California Nutrition and Physical Activity Guidelines for Adolescents

Maternal, Child and Adolescent Health Division
Center for Family Health
California Department of Public Health

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About the Guidelines

These Guidelines were designed to assist Adolescent Family Life Program (AFLP) case managers in improving the nutrition, physical activity, and healthy eating practices of AFLP clients. They can and have been used by other adolescent programs. If interested in modifying or using the materials in any derivative work, contact the Maternal, Child and Adolescent Health Division.

The Guidelines include several nutrition topics to serve as a reference for case managers working with teens. They also provide handouts for motivational counseling and education with adolescents.

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Adolescent Nutrition

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Introduction

Adolescence is the only time following infancy when the rate of physical growth actually increases. This sudden growth spurt is associated with hormonal, cognitive, and emotional changes that make adolescence an especially vulnerable period of life. First, there is a greater demand for calories and nutrients due to the dramatic increase in physical growth and development over a relatively short period of time. Second, adolescence is a time of changing lifestyles and food habits that affect both nutrient needs and intake. Third, adolescent drive for individuation means more opportunity to assert food choices and expand or narrow healthy options.

Adolescence can be divided into three stages. Early adolescence (11-14 years of age) is characterized by the onset of puberty and increased cognitive development. Middle adolescence (15-17 years of age) is characterized by increased independence and experimentation. Late adolescence (18-21 years of age) is a time for making important personal and occupational decisions.

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Poor nutrition during any of these stages can have lasting consequences on an adolescent's cognitive development, resulting in decreased learning ability, poor concentration, and impaired school performance.

Common Nutrition Concerns

Adolescents of both sexes and in all income and racial/ethnic groups are at risk for dietary excesses and deficiencies. Dietary excesses of total fat, saturated fat, cholesterol, sodium, and sugar commonly occur. Most adolescents do not meet dietary recommendations for fruits, vegetables, and calcium-rich foods.[1] See Figure AN-1 for some factors that contribute to poor eating habits.

Figure AN-1 Factors that Contribute to Poor Eating Habits

- Easily available, low-cost, high-fat and/or high-sugar, low-nutrient foods, such as French fries, candy, chips, or soda
- Limited access to healthy foods that appeal to adolescents
- Perception that healthy, low-in-fat, unprocessed, nutrient-dense foods (high in nutrients compared with their caloric content) are inconvenient and lack taste. Some examples of healthy snacks include fresh fruit, whole grain bread, or lowfat yogurt
- Lack of knowledge regarding appropriate nutrition and the health impact of poor nutrition
- Poor parental role modeling
- Lack of food shopping and preparation classes at school (e.g., home economics), resulting in the lack of relevant skills
- Increased incidence of disordered eating due to 1) fear of weight gain, 2) desire to build muscle mass, 3) to meet sports weight cut-offs, and 4) media and advertising messages

Some nutrition-related concerns for adolescents include consumption of sugar-sweetened beverages (SSBs), iron-deficiency anemia, inadequate calcium intake, unsafe weight-loss methods and eating disorders. Overweight and obesity in children and adolescents is generally caused by poor eating habits and physical inactivity or a combination of the two.[2]

Nutrition problems may occur as a result of tobacco and alcohol use, pregnancy, disabilities, or chronic health conditions.

Consequences of Poor Eating Habits

Poor or inappropriate dietary habits increase the risk and/or incidence of chronic disease among adolescents. Of great concern is the increasing rate of obesity and obesity-related health risks, such as diabetes and cardiovascular disease. The prevalence of type 2 diabetes among adolescents has increased and is closely linked to overweight and obesity.[2]

Inadequate iron intake increases the incidence of iron-deficiency anemia, especially among those adolescents at highest risk, such as pregnant adolescents, vegetarians, and competitive athletes. Vegetarianism is popular among some adolescents as they experiment or rebel and individuate. Without appropriate supplementation, these adolescents may be at risk for nutrient deficiencies (see the *Vegetarian Teens* section).

A typical adolescent diet does not include adequate amounts of fruit, vegetables, and grains.[1] These foods are a significant source of vitamins and minerals such as folate. Folate deficiency is a concern for all girls physically capable of becoming pregnant (see the *Folate/Folic Acid* section and *Fruits and Vegetables* section).

Consumption of SSBs (e.g. soda, vitamin water, sports drinks, energy drinks, Kool-Aid etc.) among adolescents has risen dramatically and continues to replace milk and water.[3] Health risks associated with this increased intake of sugar-sweetened beverages include excess sugar and caloric intake, which contribute to overweight, obesity and dental caries.

According to the American Academy of Pediatrics (AAP), most children and adolescents do not need to replace their electrolytes by drinking sports drinks. Their electrolyte needs are normally met by consuming a healthy and balanced diet. Water should be the beverage of choice. However, nonfat or lowfat milk can also be consumed after exercise.[4]

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Due to their health risks, the AAP recommends that energy drinks should never be consumed by children and adolescents. Energy drinks and sports drinks are significantly different drinks with different risks. The fact that the terms are used interchangeably, possibly indicating confusion, is an additional concern.

One disturbing result of drinking SSBs is the decrease in milk consumption, resulting in insufficient calcium intake. Adequate calcium intake during adolescence is essential for peak bone mass, yet evidence suggests that most female adolescents do not meet the recommended daily intake.[5] Drinking soda may also interfere with calcium absorption due to high content of phosphorus in soda. For more information, refer to the *Calcium* section.

Nutrition Recommendations

For personalized nutrition recommendations based on age, sex, physical activity level, and other factors, visit the USDA's interactive SuperTracker website.

Although using the online tool is most convenient, food pattern tables can also be used. Refer to pages 78-82 of *The 2010 Dietary Guidelines for Americans.* Some tables are included in Appendix A of this document.

Tools for pregnancy and breastfeeding are described on page AN-5.

Energy

Carbohydrates, protein and fat provide energy in the form of calories. Carbohydrates and protein each contain four calories per gram; fat contains nine calories per gram.

Non-pregnant and non-lactating female adolescents usually require between 1,600 and 2,400 calories each day. Adolescent males usually need about 1,800 to 3,200 calories. However, caloric needs vary by age and physical activity level. To identify calorie needs based on such factors, see Appendix A.

Of the total calories needed, about 60% is needed for the body's basic energy needs (basal metabolism).Some examples include tissue growth and repair as well as heart and lung function.

Figure AN-2 MyPlate

The MyPlate symbol and website, www.choosemyplate.gov, were launched by the United States Department of Agriculture (USDA) in 2011. MyPlate serves as a reminder to eat healthfully and illustrates the five food groups using a familiar mealtime visual, a place setting. MyPlate encourages individuals to make healthier meal choices by building their plate like in the graphic below.

Each of the food groups depicted provides some, but not all of the nutrients that an individual needs. Foods in one group cannot replace foods from another group.

In addition to consuming healthy foods, daily physical activity is important for a healthy lifestyle.

MyPlate displays food proportions, not quantities. The recommended quantity of each food group varies from person to person based on age, sex, and other factors. For personalized recommendations, use the USDA's SuperTracker website or the tables included in Appendix A.

Resources that are available on the ChooseMyPlate and SuperTracker websites include:

- Daily food plans tailored to individuals of varying ages, beginning at age two
- A tool to access food information (food groups, calories and comparisons)
- A tracker that provides feedback on food and physical activity levels
- Planners that help in reaching personal goals

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Pregnant and lactating adolescents generally have higher caloric needs. These needs depend on factors such as age, height, weight, and physical activity level. After entering in personal information, the SuperTracker website provides caloric recommendations for pregnancy and breastfeeding.

Carbohydrates

Carbohydrates are an essential part of a healthy diet. They should not be eliminated from one's diet as part of a weight loss diet, such as the popular "no-carb diets." The best sources of carbohydrates are whole grains, fruits, vegetables, and beans. These are also excellent sources of vitamins, minerals, and fiber.

Protein

Protein needs depend on the individual's rate of growth. Most adolescents meet or exceed recommended levels. Adolescents at risk for protein deficiency include strict vegetarians and those using extreme measures to restrict their food intake to lose weight.

Fat

Fat is a necessary nutrient but most adolescents exceed recommended levels for fat intake.[5] Some adolescents, especially girls, are at risk for deficiency due to their efforts to lose or avoid gaining weight by severely reducing their fat intake. The USDA recommends that for adolescents aged 14-18 years, fat from all sources should be limited to 25%- 35% of all calories consumed that day. Most fats given to adolescents should be unsaturated fats. Examples are fish, nuts, and vegetable oils.

Vitamins and Minerals

Vitamins and minerals have a role in most or all processes that take place in the body. The demands of growth and development, coupled with poor eating habits, place many adolescents at risk for vitamin and mineral deficiencies, such as calcium and vitamin D (see Figure AN-3). Calcium requirements are higher for adolescents (see the *Calcium* section).

Figure AN-3 Vitamin D

This vitamin is found in foods such as fortified milk, fish, eggs, and cod liver oil. Sunshine also contributes to vitamin D intake. Vitamin D is important for the body to build strong and healthy bones.[6]

For people aged 1-70 years of age, the Recommended Dietary Allowance is 600 IU of vitamin D per day, regardless of sex, pregnancy, or breastfeeding status.[7] If this recommendation is not met through foods and fortified milk, taking a vitamin D supplement may be recommended by their health care provider. Adolescents, especially those pregnant and breastfeeding should check with their primary healthcare provider before taking a vitamin supplement.

Adolescents who may become pregnant or are pregnant need to consume folic acid daily to help prevent birth defects (see the *Folate* section). Adolescents who are pregnant have increased needs for certain vitamins and minerals. They should talk to their primary health care provider about taking a prenatal vitamin. See other sections for *Iron, Fruits and Vegetables,* and *Vegetarian Teens*.

Fiber

Fiber is the non-digestible edible material found in fruits, vegetables, beans, and some grains, such as whole-grain cereal or oatmeal. Fiber helps with digestion and may reduce cholesterol levels. See Table AN-1 for recommended daily values.

Table AN 1 Adequate Intake for Fiber (grams per day)

Age	Females	Males
9-13	26	31
14-18	26	38
19-30	25	38
Pregnancy		
14-18	28	
19-30	28	
Lactation		
14-18	29	
19-30	29	

Source: Institute of Medicine, Food and Nutrition Board, 2005 [9]

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Average fiber intake for female adolescents is approximately 13 grams per day,[10] which is well below recommended intakes. Fiber intake can be increased by consuming more fruits, vegetables, beans and whole grains.

To check if recommended daily intakes are met, an interactive calculator can be used.

Water

Water is involved in almost every life-sustaining body process. It carries nutrients and oxygen to body cells, takes waste products away, and regulates body temperature. It provides no energy and thus has no calories.

The body loses water through urination, sweat, breathing, and feces. Drinking water and other beverages is the best way to replace body water. Solid foods, especially fruits and vegetables, also provide water, however this amount is difficult to measure.

When adolescents are physically active for less than three hours in mild weather conditions, only water is needed for re-hydration. However, if physical activity lasts longer than three hours and the weather is hot and humid, athletes may need to replace electrolytes, such as sodium, potassium, and chloride that help regulate the body's balance of fluids. When adolescents participate in prolonged physical activity, they should drink water; commercial sports drinks are rarely necessary. Salt pills should not be used, as they can be dangerous.

Nutrition for Pregnancy & Breastfeeding

The USDA's SuperTracker website provides personalized nutrition recommendations during pregnancy and breastfeeding.

MyPlate for Moms (also available in Spanish) provides general nutrition recommendations for an average pregnant or breastfeeding woman* (the document is available at the end of this section).

*Pregnant adolescents require 4 cups of milk.

Pregnancy

During pregnancy, there is a higher need for some vitamins and minerals. These can be obtained through eating healthy foods, such as fruits, vegetables, whole grains, etc. Use the SuperTracker website or MyPlate for Moms (also available in Spanish) to identify the quantity and types of foods to be eaten. A healthy diet plan should also be discussed with the primary healthcare provider.

Vitamins: Before and during pregnancy, folic acid must be consumed to help prevent certain birth defects (see the *Folate* section for details). A prenatal vitamin containing folic acid may be recommended during pregnancy. Vitamin, mineral and other supplements should be discussed with the primary healthcare provider at prenatal visits. However, taking too much or giving them to someone else can be very dangerous. Vitamins should not replace a healthy diet.

Alcohol: Pregnant women and women who may become pregnant should not drink any alcohol. No amount of alcohol has been determined as safe during pregnancy. Drinks

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containing alcohol include beer, wine, liquor, and mixed drinks.

Breastfeeding

Although similar to pregnancy, there are slight differences in nutrient requirements, which also vary by degree of breastfeeding. Use the SuperTracker website and MyPlate for Moms (also available in Spanish) to identify the quantity and types of foods to be eaten.

Water: As with everyone, while breastfeeding, one should drink to thirst. Most people get more thirsty while breastfeeding, so preparing a glass of water in advance is helpful. Drinking extra liquids does not produce more milk.

Milk: Drinking milk is not necessary for producing breast milk. Most mammals do not drink milk, but are capable of breastfeeding their young. Individuals who do not consume milk should have an alternate source of calcium. See the *Calcium* section for examples.

Vegetarians: Vegetarians are perfectly capable of producing quality breast milk and should breastfeed. Vegetarian diets should include alternate sources of protein, Vitamin B_{12}, Vitamin D, and calcium.[12] Refer to the *Vegetarian Teens* and *Calcium* sections for examples.

See the *Physical Activity* section for physical activity recommendations for pregnancy or parenting.

Adolescent Eating Behaviors

Adolescents spend a good deal of time away from home and many consume fast foods, which are convenient, but are often high in calories and fat. It is common for adolescents to skip meals and snack frequently. Some factors influencing adolescent food choices are described in Figure AN-4.

The California Department of Public Health conducts a dietary practices survey of 12- to17-year-olds in California. It is called the California Teen Eating, Exercise and Nutrition Survey (CalTEENS). As part of this survey, Healthy Eating Practice Scores are analyzed. This score reflects fruit, vegetable, fiber, whole grain, and dairy consumption, in addition to low-fat dairy intakes. Scores range from potentially zero to a maximum of seven. In 2002, the average Healthy Eating Practice Score was approximately three out of seven for California adolescents (3.1 for females and 2.9 for males). The score for African-American adolescents was significantly lower than that of White adolescents at 2.6 (versus 3.1).[13]

Figure AN-4 Food Choices and Self-Regulation[11]

Adolescents are provided with several different messages that may affect their daily food choices. In one study, researchers sought to understand the factors that influence the decision-making process of adolescents when it comes to food selection. Adolescents aged 11-18 years participated in a simulated task in which they chose particular items for a meal and then described why they chose particular foods.

Findings include:

- The primary reasons for adolescent food selection include: taste, familiarity/habit, health, dieting, and satiety.
- Adolescents reported eating a more healthy and varied meal at dinner.
- When adolescents made food choices, they followed self-made food decision-making rules to resolves conflicting values. Within a meal, “taste” was more influential for the core item, but “health” rose up in influence for the secondary or side item. When having lunch with peers, “taste” may be the primary reason for a food choice, but when with family at dinners, health may be more influential than it would be with peers.
- Other factors that influenced food selection are negotiation patterns within the family and interactions with peers.

When promoting healthy eating, educators should recognize the many dilemmas that adolescents face in making food choices. Educators can help adolescents eat healthy by providing guidance on: (1) developing food decisions, (2) effectively negotiating with family members and (3) appropriate peer interactions.

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Approximately forty-eight percent of adolescents surveyed by the California Health Interview Survey (CHIS) in 2009* reported eating at a fast food restaurant two or more times in in the past week.[14] In 2006, 60.3% of California adolescents had eaten 2 or more servings of high-fat, low-nutrient foods the previous day.[15] On a positive note, adolescents who had been taught to cook in healthy ways reported more healthy eating practices.[13]

To encourage adolescents to learn how to prepare healthy foods, recipes for adolescents are available online.

Nutrition Supplements

Dietary supplements may supply some vitamins and minerals, but they cannot provide all the nutritional components that food offers for good health. No supplement can fix an ongoing pattern of poor food choices.

Some adolescents may be intrigued by over-the-counter nutrition supplements such as vitamins, minerals, herbs and protein powders. The Food and Drug Administration (FDA) does not regulate the purity or dosages of most of these products, their claims are seldom proven, and overuse may be dangerous.

Expensive nutrition products — such as energy or power bars and shakes — are popular, but their effects on performance have not been widely studied and these may cause harm to adolescents. Creatine, a popular supplement among athletes, has not been evaluated for its effects on the growth, development, or health of adolescents.

Cultural Factors

One's cultural background often influences one's food choices and preferences. People from different cultures may also view body weight differently. For example, some cultures may see excess weight as a sign of social status and health.

One's culture may also affect diet during pregnancy and infant feeding practices. Some cultures traditionally use herbal supplements and teas during pregnancy. These are not regulated and are not routinely recommended for use. See the *Infant Feeding* section for infant feeding recommendations.

Some cultures may also practice "good/bad" and/or "hot/cold" labeling of foods. According to this belief, certain foods cannot be eaten at certain times of the day or during a specific life stage (such as in pregnancy). If this is practiced, meal planning may be slightly more difficult, but plans can still be made.

Cultural influences are not limited to one's ethnic background. They can include religion, social and economic status, and where one was raised or currently lives (urban, rural, or suburban lifestyle). Adolescents also have their own culture that can strongly influence their food choices, especially away from home (see "Adolescent Eating Behaviors," earlier in this section).

For more information, refer to the following online resources:

- Celebrating Diversity: Approaching Families through Food
- The California Food Guide (also contains dietary information for several cultural groups in California)

The social pressure to be thin and the stigma of obesity can lead to unhealthy eating practices and poor body image, particularly among young female adolescents. Some adolescents, especially males, may want to build muscle mass. Their methods should be evaluated by their healthcare provider.

* 12-17 years of age

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What Can Case Managers Do?

Suggested Interventions

Interventions planned to address adolescent nutrition and physical activity topics should include concrete, practical experiences that address immediate concerns. Although having accurate nutrition knowledge is important, especially for adolescents, it is very important to remember that knowledge alone is not enough to change dietary behavior.

Adolescents are more attentive to information if it is presented in an interactive way; they prefer not to simply listen to a speaker or read a pamphlet or booklet. Education activities should be quick and fun, and should demonstrate that healthy foods are affordable, easy to prepare and can be flavorful.

Encourage these eating practices:

- Drinking water or nonfat/lowfat milk when thirsty
- Eating with family members
- Selecting healthy foods when eating out
- Visiting farmers' markets if they are available in the community. Find a market using this online search tool
- Selecting fresh fruits and vegetables when they are in season and prices are lower
- Eating at fast food restaurants less frequently and learning to make healthier choices when doing so. Encourage reviewing nutritional content, as chain restaurants are required to have this information. It is unrealistic to expect adolescents to not frequent fast food restaurants
- Avoiding eating while watching TV or playing computer games

Hands-on activities are very effective. Such activities include:

- Cooking demonstrations and food sampling
- Meal planning, including snacks and party foods
- Grocery store tours
- Planning a menu and shopping for ingredients within a limited dollar amount
- Tips on how to eat healthfully in restaurants
- Learning basic food preparation techniques using recipes for teens
- Serving healthy foods and providing a physical activity break. Use the resources available here
- Using applications ("apps") on phones to encourage healthy eating practices

Nutrition Screening

Case managers can screen their clients for nutrition risk (see the *Nutrition Risk Screening* section). They can provide education, offer nonjudgmental feedback on current habits, and recommend reasonable lifestyle changes. Concrete approaches are best. "Try a whole wheat bagel for breakfast" is clearer than "eat more grains," or "gradually switch from whole or lowfat milk to 1% or nonfat milk" is more concrete than "eat less fat." Using information gathered during the screening process, case managers can assist clients to set goals and develop an action plan.

Goal Setting

Goals must be descriptive and concrete. They should be realistic, reasonable, and achievable. Avoid goals that are too ambitious or long term; make them small with short-term results.

It is important that the client chooses which goals are most important and realistic for her. Use MyPlate for Moms (also available in Spanish) to help the client identify nutrition goals that she would like to try.

Referrals

Each section/guideline includes, when appropriate, recommendations for when and to whom referrals should be made.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
SuperTracker	Webpage - interactive tool	www.choosemyplate.gov/SuperTracker/createprofile.aspx
The Dietary Guidelines for Americans	Document (PDF)	www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/PolicyDoc.pdf
MyPlate for Moms	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyPlateForMoms.pdf
MyPlate for Moms (Spanish)	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-SP_MyPlateHandout.pdf
Fiber calculator	Webpage - interactive tool	www.healthcalculators.org/calculators/fiber.asp
Celebrating Diversity: Approaching Families through Food	Document (PDF)	www.mchlibrary.info/pubs/pdfs/CelebratingDiversity.pdf
California Food Guide: Fulfilling the Dietary Guidelines for Americans	Webpage	www.dhcs.ca.gov/formsandpubs/publications/Pages/CFGTableofContents.aspx
California Food Guide: Fulfilling the Dietary Guidelines for Americans – Life Cycle: 9-18 Year Olds	Document (PDF)	www.dhcs.ca.gov/dataandstats/reports/Documents/CaliforniaFoodGuide/12.9-18YearOlds.pdf
Recipes/cookbooks for adolescents	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx
Farmers markets search tool	Webpage - interactive tool	http://apps.ams.usda.gov/FarmersMarkets/
Worksite nutrition and physical activity	Webpage - resources	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/WorksiteNutritionandPhysicalActivity.aspx
Nutrition and Physical Activity Initiative - Maternal, Child and Adolescent Health	Webpage	www.cdph.ca.gov/programs/nutiritionandphysicalactivity/Pages/default.aspx
Comprehensive website for adolescent girls' health	Website	www.girlshealth.gov/
Los Angeles obesity campaign website	Website	http://www.choosehealthla.com/

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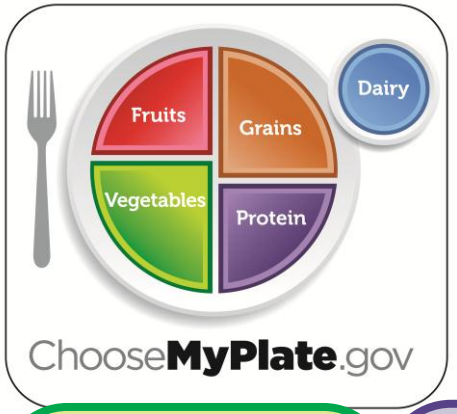

California

MyPlate for Moms

Make half your plate vegetables and fruits, about one quarter grains and one quarter protein. Choose foods that are high in fiber and low in sugar, solid fats and salt (sodium). For most women, these are the average food amounts for one day.

Vegetables

Eat more vegetables. Use fresh, frozen or low-sodium canned vegetables. Avoid French fries.

Daily Amount
3 or more of these choices:

- 2 cups raw leafy vegetables
- 1 cup raw vegetables or juice
- 1 cup cooked vegetables

Protein

Choose healthy protein. Eat vegetable protein daily. Avoid bacon, hot dogs and bologna.

Daily Amount
6-7 of these choices:

- 1 ounce fish, poultry or lean meat
- 1 egg
- ½ ounce nuts
- ¼ cup cooked dry beans, lentils or peas
- ¼ cup tofu
- 1 tablespoon nut butter

Grains

Eat mostly whole grains like brown rice. Limit bread, noodles and rice that are white.

Daily Amount
6 of these choices in the 1st trimester,
8 in the 2nd/3rd trimester and while breastfeeding:

- 1 slice whole wheat bread or ½ bagel
- 1 small (6-inch), whole wheat tortilla
- 1 cup cereal
- ½ cup cooked pasta, rice or cereal

Fruits

Add color with fruit. Make most choices fruit, not juice.

Daily Amount
2 of these choices:

- 1 cup fresh fruit
- 1 cup unsweetened frozen or canned fruit
- ½ - ¾ cup juice
- ½ cup dried fruit

Dairy

Enjoy calcium-rich foods. Choose pasteurized nonfat or lowfat milk, yogurt and cheese.

Daily Amount
3 of these choices for women

or

4 of these choices for teens:

- 1 cup milk
- 1 cup soy milk with calcium
- 1 cup of plain yogurt
- 1½ ounces cheese

Choose Healthy Fats & Oils

- Use plant oils like canola, safflower and olive oil for cooking.
- Read food labels to avoid saturated and trans fats (hydrogenated fats).
- Avoid solid fats such as lard and butter.
- Eat cooked fish at two meals each week.
- Limit oils to 6 teaspoons each day.

Choose Healthy Beverages

- Drink water, nonfat or lowfat milk instead of soda, fruit drinks and juice.
- Limit caffeine drinks like coffee and tea. Avoid energy drinks.
- Do not drink alcohol when you are pregnant or may become pregnant.
- Alcohol passes through breast milk. If breastfeeding, talk with your healthcare provider about alcohol use.

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April 16, 2013

California

My Nutrition Plan for Moms

These tips can help you to eat well and have a healthy weight during and after your pregnancy. Fill in your weight goals and check off which tips you are willing to try.

Pregnancy: My recommended weight gain in pregnancy is _____ pounds. My current weight gain is _____ pounds.

After Pregnancy: A healthy weight range for me is _____ pounds. My goal is to weigh _____ pounds.

Vegetables

Each day I will:

- ☐ Try to eat at least 3 choices of fresh, frozen or low-sodium canned vegetables.
- ☐ Flavor vegetables with herbs and spices instead of fat or salt.
- ☐ Eat many dark green and orange vegetables.

Protein

Each day I will:

- ☐ Try to eat 6-7 choices.
- ☐ Grill, broil or bake meat instead of fry.
- ☐ Eat beans, nuts, tofu, seeds and nut butter.
- ☐ Eat lean meat (15% fat or less).
- ☐ Take skin off poultry.
- ☐ Eat 12 oz. of fish per week.
- ☐ Limit bacon, hot dogs and bologna.

Grains

Each day I will:

- ☐ Try to eat 6-8 choices.
- ☐ Choose whole grains at least half of the time.
- ☐ Eat WIC-approved cereals.

Fruits

Each day I will:

- ☐ Try to eat 2 choices.
- ☐ Eat a variety of fresh, frozen or canned fruits.
- ☐ Choose fresh, frozen and canned fruits without added sugars.
- ☐ Limit fruit juice to ½ - ¾ cup juice each day.

Dairy

Each day I will:

- ☐ Try to eat 3 choices.
- ☐ Choose pasteurized nonfat or lowfat (1%) milk and cheeses.
- ☐ Eat plain yogurt. For sweetness, add fruit.
- ☐ Choose soy products, with calcium, like tofu.

Fats & Oils

I will:

- ☐ Use 6 teaspoons of plant oils like canola, safflower and olive oil daily.
- ☐ Bake, broil, steam, or microwave instead of frying.

Beverages

I will:

- ☐ Drink water, nonfat or lowfat milk instead of sugary drinks.
- ☐ Limit caffeine drinks like coffee and tea. Avoid energy drinks.

Extras (Solid Fats, Sugars and Salt)

I will:

- ☐ Choose foods low in fat, sugar and salt.
- ☐ Read nutrition labels to limit fat, sugar and salt (sodium).
- ☐ Choose fruits, vegetables, unsalted nuts and seeds for snacks.

My Other Ideas

- ☐ Make a daily food plan. Go to www.choosemyplate.gov/SuperTracker/createprofile.aspx.
- ☐ _____

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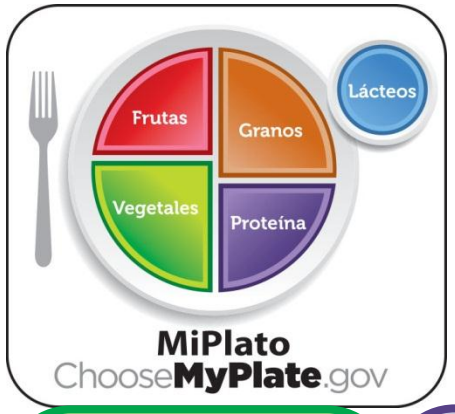
April 16, 2013



California

MiPlato para Mamás

Haga que la mitad de su plato contenga vegetales y frutas, alrededor de un cuarto del plato granos y el otro cuarto alimentos con proteína. Elija alimentos ricos en fibras y de bajo contenido de azúcar, grasas sólidas y sal (sodio). Estas cantidades de alimentos son para el consumo diario de una mujer de tamaño promedio. Usted puede necesitar más o menos de las cantidades sugeridas.

Vegetales

Coma más vegetales.
Coma vegetales frescas, congeladas o vegetales enlatadas bajas en sodio. Evite comer las papas fritas.

Cantidad Diaria
3 o más de estas opciones:

- 2 tazas de vegetales de hoja crudas
- 1 taza de vegetales crudas o jugo
- 1 taza de vegetales cocidas

Proteína

Elija proteínas saludables.
Coma proteínas vegetales a diario. Evite el tocino, las salchichas y la mortadela.

Cantidad Diaria
6-7 de estas opciones:

- 1 onza de pescado, pollo o carne magra
- 1 huevo
- ½ onza de nueces
- ¼ de taza de frijol, lenteja o chícharo seco cocido
- ¼ de taza de tofu
- 1 cucharada de crema de cacahuate

Granos

Coma mayormente granos integrales como arroz integral. Limite su consumo de pan, fideos y arroz que no sean integrales.

Cantidad Diaria
6 de estas opciones en el 1er trimestre
8 en el 2o o 3er trimestre y mientras esté amamantando:

- 1 rebanada de pan integral o ½ bagel
- 1 tortilla pequeña de trigo integral (6-pulgadas)
- 1 taza de cereal
- ½ taza de fideos, arroz o cereal cocidos

Frutas

Agregue color con frutas.
Escoja frutas enteras en lugar de jugos de frutas.

Cantidad Diaria
2 de estas opciones:

- 1 taza de fruta fresca
- 1 taza de fruta congelada o enlatada sin azúcar
- ½ - ¾ taza de jugo
- ½ taza de fruta seca

Lácteos

Coma alimentos ricos en calcio.
Elija leche, yogur y queso pasteurizados descremados o bajos en grasa.

Cantidad Diaria
3 de estas opciones para las mujeres
o
4 de estas opciones para los adolescentes:

- 1 taza de leche
- 1 taza de leche de soya enriquecida con calcio
- 1 taza de yogur natural
- 1½ onza de queso

Elija Grasas y Aceites Saludables

- Use aceites vegetales para cocinar como el aceite de alazor (safflower), canola y oliva.
- Lea las etiquetas de los alimentos para evitar consumir grasas saturadas y trans (grasas hidrogenadas).
- Evite las grasas sólidas como la manteca y la mantequilla.
- Coma pescado cocido en dos de sus comidas cada semana.
- Limite su consumo de aceites a 6 cucharaditas por día.

Elija Bebidas Saludables

- Beba agua, leche descremada o baja en grasa en lugar de refrescos, bebidas de frutas y jugo.
- Limite su consumo de bebidas con cafeína como el café o el té. Evite las bebidas energizantes.
- No beba alcohol si está embarazada o pudiera estar embarazada.
- El alcohol pasa al bebé a través de la leche materna. Si está amamantando, hable con su médico acerca del consumo de alcohol.

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April 25, 2013

California

Mi Plan Nutricional para Mamás

Estas sugerencias pueden ayudarla a comer bien y a mantener un peso saludable durante y después del embarazo.
Llene los espacios en blanco con el peso que le gustaría llegar a tener y marque las opciones que está dispuesta a probar.

Embarazo: Me recomendaron subir _____ libras durante mi embarazo. Hasta la fecha, he subido _____ libras.

Después del embarazo: Un peso saludable para mi es _____ libras. Mi meta es pesar _____ libras.

Vegetales

Cada día trataré de:

- ☐ Comer al menos 3 porciones de vegetales frescas, congeladas o enlatadas bajas en sodio.
- ☐ Condimentar las vegetales con hierbas y especias en lugar de grasas o sal.
- ☐ Comer mucha verdura de color verde oscuro y anaranjado.

Proteína

Cada día trataré de:

- ☐ Comer 6 a 7 de porciones.
- ☐ Asar u hornear carnes en lugar de freírlas.
- ☐ Comer frijoles, nueces, semillas, tofu o crema de cacahuate.
- ☐ Comer carne magra (con el 15% de grasa, o menos).
- ☐ Quitarle la piel al pollo.
- ☐ Comer 12 onzas de pescado por semana.
- ☐ Limitar mi consumo de tocino, salchichas y mortadela.

Granos

Cada día trataré de:

- ☐ Comer 6 a 8 porciones.
- ☐ Elegir granos integrales al menos la mitad del tiempo.
- ☐ Comer cereales aprobados por el programa de WIC.

Frutas

Cada día trataré de:

- ☐ Comer 2 porciones.
- ☐ Comer una variedad de frutas frescas, congeladas o enlatadas.
- ☐ Elegir frutas frescas, congeladas y enlatadas sin azúcares añadidos.
- ☐ Limitar el consumo de jugos de frutas a ½ - ¾ de taza por día.

Lácteos

Cada día trataré de:

- ☐ Comer 3 porciones.
- ☐ Elegir leche y quesos pasteurizados descremados o bajos en grasa (1%).
- ☐ Comer yogur natural (para endulzarlo, le pondré fruta).
- ☐ Elegir productos de soya enriquecidos con calcio, como el tofu.

Grasas y Aceites

- ☐ Usaré 6 cucharaditas diarias de aceite vegetal como el aceite de alazor (safflower), canola y oliva.
- ☐ Cocinaré los alimentos al horno, asados, al vapor o en el microondas, en lugar de freírlos.

Bebidas

- ☐ Beberé agua, leche descremada o baja en grasa en lugar de bebidas azucaradas.
- ☐ Limitaré mi consumo de bebidas con cafeína como el café y el té. Evitaré las bebidas energizantes.

Extras (Grasas Sólidas, Azúcares y Sal)

- ☐ Elegiré alimentos bajos en grasas, azúcares y sal.
- ☐ Leeré las etiquetas con la información nutricional para poder limitar mi consumo de grasas, azúcares y sal (sodio).
- ☐ Para mis bocadillos, elegiré frutas, vegetales, nueces y semillas sin sal.

Mis Otras Ideas

- ☐ Hacer un plan diario alimenticio. Visite esta página: www.choosemyplate.gov/SuperTracker/createprofile.aspx.
- ☐ _____

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Appendix A

Dietary Tables for Ages 9-30 Years, Non-Pregnant

Instructions

Step 1

Use Table A-1a to determine the client's Estimated Calorie Needs.

a. You will need the following client information:
   - Age
   - Gender
   - Physical Activity Level (definitions to the right)

b. Use the age, gender and physical activity level identified in "a" to obtain the client's Estimated Calorie Needs from the table below.

Physical Activity Levels

- **Sedentary:** lifestyle that includes only the light physical activity associated with typical day-to-day life.
- **Moderately active:** lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.
- **Active:** lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.

Table A 1a Estimated Calorie Needs Per Day by Age, Gender, and Physical Activity Level

Estimated amounts of calories[a] needed to maintain calorie balance for various gender and age groups at three different levels of physical activity. The estimates are rounded to the nearest 200 calories. An individual's calorie needs may be higher or lower than these average estimates.

Age/Activity Level[b]	Male Sedentary	Male Moderately Active	Male Active	Female[c] Sedentary	Female[c] Moderately Active	Female[c] Active
9	1,600	1,800	2,000	1,400	1,600	1,800
10	1,600	1,800	2,200	1,400	1,800	2,000
11	1,800	2,000	2,200	1,600	1,800	2,000
12	1,800	2,200	2,400	1,600	2,000	2,200
13	2,000	2,200	2,600	1,600	2,000	2,200
14	2,000	2,400	2,800	1,800	2,000	2,400
15	2,200	2,600	3,000	1,800	2,000	2,400
16	2,400	2,800	3,200	1,800	2,000	2,400
17	2,400	2,800	3,200	1,800	2,000	2,400
18	2,400	2,800	3,200	1,800	2,000	2,400
19–20	2,600	2,800	3,000	2,000	2,200	2,400
21–25	2,400	2,800	3,000	2,000	2,200	2,400
26–30	2,400	2,600	3,000	1,800	2,000	2,400

a. Based on Estimated Energy Requirements (EER) equations, using reference heights (average) and reference weights (healthy) for each age-gender group. For children and adolescents, reference height and weight vary. For adults, the reference man is 5 feet 10 inches tall and weighs 154 pounds. The reference woman is 5 feet 4 inches tall and weighs 126 pounds. EER equations are from the Institute of Medicine. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Washington (DC): The National Academies Press; 2002.
b. Sedentary means a lifestyle that includes only the light physical activity associated with typical day-to-day life. Moderately active means a lifestyle that includes physical activity equivalent to walking about 1.5 to 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life. Active means a lifestyle that includes physical activity equivalent to walking more than 3 miles per day at 3 to 4 miles per hour, in addition to the light physical activity associated with typical day-to-day life.
c. Estimates for females do not include women who are pregnant or breastfeeding.Source: Britten P, Marcoe K, Yamini S, Davis C. Development of food intake patterns for the MyPyramid Food Guidance System. J Nutr Educ Behav 2006;38(6 Suppl):S78-S92.

Source: 2010 Dietary Guidelines for Americans[1]

c. **Estimated Calorie Needs:** _____ calories

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Step 2

Use Table A-1b to identify the client's food group recommendations.

a. Begin with the Estimated Calorie Needs (obtained in Step 1): _____ calories

b. Use the Estimated Calorie Needs to identify daily recommendations for fruits, vegetables, grains, protein foods, dairy and oils from the table below. Subgroups (e.g., type of vegetable) are listed in weekly amounts. Limits for solid fats and added sugars (SoFAS) are also available.

Table A 1b Dietary Recommendations Based on Calorie Level

For each food group or subgroup,[a] recommended average daily intake amounts[b] at all calorie levels. Recommended intakes from vegetable and protein foods subgroups are per week. For more information and tools for application, go to ChooseMyPlate.gov.

Calorie Level of Pattern[c]	**1,000**	**1,200**	**1,400**	**1,600**	**1,800**	**2,000**	**2,200**	**2,400**	**2,600**	**2,800**	**3,000**	**3,200**
Fruits	1 c	1 c	1½ c	1½ c	1½ c	2 c	2 c	2 c	2 c	2½ c	2½ c	2½ c
Vegetables[d]	1 c	1½ c	1½ c	2 c	2½ c	2½ c	3 c	3 c	3½ c	3½ c	4 c	4 c
Dark-green vegetables	½ c/wk	1 c/wk	1 c/wk	1½ c/wk	1½ c/wk	1½ c/wk	2 c/wk	2 c/wk	2½ c/wk	2½ c/wk	2½ c/wk	2½ c/wk
Red and orange vegetables	2½ c/wk	3 c/wk	3 c/wk	4 c/wk	5½ c/wk	5½ c/wk	6 c/wk	6 c/wk	7 c/wk	7 c/wk	7½ c/wk	7½ c/wk
Beans and peas (legumes)	½ c/wk	½ c/wk	½ c/wk	1 c/wk	1½ c/wk	1½ c/wk	2 c/wk	2 c/wk	2½ c/wk	2½ c/wk	3 c/wk	3 c/wk
Starchy vegetables	2 c/wk	3½ c/wk	3½ c/wk	4 c/wk	5 c/wk	5 c/wk	6 c/wk	6 c/wk	7 c/wk	7 c/wk	8 c/wk	8 c/wk
Other vegetables	1½ c/wk	2½ c/wk	2½ c/wk	3½ c/wk	4 c/wk	4 c/wk	5 c/wk	5 c/wk	5½ c/wk	5½ c/wk	7 c/wk	7 c/wk
Grains[e]	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	6 oz-eq	6 oz-eq	7 oz-eq	8 oz-eq	9 oz-eq	10 oz-eq	10 oz-eq	10 oz-eq
Whole grains	1½ oz-eq	2 oz-eq	2½ oz-eq	3 oz-eq	3 oz-eq	3 oz-eq	3½ oz-eq	4 oz-eq	4½ oz-eq	5 oz-eq	5 oz-eq	5 oz-eq
Enriched grains	1½ oz-eq	2 oz-eq	2½ oz-eq	2 oz-eq	3 oz-eq	3 oz-eq	3½ oz-eq	4 oz-eq	4½ oz-eq	5 oz-eq	5 oz-eq	5 oz-eq
Protein foods[d]	2 oz-eq	3 oz-eq	4 oz-eq	5 oz-eq	5 oz-eq	5½ oz-eq	6 oz-eq	6½ oz-eq	6½ oz-eq	7 oz-eq	7 oz-eq	7 oz-eq
Seafood	3 oz/wk	5 oz/wk	6 oz/wk	8 oz/wk	8 oz/wk	8 oz/wk	9 oz/wk	10 oz/wk	10 oz/wk	11 oz/wk	11 oz/wk	11 oz/wk
Meat, poultry, eggs	10 oz/wk	14 oz/wk	19 oz/wk	24 oz/wk	24 oz/wk	26 oz/wk	29 oz/wk	31 oz/wk	31 oz/wk	34 oz/wk	34 oz/wk	34 oz/wk
Nuts, seeds, soy products	1 oz/wk	2 oz/wk	3 oz/wk	4 oz/wk	4 oz/wk	4 oz/wk	4 oz/wk	5 oz/wk	5 oz/wk	5 oz/wk	5 oz/wk	5 oz/wk
Dairy[f]	2 c	2½ c	2½ c	3 c	3 c	3 c	3 c	3 c	3 c	3 c	3 c	3 c
Oils[g]	15 g	17 g	17 g	22 g	24 g	27 g	29 g	31 g	34 g	36 g	44 g	51 g
Maximum SoFAS[h] limit, calories (% of calories)	137 (14%)	121 (10%)	121 (9%)	121 (8%)	161 (9%)	258 (13%)	266 (12%)	330 (14%)	362 (14%)	395 (14%)	459 (15%)	596 (19%)

Source: 2010 Dietary Guidelines for Americans[1]

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Notes for Table A-1b

[a.] All foods are assumed to be in nutrient-dense forms, lean or low-fat and prepared without added fats, sugars, or salt. Solid fats and added sugars may be included up to the daily maximum limit identified in the table. Food items in each group and subgroup are:	
Fruits	All fresh, frozen, canned, and dried fruits and fruit juices: for example, oranges and orange juice, apples and apple juice, bananas, grapes, melons, berries, raisins.
Vegetables	
• Dark-Green Vegetables	All fresh, frozen, and canned dark-green leafy vegetables and broccoli, cooked or raw: for example, broccoli; spinach; romaine; collard, turnip, and mustard greens.
• Red and Orange Vegetables	All fresh, frozen, and canned red and orange vegetables, cooked or raw: for example, tomatoes, red peppers, carrots, sweet potatoes, winter squash, and pumpkin.
• Beans and Peas (legumes)	All cooked beans and peas: for example, kidney beans, lentils, chickpeas, and pinto beans. Does not include green beans or green peas. (See additional comment under protein foods group.)
• Starchy vegetables	All fresh, frozen, and canned starchy vegetables: for example, white potatoes, corn, green peas.
• Other Vegetables	All fresh, frozen, and canned other vegetables, cooked or raw: for example, iceberg lettuce, green beans, and onions.
Grains	
• Whole Grains	All whole-grain products and whole grains used as ingredients: for example, whole-wheat bread, whole-grain cereals and crackers, oatmeal, and brown rice.
• Enriched Grains	All enriched refined-grain products and enriched refined grains used as ingredients: for example, white breads, enriched grain cereals and crackers, enriched pasta, white rice.
Protein Foods	All meat, poultry, seafood, eggs, nuts, seeds, and processed soy products. Meat and poultry should be lean or low-fat and nuts should be unsalted. Beans and peas are considered part of this group as well as the vegetable group, but should be counted in one group only.
Dairy	All milks, including lactose-free and lactose-reduced products and fortified soy beverages, yogurts, frozen yo-gurts, dairy desserts, and cheeses. Most choices should be fat-free or low-fat. Cream, sour cream, and cream cheese are not included due to their low calcium content.
[b.] Food group amounts are shown in cup (c) or ounce-equivalents (oz-eq). Oils are shown in grams (g). Quantity equivalents for each food group are: Grains, 1 ounce-equivalent is: 1 one-ounce slice bread; 1 ounce uncooked pasta or rice; ½ cup cooked rice, pasta, or cereal; 1 tortilla (6" diameter); 1 pancake (5" diameter); 1 ounce ready-to-eat cereal (about 1 cup cereal flakes). • Vegetables and fruits, 1 cup equivalent is: 1 cup raw or cooked vegetable or fruit; ½ cup dried vegetable or fruit; 1 cup vegetable or fruit juice; 2 cups leafy salad greens. • Protein foods, 1 ounce-equivalent is: 1 ounce lean meat, poultry, seafood; 1 egg; 1 Tbsp peanut butter; ½ ounce nuts or seeds. Also, ¼ cup cooked beans or peas may also be counted as 1 ounce-equivalent. • Dairy, 1 cup equivalent is: 1 cup milk, fortified soy beverage, or yogurt; 1½ ounces natural cheese (e.g., cheddar); 2 ounces of processed cheese (e.g., American). [c.] See Appendix 6 for estimated calorie needs per day by age, gender, and physical activity level. Food intake patterns at 1,000, 1,200, and 1,400 calories meet the nutritional needs of children ages 2 to 8 years. Patterns from 1,600 to 3,200 calories meet the nutritional needs of children ages 9 years and older and adults. If a child ages 4 to 8 years needs more calories and, therefore, is following a pattern at 1,600 calories or more, the recommended amount from the dairy group can be 2½ cups per day. Children ages 9 years and older and adults should not use the 1,000, 1,200, or 1,400 calorie patterns. [d.] Vegetable and protein foods subgroup amounts are shown in this table as weekly amounts, because it would be difficult for consumers to select foods from all subgroups daily. [e.] Whole-grain subgroup amounts shown in this table are minimums. More whole grains up to all of the grains recommended may be selected, with offsetting decreases in the amounts of enriched refined grains. [f.] The amount of dairy foods in the 1,200 and 1,400 calorie patterns have increased to reflect new RDAs for calcium that are higher than previous recommendations for children ages 4 to 8 years. [g.] Oils and soft margarines include vegetable, nut, and fish oils and soft vegetable oil table spreads that have no *trans* fats. [h.] SoFAS are calories from solid fats and added sugars. The limit for SoFAS is the remaining amount of calories in each food pattern after selecting the specified amounts in each food group in nutrient-dense forms (forms that are fat-free or low-fat and with no added sugars). The number of SoFAS is lower in the 1,200, 1,400, and 1,600 calorie patterns than in the 1,000 calorie pattern. The nutrient goals for the 1,200 to 1,600 calorie patterns are higher and require that more calories be used for nutrient-dense foods from the food groups.	
Source: 2010 Dietary Guidelines for Americans[1]	

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Reference

1. Dietary Guidelines for Americans, 2010. In: U.S. Department of Agriculture and U.S. Department of Health and Human Services, ed. 7 ed. Washington, DC: U.S. Government Printing Office; 2010.

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Infant Feeding

What is Infant Feeding?

Infant feeding is feeding a child until one year of age.

Breastfeeding is feeding human milk (breast milk) and is the normal food for infants. For this reason, this guideline primarily covers breastfeeding and its promotion, protection and support.

Infants should be breastfed for **at least the first year of life**, if not longer, as mutually desired:[1]

- Infants under ~6 months of age should be **exclusively breastfed**, which means feeding only human milk (with the exception of vitamins, minerals and medicines). The infant is not given any formula, juice, water, milk of any other animal or other foods.
- Infants ~6 months of age and older should be fed human milk with complementary foods being added as the infant develops (Figure IF-4). An infant who starts solids is fully breastfed as long as human milk is not replaced by formula, cow's milk, or juice.

Formula feeding is feeding infant formula. Infant formula is milk from a cow or other animal that has been modified for use with infants. Infants should not be given regular cow's milk that has not been modified. Such milk is not appropriate for infants due to their extra nutritional needs and can cause illness.

Combination or "mixed" feeding is feeding both formula and human milk. Feeding both is not better than feeding only human milk. Combination feeding can reduce the amount of mother's milk the baby takes. This decreases the amount of milk the mother makes and her ability to protect her baby.

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California
Nutrition and Physical Activity
Guidelines for Adolescents

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Why is Breastfeeding Important?

This is described in the context of Mothers and Child(ren), Families and Communities. Not all benefits/risks are described here.

Mothers and Child(ren)

The health effects of breastfeeding for mothers and children are well recognized and supported by scientific evidence. Infants and mothers who are not breastfed are more likely to have health problems. Examples are shown in Table IF-1.

Table IF 1 Impacts of Not Breastfeeding[2]

Among full-term infants, increased risk of:
• Acute ear infection • Eczema • Diarrhea and vomiting • Hospitalization for some lung infections in the first year • Asthma • Childhood obesity • Type 2 diabetes • Some cancers (leukemia) • Sudden Infant Death Syndrome (SIDS)
Among preterm infants, increased risk of:
• Death from intestinal infection (necrotizing enterocolitis)
Among mothers, increased risk of:
• Breast cancer • Ovarian cancer
Among families and communities:
• Missed opportunities to bond through breastfeeding • Higher economic costs: lab tests, formula, medicines, missed work time* • Lost opportunity to use a renewable ("green") source of food

Public health and medical organizations in the U.S. and worldwide recommend breastfeeding.† The AAP states that all substitute products "differ markedly" from human milk and that exclusive breastfeeding for the first six months of life should be considered normal infant feeding.[1]

Breastfeeding should be thought of as an essential part of the human lifecycle. The first three months after birth can be thought of as the "fourth trimester"[3] of pregnancy because this time is important, not only for breastfeeding, but for the mother's recovery and the baby's adjustment to living on his own. It is normal for the following to occur when a mother breastfeeds:

- Her body recovers as her uterus shrinks; helping to reduce her risk of postpartum bleeding
- Her body makes milk and loses some of the fatty stores she developed during her pregnancy, helping her to return to her pre-pregnancy weight
- Periods usually return later, helping her to conserve iron
- Breastfeeding can help mothers feel confident, relaxed and help with bonding with her baby. The infant gets used to eating, breathing and doing for himself what mother's body used to do. Both learn to communicate and understand each other's cues and responses

Breastfeeding can help younger mothers in many ways:

- Younger mothers may feel less prepared to raise a child and may lack confidence. Breastfeeding is linked with increased confidence[4]
- Children of younger mothers may be more likely to be neglected or subjected to harsh parenting.[5,6] Breastfeeding may help with bonding and may be associated with reduced abuse/neglect[7]
- Babies born to adolescents are hospitalized more often than those born to older mothers. This makes the factors in human milk that help prevent illness even more important for adolescents[8]
- Younger parents often have lower income, and as such can greatly benefit from the lower cost of breastfeeding as well as fewer medical expenses for their babies[9]

* These savings were based on direct costs (e.g., costs for formula as well as physician, hospital, clinic, laboratory, and procedural fees) and indirect costs (e.g., wages parents lose while caring for an ill child), as well as the estimated cost of premature death.
† Examples include the World Health Organization (WHO), International Lactation Consultant Association (ILCA), American Academy of Pediatrics (AAP), American Public Health Association (APHA), American Congress of Obstetricians and Gynecologists (ACOG) and the Academy of Nutrition and Dietetics (AND)

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Families

Fewer Illnesses

Babies who are not breastfed are more likely to become sick. Mothers and their children are more likely to develop certain chronic diseases if breastfeeding does not take place. When this happens, families face fear, stress, inconvenience, and the financial burden of doctor and hospital visits.

Less Cost

Breastfeeding helps families save money because they do not have to spend money on formula or extra trips to the doctor and hospital. When children are sick, parents often have to stay home, causing them to lose income.

Mothers who breastfeed can receive extra food from Women, Infants, and Children (WIC), a supplemental nutrition program. Pregnant women, infants and young children are eligible for WIC services if they meet income and health requirements.

Learn about WIC and how to apply.

WIC's Role with Breastfeeding

WIC promotes breastfeeding by giving mothers who breastfeed their children more food and education based on how much the mother breastfeeds. Fully breastfeeding mothers get the most benefits for themselves and their babies.

More information about WIC breastfeeding benefits

Opportunities for Bonding

Breastfeeding provides an opportunity for mothers to bond with their infants. This closeness can help to overcome fears that mothers may have that they may not know how to care for their baby.

Communities

Breastfeeding is "Green"

Breastfeeding benefits the environment, since it is all-natural. Breastfeeding does not require animals to feed, land to grow their food, manufacturing and disposal of formula, cans, bottles and related equipment.

When partners or family members say they are feeling "left out" because they can't feed the baby, validate those feelings ("Yes, many people feel this way"). Then brainstorm with the client about ways that others can create their own special bond with the baby.

Some examples include:

- Burp and cuddle the baby once feeding is done
- Get on the floor to play with the baby during "tummy time"
- Play, sing, read, and dance with the baby
- Take the baby/all children out for a walk
- Bring the mother food or water when she is breastfeeding
- Praise the mother for her decision to breastfeed the baby

Breastfeeding is Safest in Disasters

Emergencies, e.g., natural disasters, terrorist events, can occur anywhere. Breastfeeding is the safest way to feed an infant in an emergency.

Mothers who are scared, stressed, or have stopped breastfeeding can often return to breastfeeding. For more information, visit Emergencies and Breastfeeding.

Breastfeeding under California Law

Breastfeeding is so important that laws have been passed to protect mothers' and babies' rights to breastfeed:

- **In public:** Mothers have the right to breastfeed in all public places
- **At work:** Employers are required to provide a private space for expressing milk, other than a bathroom. They must provide sufficient breaks for expressing of milk

More information about California's breastfeeding laws

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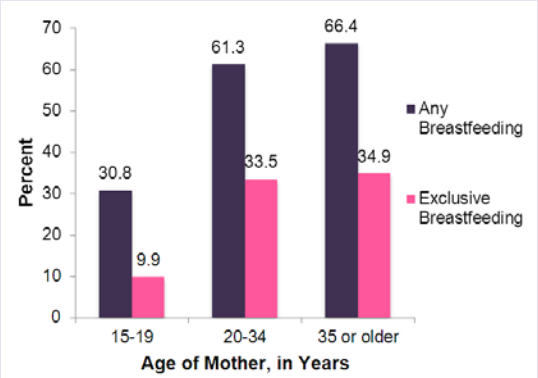
Breastfeeding Statistics

Younger mothers report breastfeeding less than older mothers. According to the 2010 California Maternal and Infant Health Assessment (MIHA) Survey,[‡] 15-19 year-old California mothers reported the following:[10]

- Before birth, 87.3% said they intended to breastfeed their babies, but only 57.8% reported breastfeeding at any level at three months after delivery
- Before birth, only 42.3% said they intended to breastfeed exclusively compared with 62.3% of mothers 20-34 years old and 62.8% of mothers 35 years or older
- Before birth, 42.3% said they intended to breastfeed exclusively, yet only 9.9% reported exclusively breastfeeding at 3 months after delivery, compared with 33.5% of mothers 20-34 years old and 34.9% of mothers 35 years or older

Figure IF-1 shows exclusive breastfeeding comparisons by age at three months after delivery. Note that AAP recommends exclusive breastfeeding until the infant begins complementary foods around six months of age.

Figure IF-1 **Breastfeeding Practices by Mother's Age, 3 Months after Delivery**



Maternal and Infant Health Assessment Survey, 2010[10]

These findings suggest that adolescents and their support people may need help understanding exclusive breastfeeding in the prenatal period and need timely information and support after birth.

Teens, like many mothers, can feel helpless and unprepared to face the challenges of getting breastfeeding started and continuing it beyond the first few weeks. They may lack the support to continue to breastfeed.

Provide resources to call if healthcare providers, family or other caregivers challenge their decision to breastfeed and encourage formula-feeding.

It is important to help teens deal with peer pressure and learn specific skills such as how to pump and store human milk.

Teens need to value what they can give their babies that no one else can: their milk. They need to know the importance of exclusively breastfeeding their babies for at least six months and why no other foods or liquids are better during this time.

Breastfeeding rates vary by race/ethnicity. Among women of all ages, the percent that report any and exclusive breastfeeding is highest for White and Asian/Pacific Islanders. It is lowest for Black and Hispanic women.

Immigrant families, in adopting U.S. culture, may lose their traditions of breastfeeding. Ask clients if they were breastfed, or if they know people with their cultural background who breastfed. If so, offer praise to engage the client and promote breastfeeding.

[‡] MIHA is an annual, statewide-representative survey of women with a recent live birth in California. MIHA collects self-reported information about maternal and infant experiences and about maternal attitudes and behaviors before, during and shortly after pregnancy.

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What Factors Might Influence Breastfeeding Practices?

Beliefs/Concerns

Teens who participate in focus group studies say that breastfeeding is "best" and is healthy for infants.[11,12] They commonly report that the health benefits for infants[11-13] and increased closeness and bonding[12,13] motivate them to breastfeed. Therefore, it is important to stress that breastfeeding can help them feel close to their baby and that their baby will recognize them as "mother" no matter who else cares for them during the day.

Potential concerns about breastfeeding are listed in Figure IF-2.

Figure IF-2 Possible Concerns about Breastfeeding

Teens—and others—may not breastfeed because of the following reasons:[14]

- Concern about insufficient milk
- Fear that breastfeeding is painful
- Believe that infants prefer formula
- Perceive formula as easier
- Embarrassed to breastfeed in public
- Fearful about body changes
- Returning to work or school
- Concern that infants will become excessively dependent
- Discomfort with act of breastfeeding or improper positioning and latching
- Concerned they must have a "special" diet
- Worried that fathers and relatives cannot play a role in the infant's life

One concern that teens or mothers of any age may have is whether their health or behaviors prevent them from being able to breastfeed. In many cases, mothers can breastfeed. See page IF-9 for situations in which breastfeeding can occur and some situations in which using one's own milk may not be possible.

Breastfeeding support is often available through WIC. International Board Certified Lactation Consultants[§] in their area can be found through www.ilca.org. These experts can help with latching, positioning and other difficulties. Those who do not want to breastfeed in public can learn strategies on how to breastfeed discretely from breastfeeding support groups or by talking about their concerns with WIC staff.

More tips to help case managers address specific concerns are available. See Tips for Addressing Breastfeeding Concerns: A Guide for Case Managers.

Unique Challenges for Teens

The normal challenges of adolescence, such as issues with sexuality, body changes and self-acceptance can affect their choice to breastfeed and get help if they have trouble with breastfeeding.

Teens often have concerns about sexuality. Since breasts are viewed as highly sexualized, breastfeeding may be challenging, embarrassing, or uncomfortable for teen mothers. Teen mothers are also more likely to have been sexually abused than other teens, so this is a possibility that brings additional complications.[15]

Teens who become pregnant have more body changes than most teens. They may feel that their body was not "theirs" for nine months and may want to have their body back. If teens feel stigmatized in society for being a teen mother, they could feel that the act of breastfeeding draws more attention to themselves.

Many teens are self-conscious about their actions and their physical appearance. They may seek validation from friends, family, partners, and society at large and can be vulnerable to pressure from others—friends, family, boyfriends, and the media--and want to fit in with their peers. Unfortunately, breastfeeding is not the norm in American society and it is difficult for a teen mother to feel normal about breastfeeding in such an environment.

These issues are very real and complex. They may not come up when a teen is asked why she does not intend or continue to breastfeed. Open and honest discussions with the teen are key to learning about her thoughts and challenges to breastfeeding.

[§] Look for the certification, IBCLC, which stands for International Board Certified Lactation Consultant.

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Breastfeeding Discussions

Listen. Discuss breastfeeding in a sensitive manner and listen to what teens have to say. This is more effective than "telling teens what to do."[11] Teens must first feel "heard" before they are ready to learn.

Validate. Each concern a mother states should be addressed first by letting the mother know her fears/feelings are normal and common: "Yes, many mothers worry that…"

Long lectures are ineffective with mothers. Targeted education based on the concerns she reported is more effective. For example:

- Help is available through WIC or support groups if she finds breastfeeding painful or is worried about pain
- Mothers can eat a variety of foods and still make perfect milk for their babies

Overcome misinformation is by teaching teens how to seek out and evaluate information for themselves. They can invite their support person to group meetings/ classes. Case managers can help teens learn about breastfeeding through websites that provide accurate information (see links in Additional Resources/Web Links Referenced) and up-to-date materials.

Societal and Cultural Norms

Societal and cultural barriers often make it difficult to choose to breastfeed or carry out one's decision to breastfeed; examples include:[16]

- Lack of knowledge about breastfeeding, role models or willingness to access mother-to-mother support groups leave many new mothers with few resources during this important transitional time
- Hospital policies such as separation of mother and baby, gifts of free infant formula, early discharge, inadequate follow-up and support in the early days of breastfeeding have been shown to shorten the duration of breastfeeding
- Lack of breastfeeding-friendly environments in the workplace and community, in spite of California Lactation Accommodation Law
- Very few health care professionals have received the training needed to support and help women and their infants with breastfeeding basics
- Limited maternity leave and lack of workplace feeding or pumping facilities
- Lack of support from one's peers and family members has an even greater impact on the decision to breastfeed than advice from health care providers, with one of the greatest influences often being a woman's partner
- Embarrassment, lack of confidence, lack of desire, poor previous breastfeeding experience, fear of change in lifestyle, concerns about their physical appearance, dietary or other health practices, such as smoking and drinking prevent some women from breastfeeding

To help lessen or overcome some of the pressures and barriers teens face, provide the following additional information:

- Formula feeding requires shopping, planning, preparation and cleanup, inconvenient at night and when not at home
- When mother must be away, she still can make sure her baby gets the best by pumping and having her baby's caretaker give her milk in a bottle. Some WIC agencies have pumps available for mothers going back to work or school. Pumps are also sold in many stores, but ask WIC staff which ones work well
- Encourage students to talk to their school/work about organizing space and time in their schedules to pump
- Help teens find breastfeeding resources using the My Breastfeeding Resources handout

To help overcome the cultural norm of formula feeding, help teens be firm advocates for themselves in their decision to breastfeed and in all decisions they make. Encourage them to respectfully question what they are told by friends, family, and professionals.

For example, if told that she should not breastfeed because of her medicine, she could say, "I want to breastfeed. What other medicines can I take that WILL allow me to breastfeed?"

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Planning for Breastfeeding

It is best to start planning for breastfeeding as early as possible. Early planning is important for all mothers. In fact, prenatal intent may increase breastfeeding success.[17] Suggested ways to help are described below.

1. **Support and encourage her.** Case managers, and others, can do the following:

- Listen to her, talk to her. Let her know why breastfeeding is important for mothers, infants, families and communities. Ask for her thoughts about breastfeeding—what sounds good about it? What concerns her?
- Discuss her right to breastfeed in public and express milk at work
- Provide and discuss educational materials in many forms: written, video, online, etc.
- Acknowledge and address concerns, answering basic questions, but refer to a specialist when necessary. See Tips for Addressing Breastfeeding Concerns: A Guide for Case Managers for sample responses

2. **Help her identify role models who breastfed.**

- Help her identify family, friends, and/or community members who have successfully breastfed
- Help her attend mother-to-mother support meetings or talk with breastfeeding professionals (described in the next section)
- See My Breastfeeding Resources to fill in local support or peer counseling groups

3. **Encourage teens to share her plans to breastfeed** with the people closest to her, so that they are aware of her intent to breastfeed and can support her. Making preparations to breastfeed within the birthing hospital and school or work setting can help her to be successfully breastfeed. Targeted strategies are listed in Table IF-2.

Table IF 2 Sharing Plans to Breastfeed

Among friends and family, she can:
• Share her birth plan with partners and others who will be her support persons in the hospital so that they are aware of her desire to breastfeed and can help advocate for her if any issues arise • Ask friends and family to shorten or delay visits right after delivery, so that she can get to know her baby, breastfeed, and/or use professional breastfeeding help • Ask a friend, partner, or family member to help with chores the first few weeks after delivery, so mother and baby can breastfeed and bond
In the hospital setting, she can:
• Develop a birth plan, a signed set of instructions for hospital staff. Keep a copy of her birth plan and make sure copies are in her prenatal chart and sent to the hospitals as part of her record. This is one way that a mother can communicate her desires around birth and breastfeeding • Ask Labor and Delivery staff to help her start breastfeeding in the first hour after delivery. Tell staff that she wants to be near her baby throughout her stay, so she can have plenty of skin-to-skin contact • Avoid bottles, formula and pacifiers for the first month, even if she plans to pump or combination feed in the future. Convey this desire to hospital staff**
In the school/work setting, she can:
• If possible, delay returning to school or work, so she and her baby can get to know each other and get breastfeeding started well. Learn about six key work laws that help families nurture their children • If needed, obtain a breastfeeding pump to pump milk at work/school. Pumps may be available through WIC. They can also be rented or purchased (and are tax-deductible) • Discuss workplace laws with her employer and arrange for a place and time to pump • Ask her school or work if it has a daycare, or find a daycare close by, so that she can breastfeed during breaks. Find a supportive child care center and share the handouts at www.breastfeedingworks.org/resources

** It is best to get breastfeeding going well during the first month, and later on use bottles/pacifiers if she still wants to do so. The baby can become confused and mother's breasts do not get the message to make enough milk for this baby. This way she keeps her options open to breastfeed or combination feed.

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Support for Breastfeeding

Support is crucial for a breastfeeding mother no matter what her age. Many teens initiate breastfeeding but do not continue possibly because they lack support. Fortunately, many types of support are available.

Support from Family and Friends

Partners, family, and friends can have a powerful impact on a teen's decision to breastfeed. They can support her decision by being informed about breastfeeding, helping her to get professional assistance if needed, helping with chores, not making discouraging remarks, and by providing a listening ear.

Community Support

- Many communities have breastfeeding support groups just for breastfeeding mothers. La Leche League has mother-to-mother support groups
- WIC agencies have staff that can answer basic questions, and some WIC agencies have peer counselors and lactation experts. The teen can connect with others who share her breastfeeding experiences
- Public Health Nurses can make home visits and provide information and assistance

Professional Support

- Help teens identify professionals who are knowledgeable about breastfeeding, such as WIC staff, lactation experts, public health nurses, registered dietitians, pediatricians, family practice physicians, and obstetrician/gynecologists
- International Board Certified Lactation Consultants are lactation experts with the highest level of practical knowledge and skill in breastfeeding support. They make breastfeeding more comfortable by helping with pain, positioning, latching, and other concerns. A Board Certified consultant can has the letters IBCLC after her name

For information about breastfeeding, clients or case managers can also call the 24-hour, toll-free number for the La Leche League (1-877-4-LALECHE). Note: Phone lines, while helpful, may not be able to provide responses immediately.

See the handout, My Breastfeeding Resources, for a list of several professional and community resources. The handout also has sections for case managers to fill in local resources for the client to use.

One way to provide teens who want to breastfeed with the knowledge and skills as well as timely access to the support needed to resist bottles and formula, is by calling **them** in the first few weeks after delivery and providing them with anticipatory guidance about the frequent barriers that mothers face.

An example of topics for these contacts is provided at: "Examples of anticipatory guidance and questions" in the CDPH Model Hospital Toolkit Policy 10.

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Is it Safe to Breastfeed?

Mothers are often told myths that cause her to doubt whether she should breastfeed. She should always check with her baby's primary healthcare provider. Most mothers can breastfeed in the following situations:

1. **If the mother smokes cigarettes.**[1,18]
- Encourage quitting. Second-hand smoke harms infants and family members and can cause infant respiratory allergies and Sudden Infant Death Syndrome (SIDS)
- Discourage smoking in the home and near children. Those who smoke should not sleep with the baby in their bed. It is a risk factor for SIDS
- Mothers who breastfeed their babies help reduce some of the risks of smoke exposure. However, nicotine can make mother produce less milk, so her baby may not grow and gain enough weight

2. **If the mother occasionally has a single alcoholic drink.**[1,18]
- Remind the client that in California, the legal drinking age is 21. Drinking alcohol when underage puts her at risk of losing custody of her baby
- Alcohol passes into breast milk and may be harmful for her and the baby. If the mother drinks alcohol, she should stop after one drink, and wait at least 3 hours before breastfeeding the baby. One drink of alcohol is 1 beer, 1 ½ ounces alcohol, or 5 ounces wine. If she has one drink and the baby cannot wait 3 hours to feed, a bottle of warmed-up breast milk from the freezer can be provided
- If one is not using birth control, she should not drink alcohol. If she becomes pregnant again, alcohol can harm the next baby, even before she knows she is pregnant
- Those who drink should make sure that their baby is being safely cared for

3. **If the mother or child is ill (has the cold, flu, herpes, has had surgery, went to the dentist, etc.).** Human milk has the nutrients and antibodies needed to fight illness. It is very rare that mothers must wean – and even then, they can often express milk and return to breastfeeding once they are well. More information about breastfeeding and maternal and infant illness.

4. **If the mother takes prescription medicine, birth control, or over-the-counter drugs.** Most do not interfere with breastfeeding. However, she should check with the baby's primary health care provider. **Note:** Ask about birth control specifically; she may not think about birth control as a medication. If a particular medication cannot be taken, alternatives are often available. It is best to avoid long-acting medications. More information about birth control and breastfeeding.

5. **If the mother is physically active.** Physical activity does not interfere with quality or production of breast milk.[19]

In rare situations, the mother may need to delay breastfeeding, pump or may not be able to breastfeed. Refer the client to her healthcare provider in the following situations:[1,18]

- If the infant is diagnosed with galactosemia
- If the mother is positive for human T-cell lymphotrophic Virus Type I /II or untreated brucellosis
- If the mother has active untreated Tuberculosis
- If the mother developed Chicken Pox (Varicella) between 5 days before delivery to 2 days after delivery
- If the mother has H1N1
- If the mother has HIV/AIDS
- If the mother needs to use chemotherapy, or radioactive medications
- If the mother uses "street" drugs, marijuana, or drinks alcohol excessively (make appropriate referrals if such behavior is suspected).The child may suffer from inadequate care or endangerment and should be referred to their primary care provider

Appendix B has details about conditions that may warrant pumping, delaying breastfeeding, stopping a behavior, or not breastfeeding at all.

Milk Banks

If a mother is unable to breastfeed, her infant can still receive the benefits of human milk. Milk banks provide pasteurized human milk for babies when their mothers cannot provide it. The costs may be covered by Medi-Cal and requires a physician's prescription. Milk banks also accept human milk donations. See the handout, My Breastfeeding Resources, for contact information.

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What is Breastfeeding Like in the Early Weeks?

The First Weeks

The first few weeks are usually very challenging, as mothers and infants learn to breastfeed. This is normal. It is important for teens to reach out for help and not give up during this crucial time. Stress the normalcy of her feelings and worries. Encourage her to seek out help quickly rather than waiting until she is ready to give up.

Acknowledge that breastfeeding may be challenging at first. As with any new skill, it is most difficult in the beginning but gets easier with time. Anticipate possible difficulties and help the client come up with possible solutions ahead of time, so the client is prepared and supported in continuing to breastfeed.

Table IF-3 describes what can be expected during the first few weeks of breastfeeding.

In the first few days, a thick "early milk" called colostrum is produced, which is rich in immune factors. This milk should not be discarded as it helps protect infants from disease. The amount produced may be so small that it is not readily visible, but babies only need small amounts as their digestive system is immature and they are learning how to suck, swallow and breathe.

After a few days, many mothers are worried that their milk seems "weak" or changes color according to what she eats. Changing milk color, smell, taste and consistency is normal – and helps the baby get used to the flavors of breast milk. Milk will change during a single feeding and from week to week. All of this milk is beneficial and meets the needs of the infant. Contrary to some myths, milk does not "sour" and there is no "bad milk."

Mothers should learn to feed their baby on cue, not by the clock.

Nursing on Cue

Nursing on cue is breastfeeding when the child gives signs that she is ready to be fed. Parents should feed on cue, feeding the baby when she shows hunger signs and stopping when she shows she doesn't want any more.

Mothers should watch for cues that their baby is hungry, such as being more active and alert, putting hands or fists to mouth, making sucking motions with the mouth, or making rooting—turning the head--motions.

It is best to feed babies **before** they are crying because crying is a late sign of hunger, and it is harder for the mother and infant to breastfeed when the infant is crying.

Some infants are very sleepy for the first few weeks. If they are not wetting, or stooling or have lost more than 7% of body weight, they need to be awakened. Make sure the mother is following up with her baby's healthcare provider.

It is normal for babies to want to breastfeed erratically, sometimes wanting to feed every 2 – 4 hours, and at times seeming to want to eat "all the time." Feeding eight to twelve times in 24 hours during the first month is normal. Infants may feed a little less frequently as they get older. This can change from week to week.

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Table IF 3 What to Expect while Breastfeeding: Birth to Six Weeks[20 23]

	Milk	The Infant	The Mother
Birth	There is milk in the breast by 28 weeks of pregnancy. Some women leak milk prior to delivery, but most do not. The first milk, colostrum, is yellowish in color and gives infants early protection against disease. Colostrum is the perfect first food for all newborns. Do not discard it. If the baby is not able to breastfeed, hand express colostrum to a small clean spoon and feed it to the baby by spoon or syringe.	The infant will be awake and alert in the first hour. This is the best time to start learning how to breastfeed. The infant's stomach at birth can hold only about as much as what fits in a marble. It is a "getting to know you" time when the baby adapts to the world and looks for her mother's face, hears her voice and adjusts to the new environment. Place the baby on the mother's chest to warm up and hear familiar sounds. This releases normal seeking behavior leading to the first breastfeeding.	Mother is tired after birth but ready to touch and talk to her baby. This is the perfect time to make her comfortable as she recovers and help her cuddle with and warm her baby skin-to-skin. This is important bonding time. When the baby shows "ready to eat" behaviors (cues) the mother can breastfeed often giving the mother and the baby many opportunities to learn new breastfeeding skills.
First 12-24 Hours	The infant will drink 1 teaspoon of colostrum at each feeding. Women may not see the milk, but it has what the infant needs and in the right amount. The baby shows cues when ready to eat: licking the lips, reaching to the mother or breast, sucking hands or fingers. The baby's stool reflects the changes in breast milk. Stools starts out dark, almost black, and become lighter. If the baby cannot be brought to the mother to breastfeed, hand expression with pumping should be taught so that The baby can be given breast milk as soon as the baby can feed.	It is normal for infants to sleep heavily shortly after birth. Some infants may be too tired to latch on well at first. Expect frequent feedings. Babies have strong instincts to suck and feed every 1-2 hours and sleep after feedings. Some infants, especially if they are not full-term, will be tired and the mother may have to wake them up to breastfeed if they sleep more than 3 hours. Mothers should ask the hospital staff not to give her baby any formula, water, or pacifiers unless needed for medical reasons, because at this age, babies usually breastfeed due to sucking needs rather than hunger. If pacifiers are used to soothe babies, they may skip feedings and not stimulate needed milk production.	Mother needs quiet time to rest during the short times between feedings and time to bond with her baby. Mothers may want to limit visitors. Nipples may be tender, but should not hurt. If breastfeeding hurts, she should ask for breastfeeding help. A semi-reclined position, with the baby on top of the women helps the infant latch on to the breast Women with a C-section may need extra help positioning the baby for feeding, but they can breastfeed even if they are taking medication for pain. If there is concern, consult the baby's health care provider.
Days 2-5	The milk now has more water, so it will look bluish-white, but may still have a yellowish appearance for about two weeks. The milk the woman makes is just right for her baby. Many mothers do not leak milk. This is not a sign of how much milk she makes. By day three the stool should be lighter (more yellow) in color.	The infant will feed often, 10 to 20 times in 24 hours. The more a baby breastfeeds, the more milk a mother makes. The infant's stomach is slowly growing to the size of the baby's fist. All infants do not eat on a schedule or know day from night. It is normal for breastfeeding infants to feed every 1-2 hours for a while, followed by a longer sleep. Feedings will probably take about 30 minutes. It is best not to remove the baby from the first breast until they let go. Some babies take only one side at a feeding. If they nurse on one side only, start on the other side at the next feeding. After delivery, it is normal for an infant to lose some weight. By about 10 days to 2 weeks of age the baby should be back to	Between days 2-4 the mother's breasts will begin to feel full and may leak. Insert pads inside the bra to absorb milk. She usually makes more milk than her baby needs. Frequent breastfeeding can help reduce swollen and hard breasts (engorgement). Between feedings, ice packs can reduce swelling, which goes away in 1-2 days. If breastfeeding becomes difficult, the mother should call for assistance. Day or night, mothers need to rest when the baby sleeps. Family and friends should help her and

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		birth weight. The baby should be seen by the health care provider at least once by 3 days after discharge.	allow her time to rest and recover. If she has pain in her nipples or worries about her milk supply, she can contact WIC, her health care provider, a lactation consultant the delivery hospital or other breastfeeding resources.
Day 6 to 4 weeks	Milk transitions from colostrum to transitional milk to mature milk. Changes will usually not be noticed by either the mother or baby, but these changes perfectly meet the baby's needs at this time. Setting aside six diapers every morning reassures her that her baby has taken enough milk if she has used them all up in 24 hours. At least two diapers should also have stool (see page IF-13). By day six the stool should be soft and thicker yellow looking or have a "cottage cheese" like look. At least two large stools (the size of the palm of the mother's hand) a day is normal.	It is normal for all infants to have irregular feeding and sleeping schedules. Breastfeeding babies feed frequently to meet their growth needs. Frequent feedings increase the mother's milk supply. The baby is learning to feed more efficiently and the mother's milk production is adjusting to the needs of the baby. Setting a feeding schedule or limiting feedings can decrease the baby's growth and reduce the mother's milk supply. Teach mothers to respond to their baby's cues and to enjoy their baby's communication skills. Reinforce that frequent, irregular feeding patterns are normal. Mothers need help anticipating and preparing for her baby's frequent feeding needs during this time. Mothers need to know that as breastfeeding infants grow they will breastfeed fewer times a day and night.	Mother may feel down one moment and frustrated the next. This is normal and often called "baby blues". She should expect to feel better in about two weeks. She should reach out for help and accept it. Family and friends can bring food for her, and help with the housework, but let the mother and the baby learn how to be with each other rather than taking the baby away. Mother's body will adjust to making the right amount of milk. If she is worried, she should call WIC and CPSP for help.
First 4-6 weeks	Most mothers never see their milk. If she expresses her milk, she may see that it looks bluish-white at the beginning of a feeding and creamy white towards the end. Milk may change color and flavor after the mother eats certain foods. This is normal and helps the baby get used to the family's diet.	The infant is more efficient at breastfeeding and may take less time on each breast. The infant has a larger stomach capacity and is able to take more milk. Feedings may be farther apart. At around 10 days, and 6 weeks, infants will breastfeed more frequently (called "growth spurts"). Breastfeeding is not just for food – it also meets many of the baby's needs, such as security, warmth and closeness. This is normal and will not lead to a "spoiled" baby.	The mother's breasts make the milk her baby needs, but not a lot more, so her breasts will be less hard unless she has delayed a feeding. Leaking usually slows down. She should not worry, as her milk will be there for her baby. Women can eat a variety of foods and still make good milk. To help her recover, she should eat a variety of foods when hungry, drink fluids when thirsty and rest whenever she can. If the mother is returning to work or school, she should be referred to local resources for pumps and information about Lactation Accommodation laws.

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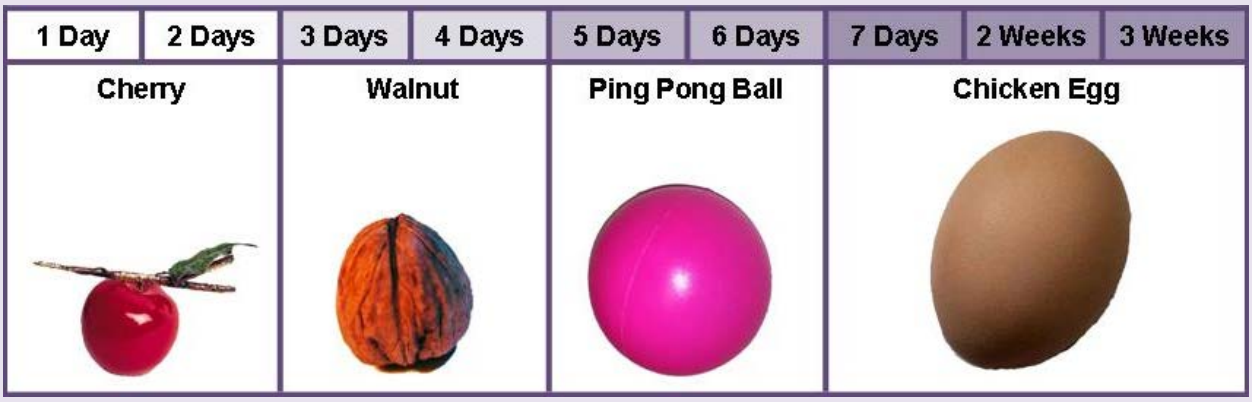
Approximate Infant Stomach Sizes[24]



Note: The graphics displayed in this table are not true to size. Please refer to the actual food items/objects to estimate sizes.

Breast Milk Production and Supply

Teens and mothers of any age may worry that they are not producing enough milk for their baby. It is important to remember that a newborn's stomach is very small and does not hold that much milk at one time. The teaching tool above can be used to show approximate stomach sizes; however, the objects are not drawn to size. Because babies' stomachs are so small, they require short, frequent feedings. This also helps establish a good milk supply in the mother.

Supply and Demand

The more often that milk is removed from the breast, the more milk the mother produces.

When nursing (or pumping) sessions are skipped, the mother's body sends signals that the milk is not needed and milk production decreases. This is why it is important to feed or pump often.

This same principle applies with growth spurts. Babies "cluster feed" at this time "Placing the order for tomorrow's milk production". It is not that the mother is not making enough milk. Rather, the increase in milk removal stimulates milk production in the mother.

AAP recommends that babies should be checked and weighed by their health care provider within 3 days after discharge and again at two weeks, and a breastfeeding evaluation should be done at that time.[1,18]

During the first few weeks, mothers are often worried about how much milk they make. Babies should be alert and awake often and feeding frequently the first few weeks after birth. One way to feel reassured their baby is eating enough is to count the wet and dirty diapers produced. The chart shows the minimum number of wet and dirty diapers the infant should have the first week. Babies often wet and dirty the same diaper. Tip: caregivers should set aside 6 clean diapers every day, and make sure that 2 – 4 of them also are dirty.

Age	Minimum Number of Wet Diapers	Minimum Number of Dirty Diapers
1 day old	1	1
2 days old	2	2
3 days old	3	2
4 days old	4	3
5 days old	5	3
6 days old	6	4
7 days old	6	4
Adapted from the California WIC Program[25]		

If the infant produces fewer wet or dirty diapers than what is listed in this table, the diapers remain dark after day 5 or the infant sleeps through feedings, refer to the infant's primary healthcare provider.

The infant's stool consistency will change during the first week of breastfeeding and that is normal. On days 1 and 2, it will be black, thick, and sticky. On days 3 and 4, it becomes greenish

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to yellow and less thick. On day 5, it becomes mustard or yellow, seedy and watery. If the infant produces more diapers, this is not cause for concern.

However, mothers should never be made to feel they are wrong to ask for an infant or breastfeeding evaluation. They should be encouraged to "follow their gut" and ask for a medical evaluation if they are worried.

Breastfeeding Positions

Helpful resources on breastfeeding positions are listed below:

- Page 14 of Your Guide to Breastfeeding. Shows common positions used to hold an infant while breastfeeding
- Pages 2 and 3 of WIC's Guide to Breastfeeding
- "Laid back breastfeeding" information at www.biologicalnurturing.com. Many mothers find that to start out, the best position is "laid back breastfeeding"
- "Laid back breastfeeding" section of La Leche League's Tear Sheet Toolkit
- Ameda's Your Baby Knows How to Latch On YouTube Video

Many great hints, including information about Cue Feeding and normal infant behavior

Refer to a lactation expert if there is pain or other problems.

Infant Care

At times, parents can feel impatient and frustrated. When this happens, parents might handle a baby in a rough way without meaning to hurt them. Talk to teens about how normal it is to feel tired and frustrated once in a while. At the same time, they must keep in mind never to shake or allow others to handle her baby roughly.

Discuss ways to calm a baby by breastfeeding. Share that if the baby is not interested, rocking or patting slowly and rhythmically can calm the baby. It can take up to 20 minutes of using the same movement (think: "repetition to soothe" such as rocking, patting, etc.) to calm a baby down. Brainstorm with her what to do if her baby's crying is getting difficult. Who can help her? Where can she place her baby that is safe?

Remind the mother to sleep when the infant sleeps, so that their sleeping schedules are in tune. Note that babies should always sleep on their backs (not their sides, not their stomachs) to reduce the risk of Sudden Infant Death Syndrome (SIDS). More SIDS information

The client can also ask for help from a partner, family member or close friend when she needs some time to herself.

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Infant Feeding Guide: Birth to Around 6 Months

Breastfeeding

AAP recommends that infants be exclusively breastfed for the first six months of life.[1,18] During this time, human milk has all the necessary factors for optimal growth and for protecting infants from germs that they have been exposed to as well as preventing the development of some illnesses later in life.

Exclusively breastfed infants should begin supplementation with 400 IU of vitamin D soon after birth. This should be discussed with a pediatrician as early as possible.[26]

For breastfeeding babies, pacifiers or artificial nipples are not recommended during the first month. Pacifiers can meet the infant's sucking needs without providing food. This will lead to fewer breastfeeding opportunities and less frequent emptying of the mother's breast, which may then make less milk.

If an exclusively breastfed baby develops allergies, breastfeeding can still be successful. The healthcare provider should be contacted, so that a plan can be developed to address the allergy (i.e. mother can eliminate one food from her diet). Rashes (eczema) and/or bloody stools are the most common symptoms.[27]

Formula-Feeding

If the mother says that she plans to partially or exclusively formula-feed and will not change her mind, or if an infant is unable to be breastfed—and milk banks have been discussed--iron-fortified formula should be provided until one year of age, not regular cow's milk.

There are different types of formula—powder, liquid and ready-to-feed—and each is prepared differently. It is important to identify the type of formula and to prepare it correctly, according to instructions on the package. Adding too much water or not enough water can harm the baby.

More information on using formula safely is available from WIC and in Appendix C.

Infant Care during Feeding

Breastfeeding or bottle-feeding, whether the bottle has infant formula or pumped breast milk, requires sensitivity to the baby's cues of hunger and fullness. As babies grow, they are awake more, but that does not mean they should be fed until they fall asleep – they may want to play, visit, take a walk, etc. Figure IF-3 describes how to help prevent overfeeding and other important strategies if a bottle is used.

Figure IF-3 Infant Feeding Strategies[16]

- Hold and cuddle the infant comfortably and securely during feeding. Make sure the head and neck are supported. Hold the head higher than the body
- Alternate sides so the baby looks towards the caregiver in both directions
- Provide skin-to-skin contact between caregiver and baby. Allow the infant to hear the caregiver's heartbeat by holding infant close to chest
- Feed according to an infant's hunger and satiety (fullness) cues such as lip smacking, sealing the lips together, slowed/decreased sucking, turning away, spitting nipple out/refusing nipple (whether bottle or breast) and increased distractibility
- Feed appropriate volume for age and avoid overfeeding by responding to the feeding cues
- If a bottle is used, **do not** prop the bottle in the infant's mouth or put the infant to bed with a bottle. Do not force the nipple into the infant's mouth
- When bottles are used, unclean water, bottles, nipples and rings is dangerous. Bottle components should be clean, regardless of whether formula or pumped milk is placed in the bottle. Easy-to-read directions for how to clean and prepare a bottle are available here

Warning: Solid Foods

Solid foods and liquids--other than breast milk or infant formula--should not be given in the first six months of life. Doing so is potentially harmful and replaces the right food, breast milk, with less nourishing foods. By reducing breastfeeding, this can also reduce how much milk the mother makes.

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Infant Feeding Guide: Around 6 Months to 9 Months

AAP recommends breastfeeding for at least the first year of life. However, at 6 months or so, breast milk or formula alone do not meet all of the infant's nutritional needs and complementary foods are slowly and gradually introduced.[1,18]

Introducing Complementary Foods

Complementary (solid) foods should be introduced when the infant meets the developmental milestones described in Figure IF-4; this is typically around six months of age but can vary.

Figure IF-4 Developmental Readiness for Complementary Foods[16]

The age at which an infant is developmentally ready for complementary (solid) foods varies, but is typically around six months of age.

When to begin solids

An infant is developmentally ready to begin complementary foods when he/she can do all of the following:

- Sit up with support
- Hold her head steady
- Put fingers or toys in her mouth
- Close her lips over a spoon
- Show that food is not wanted by turning her head
- Be able to keep food in her mouth and swallow it

Beginning solids too early

When an infant is fed too early, or before she is developmentally ready, she may choke on the food, consume too many calories, or develop food aversions. Feeding too early can also cause the infant to consume too little human milk or formula, which can lead to poor nutrition.

Beginning solids too late

However, feeding too late, or after the infant is developmentally ready, can negatively impact growth and intake of nutrients such as iron. Infants may not obtain the right variety and amounts of complementary foods, may reject age-appropriate foods and textures, may delay independent eating, and may resist mealtime routines.

If there is a family history of food allergy, the primary care provider should be contacted before introducing complementary foods. The child should be watched for allergies as new foods are introduced. See Figure IF-5 for more information.

Fostering a Love of Healthy Foods

Healthy habits need to begin early in life--this includes enjoying healthy foods and not overfeeding/overeating.

When feeding, attention must be paid to hunger and fullness cues. Self-feeding helps children exercise control how much to eat and which healthy foods they would like to try. Feeding tips include:

- Introduce healthy foods gradually and in a positive, gentle manner to avoid "food battles"
- As the child cues interest in eating, offer foods. If she shows signs of being full, remove the food
- Provide opportunities to finger-feed and explore ("play with") food. At first this is messy and may require a wash after mealtime. As children learn, it is less messy

See page IF-17 for more information.

Introducing Cups

Learning to drink from a cup is important, since drinking from a bottle too long can lead to tooth decay, anemia, too much weight gain, and ear infections (more information from WIC). Tips for using a cup include:

- Give babies the opportunity to practice drinking from a cup by giving them water in a cup from around six months of age, when solid foods are introduced
- When traveling, use a small plastic cup with a lid and a hard spout, but other times it is best to teach the child to drink from a regular cup. Water can be used to reduce anxiety about spills. Some children also like cups with handles
- If baby insists on a bottle at bedtime, brush teeth and provide only water in the bottle

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Guide for Complementary Feeding

Breastfeed first when offering complementary foods to infants.
Between approximately 6-12 months of age, breastfeed before serving solid foods, so that solid foods do not replace breast milk. After the baby is over 12 months of age, solids are offered first, followed by breastfeeding.

Introduce foods with new textures.
Infants should be allowed to explore and learn about textures:
1. Smooth (strained or pureed)
2. Mashed (smooth with a few small lumps)
3. Chopped (more lumps)
4. Tiny pieces of food

Be sure that they can chew and swallow foods from one stage before moving to the next.

Introduce a variety of foods.
Continue to offer foods that infants did not seem to like. As they get older, they may find they do like them. Below are healthy foods for infants:
- Baby cereals: rice, oatmeal, barley
- Meats: beef, chicken, turkey
- Vegetables: squash, peas, carrots, sweet potato
- Other foods: beans, egg yolk, tofu, cottage cheese, plain yogurt, rice, noodles

Try homemade foods, a healthier and inexpensive alternative.
They can be prepared using a strainer, blender, or baby food grinder. Salt, sugar, fats, or gravy should not be added to baby foods. Canned foods for adults should not be given, as they contain large quantities of salt and/or sugar.

Feed according to infant cues.
Infants should be fed according to cues that they are hungry or full, just as recommended for breastfeeding. Infants might open their mouths when they are hungry or turn away when full.

Feeding infants in response to cues prevents over-feeding, helps infants enjoy the healthy foods they are given, and teaches them to eat only when hungry. Infants should not be force-fed at certain times of the day or forced to complete the entire meal.

Watch infants for food allergies. See Figure IF-5 (for allergy in exclusively breastfeeding babies, see page IF-15).

Do not feed foods that have honey, even if cooked.
Honey should not be offered for the first year of life, as it may lead to infant botulism, a life-threatening condition.

Handle food safely.
Foods should be safe, age-appropriate and high in iron. See Figure IF-6 for food safety information.

Help infants have healthy teeth and gums.
See Figure IF-7 for oral health information.

Do not share harmful bacteria.
Adults have bacteria in their mouths that can cause disease and cavities. Avoid sharing spoons or food that others have had in their mouth.

Give only breast milk or formula in a bottle.
Sugary drinks, such as juice or soda, or solid foods should never be placed in a bottle.

Do not feed juice or soda.
Avoid juice during the first year of life. Juice fills the infant's stomach, replacing other foods. If juices are given, it should be 100% juice, given in a cup, limited to 2 ounces per day, and diluted in equal parts with water. Do not give sweet drinks such as soda, as it can lead to cavities.

Make feeding time a happy time.
Feeding infants with other family members at the table makes eating enjoyable for the infant, as well as the entire family. Infants also enjoy eating with their hands, so wait until the meal is over for a "clean up."

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Figure IF-5 **Food Allergy**[28]

When foods are introduced, give the baby one food at a time (not mixed with other foods) so you can tell which food is making the baby sick. Wait a few days before trying another new item to watch for any problems with the new food.

Signs of food allergy might include rashes, hives, diarrhea, stomachaches, vomiting, and difficulty breathing. If an allergy is suspected, a health care provider should be contacted immediately.

Foods that infants are more likely to be allergic to are:

- Cow's milk
- Soy milk or tofu
- Egg whites
- Fish or other seafood
- Wheat
- Nuts
- Corn
- Foods that cause problems to other family members (father, mother, grandparents). Tell the healthcare provider about this, as these foods may need to be avoided

Figure IF-6 **Food Safety**[28]

Be clean. To avoid illness, hands should be washed before preparing or handling food. Wash surfaces used for preparing food, bottles, bottle nipples, and foods used to make baby food.

Read labels. If infant formula is used, directions on the container should be followed. Adding too much water or formula can be harmful. Formula or other foods should not be used after their expiration date.

Avoid burns. Milk should never be heated in a microwave. Place the bottle in hot water. Test the milk (on his/her inner arm) before giving it to the baby.

Refrigerate promptly. Milk and other foods should be refrigerated to keep food from spoiling. Recently pumped human milk lasts 5 days in the refrigerator, but formula only lasts 24 hours. Breast milk can also be frozen. When feeding with a bottle, throw away any leftover milk that the baby does not drink—do not refrigerate for later use, as it could make the baby sick.

Cook food thoroughly. If a food requires cooking, make sure it is cooked thoroughly and reaches appropriate temperatures.

More information on food safety

Do not cross-contaminate. Cooked foods should never be placed on a surface (plate, bowl, cutting board, etc.) that previously held raw meat or eggs, unless that surface has been thoroughly washed.

The following should not be given to infants:

- Items that can cause choking, such as hot dogs, nuts, seeds, popcorn, chips, grapes, raisins, raw vegetables, peanut butter, and candy
- Honey should not be offered for the first year of life, as it may lead to infant botulism, a life-threatening condition
- Adult canned foods should not be given
- If there is news of a food outbreak, that food should also be avoided
- Items to which there is allergy

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Figure IF-7 **Oral Health**[29]

Early Childhood Caries (ECC), or tooth decay in infants and children, is a widespread public health problem. Fortunately, it is often preventable. Parents and family members can prevent ECCs by doing the following:

1. Cleaning their own teeth because harmful bacteria are often transmitted from the caregiver to the child.
2. Not sharing utensils with children, pre-chewing the child's food, or cleaning pacifiers with their mouths.
3. Cleaning infant's or child's teeth twice daily once a tooth develops.
4.
   - For children less than two years of age, a 'smear' of fluoridated toothpaste should be used
   - Teeth should be flossed when a toothbrush cannot reach all tooth surfaces
5. Making sure the child visits a dentist by one year of age.
6. Having good feeding practices:
   - Infants should not sleep with a bottle, unless it has water. Even milk contains sugars that can cause caries!
   - Children should not carry around a bottle. They should not carry around a no-spill training cup if it contains a sugary drink, such as juice. These bathe the mouth in sugar, providing the perfect environment for bacteria for bacteria to grow
   - Infants should start drinking from a cup as they approach their first birthday
   - Between-meal snacking and excessive exposure to sugary food and drinks—such as juice—should be avoided. Remember: juice is not needed in the first year of life!

Infant Feeding Guide: 9 Months - 12 Months

Finger Foods

Breastfeeding continues to be the primary food at this age, but children will also be more skilled at eating finger foods themselves, and some will be learning to use a spoon.

Sample finger foods are small pieces of peeled soft fruits and soft cooked vegetables, small pieces of well-cooked ground meat, small pieces of dry cereal, toasted bread squares, unsalted crackers, teething biscuits, small pieces of soft tortilla, small slices of cheese and cut-up noodles.

These foods should continue to be provided as part of the family meal, allowing the child to decide the amounts and types of food to eat. Most babies will choose to eat one or two foods for a few days, such as chicken and avocados, then choose to eat carrots and beans. It is not necessary to worry about eating a balanced diet during each meal, but rather that a variety of foods are eaten in a few days or weeks.

Continued Cup Use

The infant should continue to practice using a cup. Cutting down on the number of bottles given each day and providing cups instead is one method. By one year of age, most infants should only drink from the breast or a cup, not from a bottle. Cups should be provided only during meals and snacks and should contain breast milk, formula, or water. If bottles are provided at bedtime, they should only hold water, to avoid early childhood caries.

Continued Breastfeeding

The longer that breastfeeding continues, the better outcomes are for both infant and mother. There is no evidence of harm for breastfeeding past three years of age.[1]

From 12 months on, mother will first offer foods and then provide opportunities to breastfeed after the meals and at bedtime. It is very normal for children to continue to breastfeed past one year of age. In this way, mother will to continue to provide her baby with protection against

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infections, as they are now more exposed to the illnesses carried by other children and adults. If the mother is working or going to school, she will probably no longer need to pump, but will just breastfeed when she is at home or on weekends. She will slowly make less and less milk, but it changes and will have more antibodies, so that she can continue to protect her child from illnesses. If her child does get sick, she can also increase her milk production to help him recover more quickly.

Cow's Milk

Some mothers would like their children to begin to drink regular cow's milk. It can now replace formula for the infant at one year of age.[1]

Weaning

Weaning occurs when breast milk is substituted with other foods or sources of milk, such as iron-fortified formula. In the U.S., women and teens often wean very early, so breastfeeding does not occur as long as is recommended. Since health outcomes keep improving the longer that breastfeeding continues, early weaning is not recommended.

When an adolescent says she wants to wean, health professionals should ask why. She may be planning to wean not because she wanted to, but because other people advised it. For example, a boyfriend may have been jealous of her relationship with the baby. Sometimes misinformation occurs, such as "the baby will get spoiled," or "someone said my milk has gone bad." These kinds of challenges can be worked through and early weaning may be avoided.

If the client is having a hard time breastfeeding and going to school, she may find it difficult to pump milk at school.

Breastfeeding does not have to be all or nothing. Rather than switching completely to formula, the mother can have her baby fed formula when she is away and breastfeed when they are together. This is better than stopping completely, as her baby will benefit from getting her milk.

If the client reports being pressured to wean, refer her to a lactation expert for help.

If the client is determined to wean, she should be helped to do it gradually, to avoid risking pain or breast infections. She should also be encouraged to replace feeding time with holding, cuddling and being with her baby – she is weaning from breastfeeding, but not from mothering. This is important for the psychological well-being of their relationship.

Sometimes mothers are sorry that they weaned. Often it is possible to return to breastfeeding. If the client is interested in re-lactation or transitioning into exclusive breastfeeding, refer her to a lactation expert.

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Breastfeeding Screening Tree for Case Managers

Client is Pregnant

- Discuss breastfeeding and provide introductory information.
- Is she considering breastfeeding?

No

- Discuss personal barriers to breastfeeding or what she may have heard or experienced.
- Provide accurate information, seeking advice from a professional when necessary. See My Breastfeeding Resources.
- Provide tips to overcome the barriers mentioned. See Tips for Addressing Breastfeeding Concerns: A Guide for Case Managers
- Have her identify solutions for overcoming barriers.
- Is she willing to try exclusive breastfeeding?

No

- Provide information on combination/mixed feeding.
- Is she willing to try combination feeding?

No

Discuss formula feeding.

Yes

Yes

- Discuss breastfeeding duration, exclusivity, vitamin D supplementation, pacifier use, laws, pumping and going back to school, who she can contact for professional help and informal support, and other challenges, as well as strategies to overcome them.
- Talk about previous breast surgery, cancer, or use of any medications and make appropriate referrals.
- Help her make a birth plan to give to the hospital. Encourage her to talk to friends and family to support her decision and help her be successful.
- Encourage her to learn more about breastfeeding by reading, attending breastfeeding groups, such as La Leche League, and talking to mothers who have breastfed.

Client is Breastfeeding

Infant is younger than 6 months

- Discuss how breastfeeding is going and ask about any concerns, e.g., latching, positioning, or shyness when feeding.
- For latching/positioning concerns, refer to a lactation expert. Provide tips for other concerns.
- Remind her that the baby needs to be supplemented with vitamin D soon after birth.
- She should feed 8-12 times per day for the first four months and 6-8 times per day from four to six months.
- Encourage feeding on cue.
- Remind her to count diapers and refer to a physician if too few dirty and wet diapers are produced.
- Artificial nipples and pacifiers can be used after the first month.
- Help her get a breast pump if she has to return to school/work and provide information on its use.
- Remind her that breast milk is the only food or drink an infant needs in the first 6 months. Around 6 months, baby foods that are high in iron should be given, e.g., meat, chicken, beans and WIC cereals.

Infant is 6 months or older

- Discuss how breastfeeding is going and ask about any concerns, such as pumping.
- Remind her to start feeding complementary foods containing iron once the child shows all signs of being ready.
- Encourage feeding the infant a varied diet with different textures.
- Encourage her to use good food safety and oral health practices.
- Breastfeeding should continue for the first year or longer as mutually desired by mother and infant. Breastfeeding longer provides greater benefits to mother and infant.
- Remind her that regular cow's milk should not be given in the first year of life.

Is she weaning or planning to wean?

No

Provide positive reinforcement for breastfeeding!

Yes

- Ask her why she is planning to wean, helping to clear any misconceptions about breastfeeding. If she is weaning before six months, refer her to her primary health care provider.
- Help overcome challenges to breastfeeding by providing information, tips, support and referring to WIC or other lactation expert.

Postpartum Client is Not Breastfeeding

- Focus on pregnancy prevention.
- Answer any questions she may have about breastfeeding or general infant feeding infant feeding.
- Let her know that breastfeeding can resume after stopping. If interested in re-lactating, she should talk to a lactation expert.

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Interventions

The interventions and resources described below are geared toward breastfeeding promotion and support. An expanded list, which includes links to other infant feeding resources, is on page IF-26.

Print handouts back-to-back to save paper.

Promote breastfeeding as normal infant feeding.

- Use the WIC Lego Chart to illustrate the difference between the contents of breast milk and formula (also available in Spanish). If possible, provide a concrete example by physically counting out the differences using real Legos or blocks
- Use resources tailored to the client's needs, for example, resources for Hispanic or African-American families may be needed

Openly and non-judgmentally discuss the client's thoughts about breastfeeding. Talk about her specific challenges and help her to address them.

- Review the handout, Breastfeeding: Common Questions and Answers, with the client. Ask her about any questions or myths that she may have heard and discuss them with her
- Review the handout, Nutrition & Breastfeeding: Common Questions and Answers, with the client to answer common questions about nutrition, illness, and drug use while breastfeeding
- Case managers can use Tips for Addressing Breastfeeding Concerns: A Guide for Case Managers as a reference for providing suggestions/tips to address specific breastfeeding barriers

Help the client prepare for and sustain breastfeeding.

- Review My Action Plan for Breastfeeding. Help the client identify and check off which items she is willing to try
- Help the client complete a Birth Plan to provide to her health care provider. Birth Plans are available in English and in Spanish
- Help the client fill out My Breastfeeding Resources, so that she will have a list of resources for if and when the need arises. Discuss the different kinds of support available in her community, including support from friends and family
- To identify nutrition needs for a client who is breastfeeding, visit the USDA's SuperTracker website and enter in the client's information. Share the resources available in the *Adolescent Nutrition* guideline, including the handouts, MyPlate for Moms/My Nutrition Plan for Moms and Nutrition & Breastfeeding: Common Questions and Answers
- Provide the handout, Breastfeeding Checklist for My Baby and Me, to the client before she gives birth. This handout lists signs that breastfeeding is or is not going well in the early days after childbirth. If breastfeeding is not going well, the client should ask for help quickly, so that problems can be addressed and breastfeeding can ensue

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Tips for Addressing Breastfeeding Concerns: A Guide for Case Managers

To correct misinformation, staff should share consistent and accurate breastfeeding information.

Breastfeeding Concern	Suggested Response/Tips
Lacks information	• Ask the client what she knows and would like to know about breastfeeding. Early on, discuss breastfeeding as the normal choice for feeding babies and the risks of not breastfeeding for mothers, babies, children, families, and communities • Discuss breastfeeding each trimester using the *Infant Feeding* guideline and offer counseling and handouts based on the client's questions and concerns • Explain breast pumps and talk to her about getting one from WIC, a hospital or elsewhere • Tell the client that professional breastfeeding support is available after delivery. See the My Breastfeeding Resources handout for support
Fears she does not have enough milk	• Women of all ages make breast milk that is similar in quality • Newborns only need a small amount of milk because their stomachs are so small. See the stomach size graphic in the breastfeeding chapter • It is normal for infants to wake up and feed multiple times throughout the day and night because of their small stomach and their rapid growth • Making breast milk does not depend on breast size. Feeding often and not using pacifiers and other nipples in the first month helps produce enough breast milk • One way to keep track of milk production is to count the number of wet and dirty diapers. Show the client the handout, What to Expect in the First Week of Breastfeeding. Some weight loss is normal in the first week. See the "Referrals" section for when to refer to a health care provider
Experiences pain or has trouble latching on or positioning	• If done correctly, breastfeeding should not hurt, but may cause some tenderness at first • Pain can be a sign of incorrect latching or positioning at the breast • See the My Breastfeeding Resources handout to contact a lactation expert if there is pain or difficulty latching and positioning
Believes baby prefers formula	• Breast milk is preferred because it is much healthier than formula, provides skin-to-skin contact, and is digested more easily than formula • Babies do not prefer the taste of formula; they may prefer that bottled milk flows out quickly • If a bottle must be used to feed a baby, it is best to choose a nipple that does not pour the milk out fast and is about the size of the mother's own nipple. Feeding should follow the baby's cues of hunger and fullness • If the client is making little milk, the baby will look for a source of food. Refer as this may be a sign she is not making enough milk
Believes giving formula is easier than breastfeeding	Breastfeeding may seem harder than providing formula at first. At about six weeks, many mothers report that breastfeeding is easier, less work, and cheaper than formula-feeding. • Breastfeeding does not require warming, setting up, or bottle cleaning • All babies need to be held during feedings. Propping bottles is not safe • The client can return to work or school and use a pump to express milk for her baby while they are separated. Breast pumps are available from WIC or can be rented if the mother is not eligible for WIC • Mothers who breastfeed do not need to carry bottles, clean water, or formula with them when they travel. They do not have to prepare bottles at night • Mothers who breastfeed can save money on formula costs and can get extra free food for them from WIC and stay on WIC up to one year • Breastfed babies are healthier than formula-fed babies. This means fewer doctor visits, trips to the hospital, missed work days, and better lifelong health • The use of formula requires special care. Making a mistake mixing and storing

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	formula can make babies sick. Formulas have been recalled in the past due to production errors that could harm babies • In emergency situations, breast milk is the safest food for a child
Is embarrassed to breastfeed in public	Validate the client's feelings that many mothers feel embarrassed to breastfeed in public. Reassure her that it gets easier with practice. Tell her that women have a legal right to breastfeed in any public place. Show pictures of women breastfeeding discretely. The client can: • Practice breastfeeding discreetly in front of a mirror to find a technique that works for her • Breastfeed before leaving and right after coming home from short trips. • Watch baby cues and breastfeed before the baby becomes fussy. It is easier to feed a baby that is calm and not crying • Breastfeed in the car, a dressing room, or in a women's lounge area • Wear clothes that cover well, such as shirts that pull up from the waist or can be unbuttoned from the bottom. Use a shawl or baby blanket • If the client is still uncomfortable, recommended pumping breast milk at home and using a bottle with expressed milk in public
Is scared her body will change	• Breasts change due to pregnancy, not breastfeeding. Sagging may occur over time and is caused by many factors: genetics, pregnancy, aging, and gravity • Breasts may become slightly larger when breastfeeding because they are producing milk, but this change is usually temporary • Breastfeeding may help the client return to pre-pregnancy weight faster than if she formula feeds
Has to return to work or school	Let the client know that she can breastfeed and return to work or school. Encourage her to discuss her plans with her employer or school as early as possible. Are her employers aware of breastfeeding and pumping at work laws? Provide tips for breastfeeding and returning to work or school. The client can: • Breastfeed her baby at work/school if child care is close by • Express breast milk by regularly pumping during breaks at work or school. • Discuss laws that support pumping milk at work • Provide bottles of expressed milk a few weeks before returning to work or school to prepare baby for the bottle • Store expressed milk in a cooler or refrigerator for immediate use or freeze breast milk for use at a later time • Feed both breast milk and infant formula. Breastfeeding in the best option, but breast milk in a bottle is better than not giving breast milk
Does not want to follow a diet	• No special diet is necessary. Nutrition while breastfeeding is similar to nutrition in pregnancy. Even if the mother eats junk food, her breast milk is better than formula • A healthy diet is important for the mother's health and postpartum weight loss • Some mothers fear they must stop eating their favorite food or spices but that is not needed. Most babies like the different flavors of mother's diet and it may help them accept a greater food variety later in life • Refer to the handout, Nutrition & Breastfeeding: Common Questions and Answers, for answers to specific questions the client may ask
Wants other family or partner to feed the baby so they are involved	Fathers and family are an important part of the baby's life. They can: • Tell stories or read to the child to help the baby's development • Hold the baby and play games, such peek-a-boo and pat-a-cake • Feed expressed breast milk in a bottle and feed other foods once the baby is six months of age
Lack of role models who support breastfeeding	• Ask the client what she is hearing about breastfeeding from those closest to her. Help her identify any misinformation or challenges • Help her name role models who have successfully breastfed and are in similar circumstances (e.g. returned to work or school)

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	• Talk to her about professional, friend, and family support after delivery • Help her list those she will call for help and encouragement • Encourage the client to discuss breastfeeding with her partner, her mother, family and friends, and others important to her • Encourage her to attend a mother's support group at WIC, La Leche League, or others. She can invite her support team to go with her
Does not want to be solely responsible for feeding the baby or fears loss of freedom	• Many mothers like the fact that their baby knows it is mom who feeds them, even if others share in the care of the baby • Breastfeeding can help her feel more "free" because she will not have to deal with formula and cleaning bottles • Assure the client breastfeeding gets faster and less frequent and the mother will have more time between feedings • Acknowledge that many times mothers may feel pressured to "get away" from the baby. Not all mothers want or need to "get away" for a break. It is normal to not want to leave your baby • If mothers do desire time away from their baby they can ask friends for help with childcare and household chores. If she needs a day off, she can express her breast milk and have someone else feed her baby
Is not confident in her ability to breastfeed	• Tell the client that most women can breastfeed their babies and that you are here to help her. Validate her concerns and fears and tell her many women are not sure they can breastfeed and with practice she will become more confident • Ask the client how she feels about her ability to breastfeed her baby and help her plan and prepare for breastfeeding. Use the handout, My Breastfeeding Resources, to discuss available resources • Ask the client if she would like the help of a breastfeeding peer mentor (if available in your area); provide referrals to breastfeeding classes and consultation • Let the health care provider know if she lacks breastfeeding confidence • Help the client prepare to breastfeed. She can talk to her doctor about pre-existing medical conditions and medications she takes. She can share her plans to breastfeed with her employer, school, and doctor • Help her complete a birth plan to share with her health care provider and delivery hospital • She can talk to friends and family members about her decision to breastfeed. She can get support from case managers, peer counselors, WIC, or mothers in support groups like La Leche League • Let her know that breastfeeding might be hard at first but that she has support to meet and overcome any challenges. Review Table IF-3 (What to Expect while Breastfeeding: Birth to Six Weeks) and discuss the handout, My Action Plan for Breastfeeding

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Web Links Referenced/Additional Resources

Many free breastfeeding resources are available. Select resources based on the client's needs. Certain handouts, such as the WIC "Feed me!" handouts will be useful for all clients.

Title	Resource Type	URL
Resources hyperlinked in *Infant Feeding*, in order of presentation, where first referenced		
About WIC and how to apply	Webpage - resources	www.cdph.ca.gov/programs/wicworks/Pages/AboutWICandHowtoApply.aspx
WIC breastfeeding benefits	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-PantryForMomAndBabyComparisonSheetsForIndividualEd.pdf
Emergencies and breastfeeding	Webpage - resources	www.cdph.ca.gov/healthinfo/healthyliving/childfamily/Pages/EmergencyPreparednessInfantandYoungChildCareandFeeding.aspx
California breastfeeding laws	Webpage - resources	www.cdph.ca.gov/HEALTHINFO/HEALTHYLIVING/CHILDFAMILY/Pages/CaliforniaLawsRelatedtoBreastfeeding.aspx
International Lactation Consultant Association	Interactive tool – search for a lactation consultant	www.ilca.org
My Birth Plan – English	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyBirthplan-English.pdf
My Birth Plan – Spanish	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyBirthplan-Spanish.pdf
Work laws to support nurturing children	Document (PDF)	http://workfamilyca.org/resources/pdf/KeyLawPoster_ENG.pdf
Resources for breastfeeding and going back to work or school	Webpage - resources	www.breastfeedingworks.org/resources
La Leche League Mother-Mother Support Groups	Webpage—interactive tool	www.llli.org/webus.html
WIC locator	Webpage—interactive tool	www.apps.cdph.ca.gov/wic/resources/laSearch/search.asp
Lactation expert locator	Webpage—interactive tool	www.ilca.org/i4a/pages/index.cfm?pageid=3432
Examples of anticipatory guidance and questions for breastfeeding	Webpage - resources	www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/BFP-MdlHospToolkitPolicy10.aspx
Maternal illness and breastfeeding	Webpage - resources	www.llli.org/NB/NBmaternalillness.html
Infant illness and breastfeeding	Webpage - resources	www.llli.org/NB/NBinfantillness.html
Breastfeeding and birth control	Webpage - resources	www.cdph.ca.gov/BreastfeedingAndBirthControl
Your Guide to Breastfeeding (in English, Spanish and	Webpage - resources	www.womenshealth.gov/pub/bf.cfm

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Chinese and tailored versions for African-American and American Indian/Alaska Native women)		
WIC's Guide to Breastfeeding	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-AWICGuideToBreastfeeding.pdf
Laid Back Breastfeeding	Website	www.biologicalnurturing.com/
La Leche League Tear-Sheet Toolkit	Document (PDF)	http://www.llli.org/docs/0000000000000001WAB/laleche_ch_20_tear-sheet_toolkit.pdf
Video: "Your Baby Knows How to Latch On"	Video	www.youtube.com/watch?v=6Hdhiii573A
Cue feeding and normal infant behavior	Website	www.secretsofbabybehavior.com/
Handout about formula preparation safety	Document (PDF)	http://www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-WhenYouFeedMeFormula.pdf
Handout about cup use	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-TimeForACup.pdf
Handout about food safety	Document (PDF)	www.nal.usda.gov/wicworks/Sharing_Center/MO/Fight_BAC.pdf
WIC Lego Chart - English	Document (PDF)	www.cdph.ca.gov/programs/breastfeeding/Documents/MO-HowDoesForWAFBF-Eng.pdf
WIC Lego Chart - Spanish	Document (PDF)	www.cdph.ca.gov/programs/breastfeeding/Documents/MO-HowDoesForWAFBF-Sp.pdf
Breastfeeding resources for Hispanic families	Webpage - resources	www.nal.usda.gov/wicworks/Learning_Center/support_bond.html
Breastfeeding resources for African-American families	Webpage - resources	www.dshs.state.tx.us/wichd/bf/african_americanbf.shtm#Resources
Breastfeeding: Common Questions and Answers	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-BreastfeedingQA.pdf
Nutrition & Breastfeeding: Common Questions and Answers	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-NutritionBreastfeedingQA.pdf
My Action Plan for Breastfeeding	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyActionPlanforBreastfeeding.pdf
My Breastfeeding Resources	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyBFResources.pdf
SuperTracker	Webpage – interactive tool	www.choosemyplate.gov/SuperTracker/createprofile.aspx
Breastfeeding Checklist for My Baby and Me	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-BFChecklistforMyBabyandMe.pdf
Additional Resources		
WIC educational resources – women Includes breastfeeding and pregnancy; multiple languages available	Webpage - resources	www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx

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WIC educational resources – infants Includes baby food (WIC: Feed me! handouts), breastfeeding and infant crying and sleeping; multiple languages available	Webpage - resources	www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsInfants.aspx
Getting to Know Your Baby – Birth to Six Months	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/BabyBehavior/WIC-BB-GettingToKnowYourBabyBooklet.pdf
Handout on milk production	Document (PDF)	www.ameda.com/sites/default/files/26401020_1010%20MakeMilk%20EN_4c.pdf
Handout on latching and positioning	Document (PDF)	www.ameda.com/sites/default/files/26401022_1010%20HelpTakeBrst%20EN_4c.pdf
Website with inspirational breastfeeding stories	Document (PDF)	www.breastfeedforall.org/index.html
Breast Milk Counts - website for women with interactive tools	Website with interactive tools	www.breastmilkcounts.com
WIC Breastfeeding Peer Counselor Training Manual	Webpage - resources	www.cdph.ca.gov/programs/wicworks/Pages/WICBFPeerCounselor.aspx
La Leche League International – information and support groups	Website	http://www.llli.org/ http://www.llli.org/resources.html
California Food Guide Life Cycle: Normal Infant Feeding	Document (PDF)	www.dhcs.ca.gov/dataandstats/reports/Documents/CaliforniaFoodGuide/9InfantFeeding0-12months.pdf
California Department of Public Health breastfeeding website	Website	www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/BreastfeedingandHealthyLiving.aspx

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Referrals[14]

Note: This list is not exhaustive.

Refer the client to **her primary health care provider** if…

- The client has had breast surgery or injury and wants to breastfeed
- The client has a medical condition and wants to breastfeed
- The client uses medication and wants to breastfeed
- The client has red bumps on her breasts
- The client has breast pain that lasted more than 72 hours
- The client wants to use breast milk bank

Refer the client to **her infant's primary health care provider** if…

- The infant is breastfed and has not been given vitamin D supplements.
- The infant does not produce enough wet and/or dirty diapers (see page IF-13)
- The infant has any of the following symptoms:
    - A dry mouth
    - Red-colored urine
    - Yellow-skin, a symptom of jaundice
    - Not have enough wet or dirty diapers
    - Does not wake up and eat at least 8 times in 24 hours
    - The baby loses more than 10% of his/her body weight or the infant's weight does not return to original birth weight by ten days
- The infant is ill
- The infant has an allergic reaction

Refer the client to a **registered dietitian** if…

- If the client is concerned about feeding the infant certain food items
- If the client is vegan or if the client has a nutritional deficiency

Refer the client to a **lactation expert/lactation consultant** if…

- The client has flat or inverted nipples and wants to breastfeed
- The client has had breast surgery or injury and wants to breastfeed
- The client experiences pain while breastfeeding, or engorgement lasting longer than 24 hours
- The client and her baby are having trouble with latching and positioning
- The client does not hear swallowing sounds by the time the infant is 48 hours of age
- The infant refuses to breastfeed for more than 24 hours, or if the infant is too sleepy to breastfeed
- The infant breastfeeds for longer than one hour after milk supply is established
- The infant appears hungry after breastfeeding
- The client stopped breastfeeding, but wants to start again
- The client is using herbal remedies
- The client's health care provider instructed her to stop breastfeeding and she does not want to stop

Follow-Up

Review the action plan with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes, talk with her about what prevented her from doing so. Validate her feelings. Work with her to identify strategies for removing any barriers.

If the client made changes but still falls short of achieving her goals, praise her for the changes that she made. Work with her to revise her action plan (change or add goals).

If the client has made changes and achieved her goal, praise for the changes that she made. Help her develop a new action plan for maintaining the new behavior.

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Breastfeeding: Common Questions and Answers

Will it be easy to breastfeed my baby?

Breastfeeding can be tricky at first, as you and your baby both learn to breastfeed. This is normal, so don't give up! Breastfeeding gets easier once you AND your baby get the hang of it. Don't sit and worry--ask for help! You and your baby CAN learn how to breastfeed.

Does breastfeeding hurt?

Breastfeeding should not hurt. If you feel pain, ask WIC or your doctor for a lactation expert who can help your baby latch on properly. This should take care of any pain you feel.

Can I make enough breast milk?

Almost all mothers worry about it, but most mothers can make all the milk their baby needs! Your body starts making milk even when you are 4-5 months pregnant. Most teens can make milk just as well as adults. You can keep making milk by feeding often. So, don't let anyone—other than a medical professional—tell you that you don't have enough milk to breastfeed your baby. If you are worried, get help from WIC or a lactation expert right away!

What are helpful breastfeeding resources?

Ask your case manager to help you fill out the *My Breastfeeding Resources* handout. Keep it somewhere where you can find it easily.

Will my baby get enough breast milk?

Newborns have small stomachs, but they have to double their birth weight in 4 months. As your baby does not eat much at one time, feedings must be frequent (at least 8-12 times per day at first)! Make this easier for you by keeping your baby close by.

Call your baby's doctor if your baby has signs of not getting enough milk. To learn what those signs are, ask your case manager to go over the handout, *Breastfeeding Checklist for My Baby and Me*. Always call the doctor if you are concerned about your baby for any reason.

How can I prepare to start breastfeeding in the hospital?

Tell your doctors you want your baby in your room after birth. Keep your baby on your chest, skin to skin at least the first hour so your baby can get warm, relax and maybe even nurse. Tell your family and friends not to give pacifiers, formula, bottles or anything else to your baby. Try not to give your baby a pacifier or artificial nipple for the first month.

Keep your baby's doctor's appointments. This is a good time to talk to your doctor about how breastfeeding is going. If you are told to feed your baby formula, contact WIC or a lactation expert to get help.

Do I have to go on a special diet to breastfeed my baby?

Breastfeeding does not require a special diet or different foods. Ask your case manager to go over the handout, *Nutrition & Breastfeeding: Common Questions and Answers*, for more information.

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What is colostrum?

The first few days, you will have early milk called colostrum. This milk looks yellow and thick, different from later milk. It comes out in small amounts, so you might not even see it! It is important to feed your baby colostrum because it helps to prevent illness. It will slowly become more watery, so that your baby can learn how to suck, swallow and breathe – and not choke! Your milk will change to mature milk when your baby is about 2 weeks old to meet his or her needs.

Is it normal for breast milk to change in color or smell?

Yes. Your milk might look different in the beginning and end of a feeding, or change from week to week. It can even change color and flavor depending on what you eat. This is normal and is just what your baby needs. In fact, this is one of the special things about breast milk.

Is it possible to breastfeed and go to school or work?

You can still breastfeed while going to school or work. Here are some tips:

- Take as much time off as you can. You and your baby can get to know each other and learn to breastfeed.
- Find out if you can get a breast pump from WIC, your CPSP or health insurance company.
- Practice pumping for a couple of weeks before returning to work or school.
- Pump or hand express when you are away, so that you can keep making milk. Your baby can have that milk when you are not there. If you are working, California law requires your employer to allow you unpaid breaks and a private space for pumping, which is NOT a bathroom. If your school or work is close by, you may be able to go to your baby and breastfeed during breaks.
- Share brochures from www.breastfeedingworks.org/resources with your school or work.

Will breastfeeding take away my freedom?

Being a mother comes with challenges no matter how you feed. If you formula feed, you have to take bottles with you whenever you go out and you have to wash sticky bottles. At night, you have to go to the kitchen and prepare the bottle! Breastfeeding is ready-made food to go.

Won't my family, friends or partner feel left out if I breastfeed my baby?

They can do other things with your baby, such as read, sing, dance, take your baby for walks, and spend some "tummy time" with them. Tell your friends and family why breastfeeding is important for your health and your baby's health. They should be proud of you for breastfeeding.

What if I am embarrassed to breastfeed in public?

If you are embarrassed to breastfeed in public, you are like many others! Try these tips:

- Practice breastfeeding in front of a mirror to find a technique that works for you.
- Breastfeed right before leaving and right after coming home from short trips.
- Wear shirts that pull up from the waist or that can be unbuttoned from the bottom. Use a pretty shawl or baby blanket as a cover-up.
- Breastfeed before your baby cries, so it is not as hard to position him/her.
- Sit in the car, in a changing room, or in a sitting area to breastfeed.
- Pump breast milk at home and use a bottle with expressed milk in public.

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Nutrition & Breastfeeding:

Common Questions and Answers

Will I have to change my diet while breastfeeding?

Breastfeeding does not require a special diet or different foods. Everyone needs to follow a healthy diet of different fruits and vegetables, lean protein, low fat dairy and whole grains every day. The extra calories and nutrients that you need are easy to get when you choose healthy foods and you eat when you are hungry and stop when you are full. You can make a food plan just for you at www.choosemyplate.gov/supertracker-tools/daily-food-plans/moms.html.

Can I go on a diet to lose weight while breastfeeding?

It is not a good idea for breastfeeding women to lose weight quickly. Rapid changes in weight can affect the amount of milk you make. You will lose weight gradually as you make milk for your growing baby. It is best to make slow changes.

To lose weight safely and slowly, limit extra fats and sugars and exercise most days. Skipping meals is not healthy for anyone and can reduce your baby's milk. The more often and longer you breastfeed, the easier it is to lose weight.

Can I eat "junk food" while breastfeeding?

Eating "junk food," such as soda, French fries, sweets and chips will not hurt your baby. Breast milk from mothers who eat "junk food" is better for babies than formula.

Eat healthy foods for yourself. You will lose extra weight faster and you will feel less tired and get sick less often. To make healthier food choices, find out how much fat and sugar is in the foods that you eat. Get quick nutrition information at www.choosemyplate.gov/SuperTracker/foodapedia.aspx.

How much water do I need to drink?

Let your thirst be your guide. Many mothers find they get thirsty when they are breastfeeding, so have a glass of water nearby when you sit down to breastfeed. Mothers who drink too much water can lower their milk supply.

Do I need to drink milk or eat dairy foods to breastfeed?

You do not need to drink milk or eat dairy foods to breastfeed. You do need foods that are high in calcium and vitamin D in your diet while you are breastfeeding and all through your life, for strong and healthy bones. Dairy foods have calcium and as do many green leafy vegetables. Other options are calcium-fortified soy products, canned sardines and salmon. If you do not eat calcium-rich foods, ask your doctor if you need a calcium supplement.

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Can I have caffeine when I'm breastfeeding?

Drinking no more than three 8-ounce cups of coffee early in the day should not affect your baby. If your baby isn't sleeping well or is fussy, cut back on caffeine in coffee, tea, soft drinks, and chocolate. Caffeine can keep you awake, too. Most coffee cups and coffee drinks are larger than 8-ounces (1 cup). Avoid energy drinks.

Is drinking alcohol a good idea when breastfeeding?

In California, the legal drinking age is 21. Drinking alcohol when underage may put you at risk of losing custody of your baby.

Alcohol passes into breast milk and may be harmful for you and your baby. If you do drink alcohol, stop after one drink, and wait at least 3 hours before breastfeeding your baby. One drink of alcohol is 1 beer, 1 ½ ounces alcohol, or 5 ounces wine. If you have one drink and your baby cannot wait 3 hours to feed, give a bottle of warmed-up breast milk from the freezer. If you drink, make sure your baby is being safely cared for.

If you are not using birth control, do not drink alcohol. Alcohol can harm your next baby, even before you know you are pregnant.

Can vegetarians or vegans breastfeed?

Yes. You need protein, not animal products and meat, to make breast milk. Vegetarian and vegan women need to be sure to eat foods rich in vitamin B12, vitamin D, and calcium. Sometimes vegetarians need to take a vitamin, so talk to your doctor about taking one that meets your needs.

Does my baby need vitamin D if I breastfeed?

Yes. Breastfed babies should begin taking 400 IU of vitamin D soon after birth. Talk to your baby's doctor about Vitamin D for your baby as soon as possible. Most breastfed babies do not need any other vitamins.

Do I need vitamins?

Every day, eat a vitamin or cereal that has 400 mcg of folic acid. Your body needs folic acid for healthy hair, nails, skin and overall health. Folic acid also helps prevent serious birth defects that can happen before you know you are pregnant. If you think that you need other vitamins, talk to your doctor or to WIC staff. Even if you take a vitamin, try to eat different colors and textures of fresh and healthy foods every day.

Can I exercise while breastfeeding my child?

Yes. Exercising is part of being healthy. Exercise will not hurt your milk. Remember for your health and safety, start exercising gradually once your doctor says it's OK!

Phone number for a registered dietitian (if needed): _____

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My Breastfeeding Resources

Type of Resource	When to Use this Resource	Specialist/ Organization Name	General Contact Information/ Information about the Resource	Fill in your Local Contact Information (e.g. Phone Number)
Professional Breastfeeding Help	When you need help breastfeeding, have problems with latching on, feel pain, have questions about drug safety, etc.	WIC lactation expert (also called a lactation consultant)	Your local WIC site may have FREE lactation experts. To find the closest WIC, call 1-888-942-9675 or visit www.applications.dhs.ca.gov/wic/resources/laSearch/search.asp	
		Other lactation experts (hospital, private)	To find a lactation expert nearby, visit www.ilca.org/i4a/pages/index.cfm?pageid=3337	
Medical Help	For emergency situations	Emergency Room/ER	Call 9-11.	Call 9-11.
	If you have medical or health concerns for you or your baby.	Primary health care provider (doctor or clinic) for mother or baby	Call your health care provider or you baby's health care provider.	
Nutrition Help	If you have questions or concerns about your diet, weight, or food intake while breastfeeding.	Registered Dietitian	Call your health care provider or your local WIC agency. To find the closest WIC, call 1-888-942-9675 or visit www.applications.dhs.ca.gov/wic/resources/laSearch/search.asp	
Community Breastfeeding Support	When you would like breastfeeding support or to talk about breastfeeding and taking care of babies with professionals and experienced mothers.	La Leche League groups	To find a local La Leche League, visit www.llli.org/Web/California.html	
		WIC peer counseling is offered in some counties	Call your local WIC agency. To find the closest WIC, call 1-888-942-9675 or visit www.applications.dhs.ca.gov/wic/resources/laSearch/search.asp	

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		Other local support groups	Find support groups in your county at www.californiabreastfeeding.org.	
Helplines/ Warmlines	For answers to basic breastfeeding questions. Note: Lines may be temporarily closed or may not be able to provide a response immediately.	National Breastfeeding toll-free helpline	• Call 1-800-994-9662 • TDD for the hearing-impaired is 1-888-220-5446 • Available in English and Spanish M-F 9am-6pm EST	
		La Leche League 24-hour toll-free warmline	Call 1-877-4-LALECHE (1-877-452-5324)	
Milk Banks	To donate or get breast milk (this is a Medi-Cal benefit that requires a doctor's prescription).	Mother's Milk Bank of California	For information: • Visit www.sanjosemilkbank.com • Call 1-408-998-4550 • Email MothersMilkBank@hhs.co.santa-clara.ca.us	
Breastfeeding Pumps/Supplies	To purchase or rent a breast pump.	Local WIC agency	Call your local WIC agency. To find the closest WIC, call 1-888-942-9675 or visit www.applications.dhs.ca.gov/wic/resources/laSearch/search.asp	
		Hospital rental		
		Private rental		
		Local Breastfeeding Coalition	Visit www.californiabreastfeeding.org/memberscounty.html	
Other	For breastfeeding information, tips, and handouts.	California Department of Public Health	Visit http://cdph.ca.gov/breastfeeding	
		California Women, Infants, and Children (WIC)	Visit www.cdph.ca.gov/programs/wicworks/Pages/BreastfeedingResourcesforMoms.aspx.	
		Federal Office on Women's Health	Visit http://womenshealth.gov/breastfeeding	

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My Action Plan for Breastfeeding

Name: _____

Check the box for each step you are doing now to prepare for breastfeeding. Check the boxes for the steps you plan to take. Write down other ways you plan to prepare for breastfeeding.

Things that I can do to get ready for breastfeeding	Am Doing	Steps I Will Take
Learn more about breastfeeding by asking questions, attending classes, and reading. Ask my local WIC agency, medical provider, or clinic staff for more information and help.	☐	☐
Attend a breastfeeding support group at WIC, a doctor's office or La Leche League to talk to moms who have breastfeeding experience.	☐	☐
Talk to my family, husband/partner, friends, and my work or school about my plans to breastfeed my baby.	☐	☐
Fill out a birth plan and give it to my doctor. Ask your case manager for a copy of *My Birth Plan.*	☐	☐
Ask that my baby stay in my room after I give birth.	☐	☐
Start breastfeeding in the first hour after delivery.	☐	☐
Avoid pacifier use for the first month.	☐	☐
Complete and save *My Breastfeeding Resources.*	☐	☐
If I have trouble breastfeeding, I will ask for help instead of giving my baby formula.	☐	☐
Give my baby only breast milk for the first six months and try to breastfeed for at least a whole year. If I need to be away from my baby, I can pump breast milk.	☐	☐
Other ideas to help me breastfeed my baby:		
_____	☐	☐
_____	☐	☐

Signature: _____ Date: _____

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Breastfeeding Checklist for My Baby and Me

This checklist will help you know things are going well for you and your 4 day to 4 week old baby.
If you have any concerns, call the baby's doctor and a lactation expert.

Check that breastfeeding is going well for you and for your baby.

My baby is over 4 days old and:

- ☐ Breastfeeds at least 8 times in 24 hours.
- ☐ Makes swallowing sounds during most of the feeding.
- ☐ Makes at least 4 dirty diapers in 24 hours.
- ☐ Has dirty diapers that are lighter in color and not so dark and thick.
- ☐ Only breastfeeds and does not take formula or other liquids.

I delivered more than 4 days ago and:

- ☐ I enjoy breastfeeding my baby.
- ☐ Latching baby on to feed is getting easier.
- ☐ After my baby latches on and I count to 10, my nipples do not hurt.
- ☐ My breasts were larger and heavier after delivery.
- ☐ My breasts feel softer after I breastfeed.
- ☐ I believe that breastfeeding is going well.

Check if you and your baby need help with breastfeeding. If you check any of these boxes, contact your baby's doctor or a lactation expert and/or WIC to get help quickly.

My baby is over 4 days old and:

- ☐ Sleeps more than 5 hours at a time
- ☐ Does not wake up to breastfeed at least 8 times every 24 hours.
- ☐ Does not make swallowing sounds during the most of the feeding.
- ☐ Wet diapers are not heavy and have a pink color.
- ☐ Does not make at least 4 dirty diapers in 24 hours.
- ☐ The dirty diapers are dark and thick.
- ☐ Breastfeeds and drinks formula and other liquids.
- ☐ Has yellow colored skin and eyes.

I delivered more than 4 days ago and:

- ☐ My breasts did not get larger and heavier after delivery.
- ☐ Latching baby on is difficult.
- ☐ My breasts do not feel softer after I breastfeed.
- ☐ I worry I don't have enough milk.
- ☐ I can't tell when my baby is hungry and when my baby is full.
- ☐ After my baby latches on and I count to 10, my nipples still hurt.
- ☐ I change sanitary pads every hour because I bleed so much.
- ☐ I do not think breastfeeding is going well.

Baby's Doctor_____ Phone_____
My Doctor_____ Phone_____
Lactation Expert_____ Phone_____
WIC's Phone_____

Baby's Birth Date_____ Baby's Birth Weight_____ Baby's Discharge Weight _____

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My Birth Plan

(For a normal, full-term delivery)

Name: _____

My plan is to:

- ☐ 1. Have my labor start and stop without drugs, unless medically required
- ☐ 2. Have my chosen support people stay with me
- ☐ 3. Drink clear liquids and eat light foods during early labor
- ☐ 4. Move, change positions, take a shower, have a massage and walk, as much as possible during labor
- ☐ 5. Have a Heparin Lock versus a continuous drip IV for quick access in case of an emergency
- ☐ 6. Hold my baby skin-to-skin immediately after birth
- ☐ 7. Have my baby's tests performed while in contact with me so my baby is not taken from me until after he/she has breastfed
- ☐ 8. Have 24-hour rooming in
- ☐ 9. Receive help and education to breastfeed successfully
- ☐ 10. Have my baby brought to me if for some reason he/she is not in my room and is giving hunger cues, such as sucking hands or making sucking sounds, moving the head towards a person or, in very sleepy babies, eye movements under the eyelids <u>before</u> he/she is crying
- ☐ 11. Get an appointment for a health checkup for my baby upon discharge and be given the names of lactation experts, in case I need help with breastfeeding
- ☐ 12. Be given instruction on the use of an electric breast pump if my baby is unable to breastfeed or is separated from me due to a medical condition within 6 hours after delivery

I do <u>not</u> want:

- ☐ A. My bag of waters broken, or to have an episiotomy or other surgery done unless medically necessary
- ☐ B. My baby given a pacifier, bottles, water or formula without my consent and the medical order of his/her doctor

_____ _____

Signature of the patient *Date signed*

Copies for doctor, hospital, clinic and patient

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Mi plan de parto

(Para el parto de un bebé a nacido tiempo completo y saludable)

Nombre: _____

Mi plan es:

- ☐ 1. Permitir que el parto comience y se demore sin el uso de drogas, a menos que sean requeridas por un problema médico
- ☐ 2. Que las personas que yo elija como equipo de apoyo me acompañen durante el parto
- ☐ 3. Ingerir líquidos claros y comidas livianas durante el parto
- ☐ 4. Moverme, cambiar de posición, tomarme una ducha, recibir un masaje o caminar lo más posible durante el parto
- ☐ 5. Tener un acceso a mi vena que me permita moverme y la vez ofrezca acceso rápido en caso de emergencia (Heparin Lock)
- ☐ 6. Poner mi bebé sobre mi pecho, piel a piel en cuanto nazca
- ☐ 7. Que hagan los exámenes de mi bebé mientras esté en contacto conmigo para que no se separe de mí hasta que haya tomado el pecho
- ☐ 8. Tener mi bebé en mi habitación las 24 horas del día
- ☐ 9. Recibir ayuda y educación para lograr dar el pecho efectivamente
- ☐ 10. Si por alguna razón mi bebé no está conmigo, que me lo traigan en cuanto dé señales de tener hambre como: chuparse las manos, hacer ruidos de chupo, mover su cabecita hacia una persona, o, si es muy dormilón, mover sus ojos debajo de los párpados antes que comience a llorar
- ☐ 11. Ya tener una cita para un examen físico de mi bebé al darme de alta y recibir los nombres de personas que me puedan ayudar si necesito ayuda con la lactancia
- ☐ 12. Que si mi bebé no puede tomar pecho o está separado de mí por una condición médica, me ofrecerán un sacaleches e instrucciones para su uso dentro de 6 horas después del parto

No deseo que:

- ☐ A. Me rompan las fuentes o me hagan una episiotomía u otra cirugía a menos que sea por necesidad médica
- ☐ B. Le den un chupón, mamilas, agua o fórmula a mi bebé sin mi permiso y las órdenes del médico

_____ _____

Firma de la paciente *Fecha*

Copias para el médico, el hospital y la paciente

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Appendix B

Sample Situations When Mothers Should Not Breastfeed[1]

In the following rare situations, the client should not breastfeed and should be referred to her primary healthcare provider for further information:

1. If the infant is diagnosed with galactosemia.
2. If the mother is positive for human T=-cell lymphotrophic Virus Type I /II or untreated brucellosis.
3. If the mother has active untreated Tuberculosis, she must stay away from her baby until she has completed 2 weeks of therapy as prescribed by her primary care provider. During this time, her expressed human milk can be used. After 2 weeks, she can be tested, and if no longer infectious she can breastfeed her baby while taking the medications to control the TB infection.
4. Mothers who develop varicella (Chicken Pox) between 5 days before delivery to 2 days after delivery should be separated from their infants but can provide their expressed human milk.
5. Mothers with H1N1 should temporarily be isolated from their babies until they have no more fever, but can provide their milk for their baby.
6. In the US, a mother with HIV/AIDS should be giving her baby formula.
7. If mother needs to have chemotherapy, or radioactive medications, they can affect her baby if she breastfeeds. In some cases she can "pump and dump" and return to breastfeeding after completing her medications. Have her check with her baby's health care provider.
8. If the mother is using street drugs, marijuana, or is drinking excessive alcohol (make appropriate referrals if such behavior is suspected).The child may suffer from inadequate care or endangerment, and should be referred to their primary care provider.

Reference

1. Breastfeeding and the use of human milk. *PEDIATRICS.* Mar 2012;129(3):e827-841.

Appendix C

Mixing/Feeding Infant Formula[1]

Iron

The infant formulas currently available in the United States are either

1. **Iron-fortified** with about **12** milligrams of iron per liter, or
2. **Low iron** with about **2** milligrams of iron per liter

The American Academy of Pediatrics (AAP) recommends that formula-fed infants receive an **iron-fortified formula** as a way of reducing the prevalence of iron-deficiency anemia.

If infants are fed a low-iron formula, a health care professional may recommend a supplemental source of iron, particularly after 4 months old.

Infant Formula Products

Baby formula comes in three forms:

- **Powder**: the least expensive of the infant formulas. It must be mixed with water before feeding.
- **Liquid concentrate:** usually mixed with an equal amount of water.
- **Ready-to-feed:** the most expensive form of formula that requires no mixing.

The protein source varies among different types of infant formula.

Safety Issues

- ***Formula preparation.*** In most cases, it's safe to mix formula using ordinary cold tap water that's brought to a boil and then boiled for one minute and cooled. According to the World Health Organization, recent studies suggest that mixing powdered formula with water at a temperature of at least 70 degree C—158 degrees F—creates a high probability that the formula will not contain the bacterium *Enterobacter sakazakii*—a rare cause of bloodstream and central nervous system infections. Remember that formula made with hot water needs to be cooled quickly to body temperature—about 98 degrees F—if it is being fed to the baby immediately. If the formula is not being fed immediately, refrigerate it right away and keep refrigerated until feeding.
- ***Bottles and nipples.*** The Mayo Clinic says you may want to consider sterilizing bottles and nipples before first use. After that, you can clean them in the dishwasher or wash them by hand with soapy water.
- ***Water.*** Use the exact amount of water recommended on the label. Under-diluted formula can cause problems related to dehydration. Over-diluted formula will not provide adequate nutrition, and, if fed for an extended period of time, may result in slower growth.
- ***Bottled water.*** If consumers use non-sterile bottled water for formula preparation, they should follow the same directions as described for tap water above. Some companies sell bottled water that is marketed for infants and for use in mixing with infant formula. This bottled water is required to meet general FDA quality requirements for bottled water. If the bottled water is not sterile, the label must also indicate this. Water that is marketed by the manufacturer as sterile and for infants must meet FDA's general requirements for commercial sterility.
- ***Formula warming.*** This isn't necessary for proper nutrition. The best way to warm a bottle of formula is by placing the bottle in a pot of water and heating it on the stove until warm (at body temperature). Never use microwave ovens for heating infant formulas. Microwaving may cause the bottle to remain cool while hot spots develop in the formula. Overheated formula can cause serious burns to the baby.
- ***"Use by" date.*** This is the date after which a package or container of infant formula should not be fed to infants. It indicates that the manufacturer guarantees the nutrient content and the general acceptability of the quality of the formula up to that date. FDA regulations require this date on each container of infant formula.
- ***Storage.*** Manufacturers must include instructions on infant formula packaging for before and after the container is opened. They must also include information on the storage and disposal of prepared formula.
- ***Freezing formula.*** This is not recommended, as it may cause a separation of the product's components.

- ***Homemade formula.*** FDA does not regulate or recommend recipes for these. Errors in selecting and combining ingredients for homemade formula can have serious consequences affecting the nutrition and overall well-being of the infant.
- ***Counterfeit formula.*** These formulas have been diverted from normal distribution channels and relabeled to misrepresent quality or identity. An example is illegal labeling of the "use by" date. Infant formula may also be illegally relabeled to disguise its true content. This can lead to serious adverse health consequences for infants who cannot tolerate certain ingredients.
- ***Formula changes.*** Always look for any changes in formula color, smell, or taste. If you buy formula by the case, make sure the lot numbers and "use by" dates on the containers and boxes match. Also, check containers for damage, and call the manufacturer's toll-free number with any concerns or questions.
- You may contact at 1-888-463-6332 or visit medwatch online voluntary reporting to report an illness, injury or other problem believed to be related to infant formula.
- Notify manufacturers about problems, complaints, or injuries caused by their products by calling the toll-free telephone numbers listed on their product labels.

Reference

1. U.S. Food and Drug Administration. FDA 101: Infant Formula. *For Consumers* 2007; http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm048694.htm.

Other Resources

- State of Washington's WIC program Staff Education: http://www.doh.wa.gov/cfh/WIC/materials/clinic/inservices/infantformula.pdf
- California Women, Infant and Children (WIC) Program: www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-WhenYouFeedMeFormula.pdf
- United States Department of Agriculture (USDA): www.nal.usda.gov/wicworks/Topics/FG/Chapter4_InfantFormulaFeeding.pdf

Nutrition and Physical Activity Screen

Why Screen?

Adolescence is an opportune time to improve eating and physical activity habits. It is important to screen each client to determine individual strengths and factors that affect the client's food and physical activity choices.

Provide nutrition education based on what the client needs and wants to know. The client's action plan should include changes in behavior that the client can make realistically and willingly.

Using the *Nutrition and Physical Activity Questions*

The nutrition and physical activity questions may be used to screen for your client's nutrition strengths and identify areas they are willing to work on. The questions include eating behaviors, weight and body image, physical activity, and the client's readiness for making changes in these areas.

Pregnant adolescents are at high risk nutritionally; ideally, their dietary intake and physical activity should be assessed by a

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Inside this Section

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NS-2 Client Readiness for Change

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NS-4 *Nutrition and Physical Activity Questions*

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- NS-15 Nutrition and Physical Activity Screen Worksheet

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registered dietitian or physician specializing in obstetrical care.

The questions within the *Nutrition and Physical Activity Screen* should not be given to the client to fill out, but rather should facilitate discussion between the client and the case manager. The food habit questions provide an overview of the client's eating behaviors.

The questions asked should be based on the client's needs. For example, if you suspect that your client has an eating disorder, you may want to screen for only that at one visit.

The question responses highlighted in gray indicate the client may be at high risk and may need a referral. Resources are provided at the end of each question series. For counseling tips, see "Stages of Change," and "Strategies to Promote Healthy Eating and Physical Activity to Adolescents" in Appendices E and F.

Interventions/Referrals

For further information about topics covered in the questions, refer to suggested sections in the Nutrition and Physical Activity Guidelines for Adolescents. These sections provide:

1. Background information on the topic covered
2. Screening or self-assessment questions
3. Suggestions for intervention activities
4. Criteria/resources for referrals
5. Handouts for the case manager to review with the client to further assess, improve understanding and set goals for behavior change
6. Web Links Referenced/Additional Resources

Client Readiness for Change

It is important to identify how ready, if at all, the client is to make changes in behavior that will improve nutrition and physical activity. By using motivational interviewing techniques, the client can be an active participant in his or her behavior change. For information, see Figure NS-1.

Figure NS-1 Motivational Interviewing

Motivational Interviewing is a learner-centered counseling method designed to support behavior change. Although originally developed for the drug and alcohol field, motivational interviewing has been used with success in the nutrition field.

Steps for motivational interviewing:

1. **Ask open-ended questions:**
   Elicit what is important to the client. Demonstrate genuine interest and respect. Example: *"How would you like things to be different?"*

2. **Use affirmations:**
   Empower clients by using language that affirms their strengths. Example: *"I'm really glad that you brought that up."*

3. **Form reflective statements:**
   Show clients that you are listening and understand issues from their perspective by using reflective statements. Using reflective statements also allow individuals to hear their own words and resolve their ambivalence. Example: *"I hear you say, 'I can make this change if I add it to my calendar.'"*

4. **Assist client in goal-setting**
   Assist client to develop next steps they are willing to take and information or assistance still needed.

5. **Provide a summary**
   Highlight important aspects of the discussion. Communicate interest and understanding of an individual's perspective, including any ambivalence.

For more resources on motivational interviewing, visit www.motivationalinterview.org.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
Nutrition and Physical Activity Guidelines for Adolescents	Webpage	http://www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx
Motivational Interviewing	Website	www.motivationalinterview.org
MyPlate Resources Includes *MyPlate for Moms* in English and Spanish	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/MyPlateResources.aspx
SuperTracker Free tool for nutrition and physical activity tracking	Webpage - interactive tool	www.choosemyplate.gov/SuperTracker/createprofile.aspx
***Steps to Take* nutrition, physical activity and breastfeeding handouts** in English and Spanish	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx
WIC nutrition handouts for Women in English and Spanish	Webpage	www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx
United States Department of Agriculture's website: Choose My Plate	Website	www.choosemyplate.gov
Fast Food Survival Guide	Document (PDF)	www.ces.ncsu.edu/EFNEP/fesmm_handouts/makingSmartChoicesEatingFastFood.pdf
Recipes/cookbooks for adolescents	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx
California Baby Behavior Campaign resources	Webpage	www.cdph.ca.gov/programs/wicworks/Pages/WICCaliforniaBabyBehaviorCampaign.aspx
The Dietary Guidelines for Americans	Document (PDF)	www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/PolicyDoc.pdf
Farmers markets search tool	Webpage - interactive tool	http://apps.ams.usda.gov/FarmersMarkets/
Nutrition and Physical Activity Initiative - Maternal, Child and Adolescent Health	Webpage	www.cdph.ca.gov/programs/nutiritionandphysicalactivity/Pages/default.aspx
Comprehensive website for adolescent girls' health	Website	www.girlshealth.gov/
Understanding Nutrition Labels Tools to teach how to read nutrition labels	Webpage	www.nutrition.gov/shopping-cooking-meal-planning/food-labels

Reference

1. Sports drinks and energy drinks for children and adolescents: are they appropriate? *PEDIATRICS.* Jun 2011;127(6):1182-1189.

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Nutrition and Physical Activity Questions

The nutrition and physical activity questions may be used to screen for your client's nutrition strengths and identify areas they are willing to work on. The questions include eating behaviors, weight and body image, physical activity, and the client's readiness for making changes in these areas.

Pregnant adolescents are at high risk nutritionally; ideally, their dietary intake and physical activity should be assessed by a registered dietitian or physician specializing in obstetrical care.

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Food Groups

MyPlate for Teens
Review the *MyPlate for Teens* to identify strengths and weakness. Use *My Nutrition Plan for Teens* to set nutrition goals. These are located at:
www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyPlateforTeens.pdf .

If the adolescent is pregnant or breastfeeding, use *MyPlate for Moms* (also available in Spanish). These resources are available at
www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/MyPlateResources.aspx .

SuperTracker
Another option, if you have ready access to the internet, is to use the food tracker located at www.supertracker.usda.gov. Have your client assess his or her intake of food groups. Daily amounts for each food group are based on age, sex, height, and other factors, so they differ from person to person. The food tracker evaluates one's diet based on his or her individual needs.

Food Diary
This tool is useful for the adolescent who does not have a good recall of how they eat on a usual basis (page NS-6).

Resource(s):

Use the *Adolescent Nutrition* section for background information, tips and additional resources on nutrition. This section can be found at
www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at
www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at
www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

Choosemyplate.gov has useful information and tips for meeting food and physical activity recommendations.

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Food Diary for: _____ Date: _____

Refer to *MyPlate for Teens* for example foods in each food group. Track your daily intake and the goal provided!

Goal	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Vegetables I need at least **3** choices per day.							
Protein I need at least **6** choices per day.							
Grains I need at least **6** choices per day.							
Fruits I need at least **2** choices per day.							
Dairy I need at least **4** choices per day.							

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Food Habits

Client name _____

For each question, **circle** the answer which best describes the client's usual behavior.

1. How many days each week do you skip breakfast, lunch or dinner?
   None 1-2 days 3-5 days 6-7 days

2. Do you limit or avoid any food or food groups (such as meat or dairy)?
   Yes No If yes, explain: _____

3. How often do you eat any of these foods?
   - Candy, chocolate, chips, cookies
   - Donuts, muffins, biscuits, cake, sweet bread
   - Ice cream, frozen yogurt
   - Sour cream, mayonnaise

   Never Rarely A few times per week Daily

4. Yesterday, did you drink any sweetened beverages or energy drinks (e.g. regular soda, fruit drinks, sweetened tea/coffee drinks, Kool-Aid® punch or sports drinks)?
   Yes No If yes, explain: _____
   If yes, how much did you drink? _____

5. How often do you eat or take out a meal from a fast food restaurant?
   Never Rarely A few times per week Daily

6. How often do you take a multivitamin or folic acid supplement in a week?
   Never 1-2 days 3-5 days 6-7 days

7. Do you take any other vitamin or mineral supplements, such as iron and calcium?
   Yes No
   If so, what brand or type?
   _____

8. Do you use home remedies or herbal supplements, such as chamomile or ginseng?
   Daily Weekly Rarely Never
   If so, what brand or type?
   _____

9. Do you use any pills or teas to lose weight?
   Yes No

10. Do you eat, drink or take anything to build muscle or increase your weight?
    Daily Weekly Rarely Never
    If so, what brand or type?
    _____

11. Are you a vegetarian?
    Yes No

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12. Are you on a special diet?
    Yes No If yes, explain: _____

13. Has your doctor ever told you that you have anemia or another nutrition-related health issue?
    Yes No If yes, explain: _____

14. **Ask if pregnant:**
    A. Do you ever eat any of the following:
    - Raw or undercooked eggs, meat, shellfish, fish, including sushi
    - Deli meat or hot dogs without heating or steaming
    - Unpasteurized milk, cheese or juice, including soft cheeses such as feta, blue cheese, queso de crema, asadero, queso fresco, panela, or homemade
    - Alfalfa/mung bean sprouts
    - Shark, swordfish, king mackerel, or tilefish
    - Albacore tuna >6 ounces/week

    B. Do you eat fish or shellfish more than 2x/week?
    Yes No If yes, explain: _____
    C. Do you eat fish caught locally by self, friends or family more than 1x/week?
    Yes No If yes, explain: _____
    D. Have you fasted during this pregnancy or do you plan to fast?
    Yes No If yes, explain: _____

Interpreting Responses:

The responses in gray indicate the client may be at high risk nutritionally and may need a referral.

Skipped Meals: Frequently missed meals can result in the inadequate intake of calories and nutrients or can lead to overeating at other meals and snacks. Explore the client's reasons for skipped meals with them. See the *Weight Management* section for healthy snack ideas and tips for healthy eating.

Unhealthy Beverages: Sugar-sweetened beverages, such as soda, sports drinks, juice and energy drinks can contribute to weight gain due to the extra calories and sugar. Note that the American Academy of Pediatrics recommends that energy drinks never be consumed by children and adolescents due to the high caffeine content.[1] Sweetened or non-nutritive beverages also displace healthier beverages such as lowfat milk or water.

Convenience/Fast Food: Convenience and fast foods are popular and easily available. Frequent consumption increases fat, calorie, and salt intake and reduces intake of fiber and some vitamins and minerals. Use the handout below to discuss options for healthier food choices at fast food restaurants: www.ces.ncsu.edu/EFNEP/fesmm_handouts/makingSmartChoicesEatingFastFood.pdf

Vegetarian Diets: Because the term "vegetarian" is often used loosely, refer to the *Vegetarian Teens* section for additional screening questions for clients who say they are vegetarian.

Vitamin/Mineral/Herbal Supplements: Adolescents who may become pregnant or are pregnant need to consume folic acid daily. One way is by taking a vitamin supplement. See the *Folic Acid and Folate* section for details.

Vitamin and mineral supplements, although helpful in some instances, such as in the case of folic acid, cannot take the place of a healthy diet. If the client insists on taking supplements, emphasize the need to avoid high doses that can be toxic. This can be done by encouraging or helping a teen to choose a multivitamin that meets all her needs, rather than taking multiple pills. Encourage her to talk to her health care provider, registered dietitian or a pharmacist if she has any questions about what quantity is safe for her

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to take. Herbal supplements are not regulated by the Food and Drug Administration (FDA) and have not been satisfactorily researched to determine their safe use for adolescents.

Protein Powders and Creatine: Protein recommendations even for athletes can generally be met through diet alone, without the use of protein or amino acid supplements.

The effect of creatine on the growing adolescent body is unknown. Like herbal supplements, creatine is not regulated by the FDA. There is no monitoring of the purity or strength of the supplement.

If an adolescent is using supplements, refer to a registered dietitian.

Special Diets: Clients on special diets for medical reasons, such as diabetes, should be instructed by a registered dietitian and should receive ongoing monitoring of their medical condition by their health care provider.

Food Safety: Pregnant women and infants are at greater risk from food poisoning because their immune systems are weaker than healthy adults and children. The foods listed in Question 14 may contain harmful bacteria or toxic chemicals.

Fasting: Fasting is not recommended during pregnancy. Most religions and cultures give exceptions to fasting practices during pregnancy.

Resource(s):

The *Weight Management*, *Vegetarian Teens* and *Folic Acid and Folate* sections can be found in the Adolescent Nutrition Guidelines found at www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

Choosemyplate.gov has useful information and tips for meeting food and physical activity recommendations.

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Food Security

Client name _____

For each question, **circle** the answer which best describes the client's usual behavior or situation.

1. In the past month, were you worried whether your food would run out before you or your family had money to buy more?
   Yes No

2. In the past month, were there times when the food that you or your family bought just did not last and you did not have money to get more?
   Yes No

3. Do you use any of the following food resources?

• CalFresh (food stamps)	Yes	**No**
• WIC	Yes	**No**
• Free food, such as from food banks, pantries or soup kitchen	Yes	**No**
• Free or reduced-price school meals	Yes	**No**

Interpreting Responses:

The responses in gray indicate the client may be at high risk nutritionally and may need a referral.

Encourage the client to use available resources. Refer to food assistance and nutrition programs, such as WIC, if the client is eligible.

Resource(s):

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

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Food Shopping and Preparation

Client name _____

For each question, **circle** the answer which best describes the client's usual behavior or facilities.

1. Who buys the food that you and your family eat?
   I do | My parent(s) | My spouse or partner | Other: _____

   If not you, is the person who does open to suggestions and education? Yes **No**

2. Is a shopping list used?
   Yes | **No** | Sometimes

3. Who plans and prepares the meals that you eat?
   I do | My parent(s) | My spouse or partner | Other: _____

   If not you, is the person who does open to suggestions and education? Yes **No**

4. Where you live, do you have...
   - Enough space for food preparation? Yes **No**
   - Electricity? Yes **No**
   - Clean running water? Yes **No**
   - A working stove? Yes **No**
   - A working oven? Yes **No**
   - A working microwave? Yes **No**
   - A working hot plate? Yes No
   - A working refrigerator? Yes **No**

Interpreting Responses:

The responses in gray indicate the client may be at high risk nutritionally and may need a referral.

Resource(s):

If appropriate, share healthy recipes with the client or other person responsible for the family's meals. This resource can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

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Body Image, Disordered Eating, and Weight Management

Client name _____

For each question, **circle** the answer which best describes the client's usual behavior or feelings.

1.	Are you happy with your body size and shape?	Yes	**No**
2.	Do you worry about gaining weight?	**Yes**	No
3.	Do you think often about losing weight?	**Yes**	No
4.	Are you on a diet or do you limit your food intake to lose weight?	**Yes**	No
5.	Does your mood depend on your weight (e.g., if you gain one pound you are depressed, irritable, etc.)	**Yes**	No
6.	Do you feel bad about yourself if you gain weight?	**Yes**	No
7.	If you gain one pound, do you worry that you will continue to gain weight?	**Yes**	No
8.	Do you think of certain foods as being either "good" or "bad" and feel guilty about eating "bad" foods?	**Yes**	No
9.	Do you use foods to comfort yourself?	**Yes**	No
10.	Do you ever feel out of control when eating?	**Yes**	No
11.	Do you spend a significant amount of time thinking about food and when you will eat?	**Yes**	No
12.	Do you vomit or have you thought about vomiting as a way to control your weight?	**Yes**	No
13.	Do you try to hide how much you eat?	**Yes**	No
14.	Do you use laxatives, water pills, exercise, etc., to prevent weight gain?	**Yes**	No
15.	Do you eat until you feel stuffed?	**Yes**	No

Interpreting Responses:

The responses in gray indicate the client may have disordered eating patterns or possibly an eating disorder.

Resource(s):

See the *Body Image and Disordered Eating* and *Weight Management* sections for further screening and intervention activities. These sections can be found at www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

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Physical Activity

Client name _____

For each question, **circle** the answer which best describes the client's usual behavior.

1. **If not pregnant, ask:** On how many of the past seven days did you participate *in moderate or vigorous* physical activity (for example, walking, dancing, riding a bike or swimming) for at least 60 minutes?
   0-1 **2-3** **4-5** 6-7

2. **If pregnant, ask:** On how many of the past seven days did you participate *in moderate or vigorous* physical activity (for example, walking, dancing, or swimming) for at least 30 minutes?
   0-1 **2-3** **4-5** 6-7

3. Outside of school and work, how many hours do you spend per day watching television, going online, or playing computer games?
   0-1 **2-3** **4-5** **5+**

Check the appropriate box based on the client's response to question 1.

❑ Client meets the recommendation of at least 60 minutes (30 minutes if pregnant) of moderate to vigorous physical activity each day. Congratulate the client and encourage him/her to continue being physically active at least 60 minutes each day.

❑ Client does not meet the minimum physical activity recommendation of at least 60 minutes (30 minutes if pregnant) of moderate to vigorous physical activity each day. Use the *Physical Activity* section for further screening and intervention activities.

Interpreting Responses:

The responses in gray indicate the client is not meeting physical activity recommendations. Most adolescents need 60 minutes or more of moderately to vigorous physical activity each day.

Excessive physical activity (too often and/or too intense) may be a sign of an eating disorder.

Watching television, going online, or playing computer games for an excessive amount of time can expose adolescents to unhealthy food advertisements and replace opportunities for physical activity. This could increase their risk for becoming overweight or obese. Sedentary activities should be limited to one to two hours per day.

Resource(s):

Use the *Physical Activity* section for further screening and intervention activities. This section can be found at www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

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Infant Feeding

Client name _____

For each question, **circle** the answer which best describes the client's response.

1. What are your questions about feeding your baby? _____

2. What do you think about breastfeeding your new baby?
   Not interested Thinking about it Wants to Definitely will Other: _____

3. What would prevent you from breastfeeding? _____
   _____

4. What can help you breastfeed? _____
   _____

5. Have you ever breastfed or tried to breastfeed?
   No Yes If yes, how long? _____

   Did you breastfeed as long as you wanted?
   Yes **No** If no, explain: _____
   Explain: _____
   _____

6. Who can you go to for help feeding your baby?_____

Interpreting Responses:

All teens can benefit from breastfeeding support and planning. The responses in gray indicate the client is at risk of not breastfeeding her baby and needs **extra** education and support:

- Discuss personal barriers to breastfeeding or what she may have heard or experienced.
- Provide accurate information, seeking advice from a professional when necessary.
- Provide tips to overcome the barriers mentioned.
- Have her identify solutions for overcoming barriers.
- Encourage her to learn more about breastfeeding by reading, attending breastfeeding groups, such as La Leche League, and talking to mothers who have breastfed.

Resource(s):

Use the *Infant Feeding* section for information on infant feeding, including how to promote and sustain breastfeeding. This section can be found at www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/TeenGuidelines.aspx .

Use the *California Baby Behavior Campaign* to help parents understand normal infant behavior, resulting in longer breastfeeding duration and less overfeeding. Resources can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICCaliforniaBabyBehaviorCampaign.aspx .

Steps to Take nutrition, physical activity and breastfeeding handouts in English and Spanish can be found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/NutritionPhysicalActivityandBreastfeeding.aspx .

WIC educational materials for women in English and Spanish can be found at www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsWomen.aspx .

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Nutrition and Physical Activity Screen Worksheet

Client name _____

Use this worksheet to summarize and follow up on any nutrition and physical activity issues identified.

Nutrition/Physical Activity Risk with Date Risk is Identified	Intervention Planned (Goals and/or Referrals)	Outcome of Intervention with Date(s) of Follow-Up

Comments:

_____

_____

_____

_____

_____

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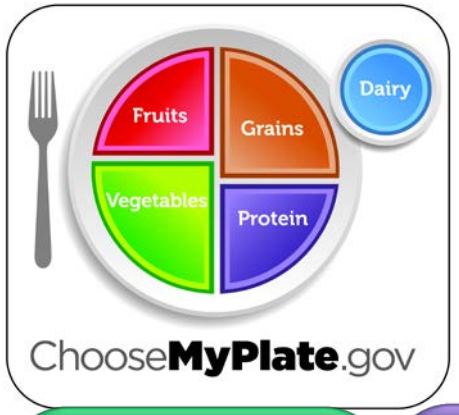

California MyPlate *For Teens*

Make half your plate vegetables and fruits, about one quarter grains and one quarter protein. Choose foods that are high in fiber and low in sugar, solid fats and salt (sodium). In addition to eating well, aim for at least one hour of physical activity every day.

If pregnant or breastfeeding, see *MyPlate for Moms.*

Vegetables

Eat more vegetables. Use fresh, frozen or low sodium canned vegetables. Limit French fries.

Daily Amount
3 or more of these choices:

- 2 cups raw leafy vegetables
- 1 cup raw vegetables or juice
- 1 cup cooked vegetables

Protein

Choose healthy protein. Eat vegetable protein daily. Limit bacon, hot dogs and bologna.

Daily Amount
6 or more of these choices:

- 1 ounce fish, poultry or lean meat
- 1 egg
- ½ ounce nuts
- ¼ cup cooked dry beans, lentils or peas
- ¼ cup tofu
- 1 tablespoon nut butter

Grains

Eat mostly whole grains like brown rice. Limit bread, noodles and rice that are white.

Daily Amount
6 or more of these choices:

- 1 slice 100% whole wheat bread or ½ bagel
- 1 small (6 inch), 100% whole wheat tortilla
- 1 cup cereal
- ½ cup cooked pasta, rice or cereal

Fruits

Eat fruits of all colors. Make most choices fruit, not juice.

Daily Amount
2 or more of these choices:

- 1 cup fresh fruit
- 1 cup unsweetened frozen or canned fruit
- ½ - ¾ cup 100% fruit juice
- ½ cup dried fruit

Dairy

Enjoy calcium rich foods. Choose pasteurized nonfat or lowfat milk, yogurt and cheese.

Daily Amount
4 of these choices:

- 1 cup milk
- 1 cup soy milk with calcium
- 1 cup of plain yogurt
- 1 cup of cottage cheese
- 1½ ounces cheese

Choose Healthy Fats & Oils

- Use plant oils like canola, safflower and olive oil for cooking.
- Read food labels to avoid saturated and trans fats (hydrogenated fats).
- Limit solid fats such as lard and butter.
- Eat cooked fish at two meals each week.

Choose Healthy Beverages

- Drink water, nonfat or lowfat milk.
- Limit sugary drinks, such as soda, fruit drinks, sweetened iced tea, sports drinks and juice.
- Limit caffeine drinks like coffee and tea.
- Do not drink energy drinks as these are not recommended for teens.

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January 8, 2014

California

My Nutrition Plan *For Teens*

These tips will help me eat well and be physically active. Every day, I will:

Vegetables

- ☐ Try to eat 3 or more choices of fresh, frozen or low sodium canned vegetables.
- ☐ Flavor vegetables with herbs and spices instead of fat or salt.
- ☐ Eat many dark green and orange vegetables.

Protein

- ☐ Try to eat 6 or more choices.
- ☐ Grill, broil or bake meat instead of fry.
- ☐ Eat beans, nuts, tofu, seeds and nut butter.
- ☐ Choose lean meat (15% fat or less).
- ☐ Take skin off poultry.
- ☐ Eat 12 oz. of fish per week.
- ☐ Limit bacon, hot dogs and bologna.

Grains

- ☐ Try to eat 6 or more choices.
- ☐ Eat whole grains at least half of the time.
- ☐ Choose high iron and low sugar cereals, such as approved by WIC. Some stores use a logo for cereals approved b WIC.

Fruits

- ☐ Try to eat 2 or more choices.
- ☐ Eat a variety of fresh, frozen or canned fruits.
- ☐ Choose fresh, frozen and canned fruits without added sugars.
- ☐ Limit fruit juice to ½ ¾ cup 100% fruit juice each day.

Dairy

- ☐ Try to eat 4 choices.
- ☐ Choose pasteurized nonfat or lowfat (1%) milk and cheeses.
- ☐ Eat plain yogurt. For sweetness, add fruit.
- ☐ Choose soy products with calcium, like tofu.

Fats, Oils, Sugars and Salt

- ☐ Read nutrition labels to choose foods low in fat, sugar and salt (sodium).
- ☐ Choose fruits, vegetables, unsalted nuts and seeds for snacks.
- ☐ Use plant oils like canola, safflower and olive oil daily.
- ☐ Bake, broil, steam, or microwave instead of frying.

Beverages

- ☐ Drink water, nonfat or lowfat milk instead of sugary drinks.
- ☐ Limit caffeine drinks like coffee and tea.
- ☐ Do not drink energy drinks.

Physical Activity or Exercise

- ☐ Get at least 1 hour of moderate physical activity every day. A good choice is walking. 10 minutes at a time is fine.
- ☐ Aim for vigorous physical activity choices at least 3 days per week. It makes you breathe faster and sweat. Try swimming or running.
- ☐ Do muscle and bone strengthening activities at least 3 days per week to stay strong. Climbing stairs is an easy choice.

More Ideas

- ☐ Make a SuperTracker daily food and physical activity plan. Go to www.supertracker.usda.gov/CreateProfile.aspx .
- ☐ Other:

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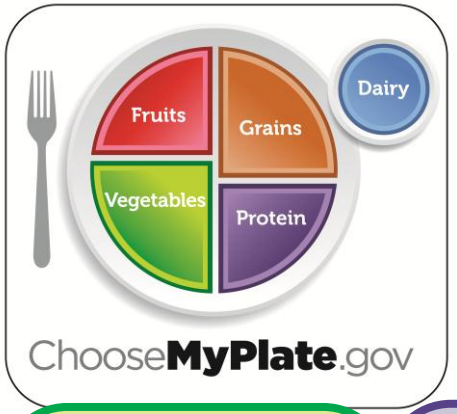
January 8, 2014



California

MyPlate for Moms

Make half your plate vegetables and fruits, about one quarter grains and one quarter protein. Choose foods that are high in fiber and low in sugar, solid fats and salt (sodium). For most women, these are the average food amounts for one day.

Vegetables

Eat more vegetables. Use fresh, frozen or low-sodium canned vegetables. Avoid French fries.

Daily Amount
3 or more of these choices:

- 2 cups raw leafy vegetables
- 1 cup raw vegetables or juice
- 1 cup cooked vegetables

Protein

Choose healthy protein. Eat vegetable protein daily. Avoid bacon, hot dogs and bologna.

Daily Amount
6-7 of these choices:

- 1 ounce fish, poultry or lean meat
- 1 egg
- ½ ounce nuts
- ¼ cup cooked dry beans, lentils or peas
- ¼ cup tofu
- 1 tablespoon nut butter

Grains

Eat mostly whole grains like brown rice. Limit bread, noodles and rice that are white.

Daily Amount
6 of these choices in the 1st trimester,
8 in the 2nd/3rd trimester and while breastfeeding:

- 1 slice whole wheat bread or ½ bagel
- 1 small (6-inch), whole wheat tortilla
- 1 cup cereal
- ½ cup cooked pasta, rice or cereal

Fruits

Add color with fruit. Make most choices fruit, not juice.

Daily Amount
2 of these choices:

- 1 cup fresh fruit
- 1 cup unsweetened frozen or canned fruit
- ½ - ¾ cup juice
- ½ cup dried fruit

Dairy

Enjoy calcium-rich foods. Choose pasteurized nonfat or lowfat milk, yogurt and cheese.

Daily Amount
3 of these choices for women

or

4 of these choices for teens:

- 1 cup milk
- 1 cup soy milk with calcium
- 1 cup of plain yogurt
- 1½ ounces cheese

Choose Healthy Fats & Oils

- Use plant oils like canola, safflower and olive oil for cooking.
- Read food labels to avoid saturated and trans fats (hydrogenated fats).
- Avoid solid fats such as lard and butter.
- Eat cooked fish at two meals each week.
- Limit oils to 6 teaspoons each day.

Choose Healthy Beverages

- Drink water, nonfat or lowfat milk instead of soda, fruit drinks and juice.
- Limit caffeine drinks like coffee and tea. Avoid energy drinks.
- Do not drink alcohol when you are pregnant or may become pregnant.
- Alcohol passes through breast milk. If breastfeeding, talk with your healthcare provider about alcohol use.

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April 16, 2013

California

My Nutrition Plan for Moms

These tips can help you to eat well and have a healthy weight during and after your pregnancy. Fill in your weight goals and check off which tips you are willing to try.

Pregnancy: My recommended weight gain in pregnancy is _____ pounds. My current weight gain is _____ pounds.

After Pregnancy: A healthy weight range for me is _____ pounds. My goal is to weigh _____ pounds.

Vegetables

Each day I will:

- ☐ Try to eat at least 3 choices of fresh, frozen or low-sodium canned vegetables.
- ☐ Flavor vegetables with herbs and spices instead of fat or salt.
- ☐ Eat many dark green and orange vegetables.

Protein

Each day I will:

- ☐ Try to eat 6-7 choices.
- ☐ Grill, broil or bake meat instead of fry.
- ☐ Eat beans, nuts, tofu, seeds and nut butter.
- ☐ Eat lean meat (15% fat or less).
- ☐ Take skin off poultry.
- ☐ Eat 12 oz. of fish per week.
- ☐ Limit bacon, hot dogs and bologna.

Grains

Each day I will:

- ☐ Try to eat 6-8 choices.
- ☐ Choose whole grains at least half of the time.
- ☐ Eat WIC-approved cereals.

Fruits

Each day I will:

- ☐ Try to eat 2 choices.
- ☐ Eat a variety of fresh, frozen or canned fruits.
- ☐ Choose fresh, frozen and canned fruits without added sugars.
- ☐ Limit fruit juice to ½ - ¾ cup juice each day.

Dairy

Each day I will:

- ☐ Try to eat 3 choices.
- ☐ Choose pasteurized nonfat or lowfat (1%) milk and cheeses.
- ☐ Eat plain yogurt. For sweetness, add fruit.
- ☐ Choose soy products, with calcium, like tofu.

Fats & Oils

I will:

- ☐ Use 6 teaspoons of plant oils like canola, safflower and olive oil daily.
- ☐ Bake, broil, steam, or microwave instead of frying.

Beverages

I will:

- ☐ Drink water, nonfat or lowfat milk instead of sugary drinks.
- ☐ Limit caffeine drinks like coffee and tea. Avoid energy drinks.

Extras (Solid Fats, Sugars and Salt)

I will:

- ☐ Choose foods low in fat, sugar and salt.
- ☐ Read nutrition labels to limit fat, sugar and salt (sodium).
- ☐ Choose fruits, vegetables, unsalted nuts and seeds for snacks.

My Other Ideas

- ☐ Make a daily food plan. Go to www.choosemyplate.gov/SuperTracker/createprofile.aspx.
- ☐ _____

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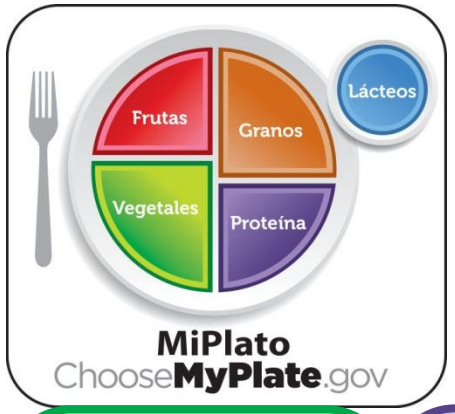
April 16, 2013



California

MiPlato para Mamás

Haga que la mitad de su plato contenga vegetales y frutas, alrededor de un cuarto del plato granos y el otro cuarto alimentos con proteína. Elija alimentos ricos en fibras y de bajo contenido de azúcar, grasas sólidas y sal (sodio). Estas cantidades de alimentos son para el consumo diario de una mujer de tamaño promedio. Usted puede necesitar más o menos de las cantidades sugeridas.

Vegetales

Coma más vegetales.
Coma vegetales frescas, congeladas o vegetales enlatadas bajas en sodio. Evite comer las papas fritas.

Cantidad Diaria
3 o más de estas opciones:

- 2 tazas de vegetales de hoja crudas
- 1 taza de vegetales crudas o jugo
- 1 taza de vegetales cocidas

Proteína

Elija proteínas saludables.
Coma proteínas vegetales a diario. Evite el tocino, las salchichas y la mortadela.

Cantidad Diaria
6-7 de estas opciones:

- 1 onza de pescado, pollo o carne magra
- 1 huevo
- ½ onza de nueces
- ¼ de taza de frijol, lenteja o chícharo seco cocido
- ¼ de taza de tofu
- 1 cucharada de crema de cacahuate

Granos

Coma mayormente granos integrales como arroz integral. Limite su consumo de pan, fideos y arroz que no sean integrales.

Cantidad Diaria
6 de estas opciones en el 1er trimestre
8 en el 2o o 3er trimestre y mientras esté amamantando:

- 1 rebanada de pan integral o ½ bagel
- 1 tortilla pequeña de trigo integral (6-pulgadas)
- 1 taza de cereal
- ½ taza de fideos, arroz o cereal cocidos

Frutas

Agregue color con frutas.
Escoja frutas enteras en lugar de jugos de frutas.

Cantidad Diaria
2 de estas opciones:

- 1 taza de fruta fresca
- 1 taza de fruta congelada o enlatada sin azúcar
- ½ - ¾ taza de jugo
- ½ taza de fruta seca

Lácteos

Coma alimentos ricos en calcio.
Elija leche, yogur y queso pasteurizados descremados o bajos en grasa.

Cantidad Diaria
3 de estas opciones para las mujeres
o
4 de estas opciones para los adolescentes:

- 1 taza de leche
- 1 taza de leche de soya enriquecida con calcio
- 1 taza de yogur natural
- 1½ onza de queso

Elija Grasas y Aceites Saludables

- Use aceites vegetales para cocinar como el aceite de alazor (safflower), canola y oliva.
- Lea las etiquetas de los alimentos para evitar consumir grasas saturadas y trans (grasas hidrogenadas).
- Evite las grasas sólidas como la manteca y la mantequilla.
- Coma pescado cocido en dos de sus comidas cada semana.
- Limite su consumo de aceites a 6 cucharaditas por día.

Elija Bebidas Saludables

- Beba agua, leche descremada o baja en grasa en lugar de refrescos, bebidas de frutas y jugo.
- Limite su consumo de bebidas con cafeína como el café o el té. Evite las bebidas energizantes.
- No beba alcohol si está embarazada o pudiera estar embarazada.
- El alcohol pasa al bebé a través de la leche materna. Si está amamantando, hable con su médico acerca del consumo de alcohol.

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April 25, 2013

California

Mi Plan Nutricional para Mamás

Estas sugerencias pueden ayudarla a comer bien y a mantener un peso saludable durante y después del embarazo.
Llene los espacios en blanco con el peso que le gustaría llegar a tener y marque las opciones que está dispuesta a probar.

Embarazo: Me recomendaron subir _____ libras durante mi embarazo. Hasta la fecha, he subido _____ libras.

Después del embarazo: Un peso saludable para mi es _____ libras. Mi meta es pesar _____ libras.

Vegetales

Cada día trataré de:

- ☐ Comer al menos 3 porciones de vegetales frescas, congeladas o enlatadas bajas en sodio.
- ☐ Condimentar las vegetales con hierbas y especias en lugar de grasas o sal.
- ☐ Comer mucha verdura de color verde oscuro y anaranjado.

Proteína

Cada día trataré de:

- ☐ Comer 6 a 7 de porciones.
- ☐ Asar u hornear carnes en lugar de freírlas.
- ☐ Comer frijoles, nueces, semillas, tofu o crema de cacahuate.
- ☐ Comer carne magra (con el 15% de grasa, o menos).
- ☐ Quitarle la piel al pollo.
- ☐ Comer 12 onzas de pescado por semana.
- ☐ Limitar mi consumo de tocino, salchichas y mortadela.

Granos

Cada día trataré de:

- ☐ Comer 6 a 8 porciones.
- ☐ Elegir granos integrales al menos la mitad del tiempo.
- ☐ Comer cereales aprobados por el programa de WIC.

Frutas

Cada día trataré de:

- ☐ Comer 2 porciones.
- ☐ Comer una variedad de frutas frescas, congeladas o enlatadas.
- ☐ Elegir frutas frescas, congeladas y enlatadas sin azúcares añadidos.
- ☐ Limitar el consumo de jugos de frutas a ½ - ¾ de taza por día.

Lácteos

Cada día trataré de:

- ☐ Comer 3 porciones.
- ☐ Elegir leche y quesos pasteurizados descremados o bajos en grasa (1%).
- ☐ Comer yogur natural (para endulzarlo, le pondré fruta).
- ☐ Elegir productos de soya enriquecidos con calcio, como el tofu.

Grasas y Aceites

- ☐ Usaré 6 cucharaditas diarias de aceite vegetal como el aceite de alazor (safflower), canola y oliva.
- ☐ Cocinaré los alimentos al horno, asados, al vapor o en el microondas, en lugar de freírlos.

Bebidas

- ☐ Beberé agua, leche descremada o baja en grasa en lugar de bebidas azucaradas.
- ☐ Limitaré mi consumo de bebidas con cafeína como el café y el té. Evitaré las bebidas energizantes.

Extras (Grasas Sólidas, Azúcares y Sal)

- ☐ Elegiré alimentos bajos en grasas, azúcares y sal.
- ☐ Leeré las etiquetas con la información nutricional para poder limitar mi consumo de grasas, azúcares y sal (sodio).
- ☐ Para mis bocadillos, elegiré frutas, vegetales, nueces y semillas sin sal.

Mis Otras Ideas

- ☐ Hacer un plan diario alimenticio. Visite esta página: www.choosemyplate.gov/SuperTracker/createprofile.aspx.
- ☐ _____

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Appendix E

Stages of Change

The five used to describe a variety of health behavior changes. Each of these stages describes an individual's attitude toward behavior change. Trying to change behavior before one is ready usually results in failure to develop new healthy behaviors.

Small changes are often best for long-term results.

1. Pre-contemplation

The stage at which there is no intention to change behavior in the immediate or foreseeable future. Many individuals in this state are unaware or underaware of their problem. These individuals are not ready for change.

Strategy: Assess knowledge, attitudes, and beliefs and provide information to build on existing knowledge.

2. Contemplation

The stage in which people are aware that a problem exists and are seriously thinking about overcoming it, but have not yet made a commitment to change and to take any action.

Strategy: Discuss motivation and barriers to change and possible solutions.

3. Preparation

The stage that combines both an intention and behavior to change. Individuals in this stage are intending to take action in the next month and have unsuccessfully taken action in the past year. This is the stage where you will want to offer intervention as they are ready to address their problem behavior.

Strategy: Assist in developing an action plan for change, provide direction and encouragement.

4. Action

The stage in which individuals modify their behavior, experiences, or environment in order to overcome their problems. Action involves the most overt behavioral changes and requires a considerable commitment of time and energy.

Strategy: Reinforce decisions for change, offer continued support and reinforcement for positive changes.

5. Maintenance

The stage in which people work to prevent relapse and consolidate the gains attained during action. For addictive behaviors, this stage extends from six months to an indeterminate period past the initial action.

Strategy: Offer reinforcement and praise. Relapse occurs when people move back to a previous stage. Relapse is very common — especially when trying to change nutrition and physical activity behaviors. Health professionals can encourage and help individuals to return to the action stage.

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Appendix F

Strategies to Promote Healthy Eating and Physical Activity to Adolescents

Adapted from: Story M, Holt K, Sofka D.

General Strategies

Strategies	Applications/Questions
Ask the adolescent about changes in eating and physical activity behaviors at every visit.	"How are you doing in changing your eating and physical activity behaviors?"
Emphasize to the adolescent the consumption of foods rather than nutrients.	For example, say, "Drink more milk and eat cheese or yogurt," rather than "Increase your calcium intake."
Build on positive aspects of the adolescent's eating behaviors.	"It's great that you're eating breakfast. Would you be willing to try cereal, fruit, and toast instead of bacon and doughnuts four days out of the week?"
Provide "how to" information.	Share behaviorally-orientated information (e.g., what, how much, and when to eat and how to prepare food) rather than focusing on why the information is important.
Provide counseling that integrates realistic behavior change into the adolescent's lifestyle.	"I understand that your friends eat lunch at fast-food restaurants. Would it help you to learn how to make healthier food choices at these restaurants?"
Discuss how to make healthy choices in a variety of settings.	Talk about how to choose foods in various settings such as fast-food and other restaurants, convenience stores, vending machines, and friends' homes.
Provide the adolescent with learning experiences and skills practiced.	Practice problem solving and role-playing (e.g., having the adolescent ask the food server to hold the mayonnaise).
Introduce the concept of achieving balance and enjoying all foods in moderation.	"Your food diary indicates that after having pepperoni pizza for lunch yesterday, you ate a healthier dinner. That's a good way to balance your food intake throughout the day…"
Make record-keeping easy, and tell the adolescent that you do not expect spelling, handwriting, and behaviors to be perfect.	"Be as accurate and honest as you can as you record your food intake. This food diary is a tool to help you reflect on your behaviors."
Make sure the adolescent hears what you are saying.	"What eating and physical activity behaviors are you planning to work on before your next appointment?"
Make sure that you and the adolescent define terms the same way to avoid confusion.	Discuss the definition of words that may cause confusion, such as "fat…calories," "meal," and "snack."

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Communication and Setting

Strategies	Applications/Questions
Encourage health professionals and staff to become role models for healthy eating and physical activity.	Have health professionals and staff model healthy eating and physical activity behaviors (e.g. keeping a bowl of fruit at the front desk.
Provide a setting oriented to adolescents.	Use posters and materials written for adolescents.
Provide concrete learning situations.	Use charts, food models and videos (e.g. YouTube) to reinforce verbal information and instructions.
Communicate developmentally-appropriate health messages.	Use posters and materials that highlight the importance of healthy eating and physical activity behaviors.
Promote positive, nonjudgmental strategies to help the adolescent adopt healthy eating and physical activity behaviors.	Reinforce positive aspects of the adolescent's eating and physical activity behaviors.
Encourage the adolescent's active participation in changing eating and physical activity behaviors.	Help the adolescent identify barriers that make it difficult to change eating and physical activity behaviors and develop a plan of action for adopting new behaviors.
Understand and respect the adolescent's cultural eating behaviors.	Help the adolescent integrate dietary recommendations with cultural eating behaviors.
Use simple terms.	Avoid using the term "diet" with the adolescent because it tends to be associated with weight loss and may be confusing.
Focus on the short-term benefits of healthy eating and physical activity behaviors.	Emphasize that healthy eating and physical activity behaviors will make the adolescent feel good and energized.

Readiness to Change

Strategies	Applications/Questions
Identify the adolescent's stage of behavior change and readiness to change based on the Stages of Change model.	"Are you **interested** in changing your eating and physical activity behaviors?" "Are you **thinking about** changing your eating and physical activity behaviors?" "Are you **ready** to change your eating and physical activity behaviors?" "Are you in the **process** of changing your eating and physical activity behaviors?" "Are you trying to **maintain** changes in your eating and physical activity behaviors?"
Facilitate behavior change with counseling strategies tailored to the adolescent based on the Stages of Change model.	Provide a supportive environment, basic information, and assessment. Prioritize behaviors to be changed, set goals, and identify barriers to change. Develop a plan that incorporates incremental steps for making changes, support, and reinforcement.

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Action Plans

Strategies	Applications/Questions
Provide counseling for the adolescent who is in the early stages of behavior change or who is unwilling to change.	Increase the adolescent's awareness and knowledge of his or her own behaviors. Encourage the adolescent to make behavior changes if necessary.
Provide task-oriented counseling for the adolescent who is ready to change eating and physical activity behaviors.	Encourage a few, small concrete changes first, and build those. Support and follow up with the adolescent who is ready to change behavior.
Identify and prioritize behavior changes to be made.	Suggest changes that will have a measurable impact on the adolescent's most serious issues.
Set realistic, achievable goals that are supported by the adolescent's family and peers.	"What behavior will you change?" "What goal is realistic right now?" "How and when will you change the behavior and who will help you?"
Identify and address barriers to behavior change; help reduce barriers when possible.	"What will make it hard for you to make changes?" "How can you get around this?"
Make sure that the behavior changes are compatible with the adolescent's lifestyle.	Don't force the adolescent to conform to rigid eating behaviors. Keep in mind current behaviors and realistic goals.
Establish incremental steps to help the adolescent change eating and physical activity behaviors.	For example, have the adolescent reduce fat consumption change by gradually changing the type of milk consumed, from whole to 2% (reduced fat), 1% (lowfat), to skim (nonfat) milk.
Give the adolescent responsibility for changing and monitoring eating and physical activity behaviors.	Stress the importance of planning how the adolescent will make and track changes in eating and physical activity behaviors. Make record-keeping simple, and review the plan with the adolescent.
Make sure the adolescent has family and peer support.	Show the adolescent how to encourage parents and peers to help. Meet with the parents to clarify goals and action plans; determine how they can help.
Offer feedback and reinforce success.	Regularly show interest to encourage continued behavior change.

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Calcium

What Is Calcium?

Calcium is a mineral that the human body needs to build and maintain strong bones and teeth. Calcium also plays a role in the proper functioning of the heart, muscles, and nerves. Dairy products, such as milk, yogurt and cheese are good sources of calcium. Other sources include: calcium-fortified foods, fish with bones, legumes and dark green, leafy vegetables.

Unfortunately, most adolescents in the United States do not meet their dietary calcium requirements. According to a 2006 American Academy of Pediatrics publication, only 10% of female adolescents meet the recommended daily intake of calcium for adolescents.[1] The recommended calcium intake for female and male adolescents is 1300 mg, which may be met with three or more servings of calcium-rich foods.

In 2006, the CalTEENS survey in California showed that 54.7% of adolescent girls and 71.6% of adolescent males consumed three or more servings of calcium- rich foods (milk, cheese, yogurt, dairy desserts) in the previous day.[2]

Almost half of lifetime bone mass is added in adolescence, so this is a critical time period for calcium intake. It is also a good time to emphasize regular calcium intake at all life stages.[1]

May 2013

California
Nutrition and Physical Activity
Guidelines for Adolescents

Inside this Section

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C-2	What are the Consequences of Calcium Deficiency?
C -2	How Much Calcium is Enough?
C-2	What Foods Have Calcium?
C-2	Warning: Unsafe Milk Practices
C-2	What is Vitamin D?
C-3	What is Lactose Intolerance?
C-3	What about Calcium Supplements?
C-4	Sample Comments and Responses
C-4	Interventions
C-5	Follow-Up
C-5	Web Links Referenced/Additional Resources
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Photo credit for yogurt photo: Debora Cartagena, Centers for Disease Control and Prevention

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What are the Consequences of Calcium Deficiency?

Inadequate calcium intake in childhood and adolescence results in low bone density, which can lead to stunted growth. It also increases risk for bone fractures and osteoporosis in later years. Osteoporosis is a condition of gradually weakened and brittle bones.

How Much Calcium is Enough?

For individuals 9 to 18 years of age, the recommended dietary calcium intake is 1,300 milligrams per day. For ages 19-30, the recommendation is lower at 1,000 mg.[3] Four choices (cups) of milk or other calcium-rich foods would meet the recommendation of 1300 mg. Pregnant adolescents should also aim for 4 choices.

What counts as a cup of dairy?

Consumption of sugar-sweetened beverages (e.g. soda, vitamin water, sports drinks, energy drinks, Kool-Aid, etc.) is common in this age group. This is problematic because those choices displace calcium-containing beverages such as milk and are high in sugar and calories.

In the United States, among African-American high school students in 2010, milk consumption was comparatively low (29.3%) in comparison to soda consumption (32.0%).[4 *]

A 12-oz serving of nonfat milk has fewer calories and less sugar than a 12-oz soft drink. Milk provides one-third of an adolescent's daily calcium needs and other important nutrients.

Adolescents may avoid dairy products because they are concerned about calories and weight gain. To address this real concern, suggest nonfat and lowfat dairy products; these have fewer calories and less fat than whole fat versions and generally have the same amount of calcium and vitamins. For barriers related to lactose intolerance, see the section "What is Lactose Intolerance?"

What Foods Have Calcium?

Dairy products, such as nonfat and lowfat milk, yogurt and cheese, are good sources of calcium.

Plant sources of calcium include broccoli, sunflower seeds, nuts, legumes, some greens (e.g. kale, collards, mustard), okra, rutabaga, bok choy, dried figs, and tortillas (made from lime-processed corn) and calcium-set tofu (this means it was prepared with calcium salts).

Fortified sources of calcium are also available. Examples include calcium-fortified orange juice, soy beverages, rice beverages and cereal. Some legumes and fish are also good sources.

See the handout How Much Calcium am I Getting? for more examples.

What is Vitamin D?

The body needs vitamin D to absorb calcium. This vitamin is found in foods such as fortified milk, fish, eggs, and cod liver oil. Sunshine also contributes to vitamin D intake. Vitamin D is important for the body to build strong and healthy bones.[5]

For people aged 1-70 years of age, the Recommended Dietary Allowance is 600 IU of vitamin D per day, regardless of sex, pregnancy, or breastfeeding status.[3] If this recommendation is not met through foods and fortified milk, taking a vitamin D supplement may be recommended by their health care provider. Adolescents, especially those pregnant and breastfeeding should check with their primary healthcare provider before taking a vitamin supplement.

Warning: Unsafe Milk Practices

Pasteurization is the method used to kill many microorganisms present in raw milk, some of which are deadly. Raw (unpasteurized) milk products, such as raw cheese or raw milk, should be avoided at all times and are especially harmful in pregnancy.

Be mindful that the practice of eating/drinking raw milk products may be more common in certain cultures or subgroups. For example,

[*] According to the National Youth Physical Activity and Nutrition Study, percentage of high school students who drank a serving of the beverage one or more times per day during the 7 days before the survey

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unpasteurized cheeses like Queso Fresco or Panela may be popular among Hispanic families.

Milk Products to Avoid in Pregnancy
Raw milk products, certain cheeses and some other foods can be contaminated by bacteria called *Listeria*. If a mother eats contaminated foods, these bacteria can be passed from her to her unborn baby. *Listeria* can cause complications for the pregnancy and health problems in the baby.

To prevent infection from dairy sources, soft cheeses such as feta, Brie, and Camembert, blue-veined cheeses, or Mexican-style cheeses such as queso blanco, queso fresco, and Panela should not be eaten, unless they have labels that clearly state they are made from pasteurized milk. Hard cheeses, semi-soft cheeses such as mozzarella, cream cheese, cottage cheese, and pasteurized processed cheese slices/ spreads are generally safe.

Other foods to avoid to help prevent Listeria infection

What is Lactose Intolerance?

Some individuals produce too little lactase, an enzyme the body uses to break down lactose (the type of sugar in milk). When lactose is not digested, it cannot be absorbed by the body. As it moves through the intestine, lactose can cause uncomfortable symptoms such as nausea, cramping, gas, bloating, abdominal pain and diarrhea.

The amount of lactose that can be tolerated without side effects varies by the individual with lactose intolerance. The type of dairy product consumed also makes a difference. Most individuals with lactose intolerance can have small amounts of dairy products throughout the day, especially when consumed with other foods.

Individuals who suspect lactose intolerance should not cut out all dairy from their diet without exploring other options. Often, people with lactose intolerance find that their symptoms are not so bad when they have dairy in smaller amounts throughout the day or try different dairy products.

Ideas to try if lactose intolerance is suspected:

- Different types of dairy products, for example yogurt, and smaller portion sizes
- Dairy products mixed with other foods, for example, eating cereal with milk
- Lactose-free/low-lactose dairy, which have the enzyme lactase to digest lactose. Lactose-free milk is available from WIC.
- Adding lactase drops to milk or taking lactase pills before consuming dairy items
- Soy, almond, or rice drink/milk with at least 300 mg of calcium, often listed as 30% of the daily value, on the nutrition label. Soy milk is available from WIC.

"Lactose intolerance" is an inability to digest lactose. It is not an allergy. A milk allergy is a different type of reaction to milk and can be serious. **Individuals with a milk allergy must avoid all dairy products and any foods containing them–even in very small amounts.** Common symptoms of a food allergy include hives, a hoarse voice and wheezing. Rarely, individuals with a food allergy will go into anaphylaxis, a life-threatening whole-body allergic reaction **(call 9-11 if this happens)**.[6]

Children diagnosed with a milk allergy by a physician usually outgrow them.

What about Calcium Supplements?

Calcium supplements can be used to provide part, or all, of the daily requirement. However, it is often more effective to include more calcium-rich foods and beverages in the diet. For best absorption of iron, calcium supplements should not be taken at the same time as an iron supplement or a multivitamin that contains iron.

Adolescents with severe lactose intolerance who are unwilling to use lactose-reduced products may need to rely on a supplement and non-dairy sources of calcium to meet their calcium needs.

Calcium Supplements to Avoid
Avoid calcium supplements made from unrefined oyster shell, bone meal, or dolomite that do not have the USP symbol. They may contain high levels of lead or other toxic metals. Consuming lead is dangerous, but it is even more dangerous for children and for women who are pregnant or nursing.[7]

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Screening

Screen for lactose intolerance by asking the following questions:

- Does drinking milk upset your stomach?
- Do you have gas, bloating, or diarrhea after drinking or eating any dairy products?

If the client answered "yes," to these questions, it is possible that she has lactose intolerance. Common symptoms include abdominal pain, bloating, gas, diarrhea and nausea, usually 30 minutes to two hours after eating or drinking milk products. Symptoms may be mild or severe depending on the amount consumed and how much each person can tolerate.[8]

Use the How Much Calcium Am I Getting? handout to help your client assess how much calcium she is getting from food and/or supplements.

Ask the client if she eats raw (unpasteurized) dairy foods, such as yogurt and cheese. If so, she should avoid eating them. If pregnant, she should not eat the products listed on page C-3.

Interventions

- Use the How Much Calcium Am I Getting? handout to teach which foods are good sources of calcium, including the lesser known non-dairy sources.
- Use the Action Plan for Calcium handout to assist the client to develop her action plan for the behavior changes she is willing to make to achieve the recommended optimal calcium intake. See "Common Barriers to Drinking Milk and Solutions" to the right.
- Review the Best Bones Forever website on bone health with the client or provide the web address: www.bestbonesforever.gov/.

Common Barriers to Drinking Milk and Solutions

"Only children need milk."
Everyone needs enough calcium and vitamin D. Adolescents especially need calcium for growth.

Adolescents often have a "live for today" frame of mind and may not care about future health benefits of calcium (e.g. strong bones when one is old). Explain the benefits of calcium that are most appealing **now**, such as for being stronger.

"Milk makes me feel sick" or "I don't like milk."
Feeling ill after drinking milk may be a sign of lactose intolerance. See page C-3 for information and tips.

Non-milk options include soy, almond or rice drink/milk that have calcium added to them. Look for at least 300 mg (often listed as 30% of the daily value) on the nutrition label.

Cheeses, yogurt, canned fish with bones and some tofu and greens can contribute calcium to the diet. For more examples, see the handout, How Much Calcium Am I Getting?

"I do not have milk at home."
Many adults do not drink milk themselves and may not have it at home. Drinking milk may not be a common cultural/dietary practice.

Help adolescents identify small, realistic ideas, such as choosing dairy products at school, drinking milk instead of soda, or preparing a calcium-rich recipe (e.g. yogurt smoothie) for herself and/or family members.

To help with costs, dairy and other foods with calcium are available through the California WIC program. Approved items usually have the WIC logo next to them at the store.

Some examples of non-milk items are described above.

"Milk is fattening."
Calcium-rich foods are an important part of a healthy diet. Nonfat and lowfat milk, yogurt and cheese have fewer calories and less fat than whole-fat versions but normally have the same amount of calcium and vitamins.

Help adolescents identify healthy foods and beverages with calcium that they are willing to try.

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Follow-Up

Review the Action Plan for Calcium handout with the client to determine if goal(s) for behavior change were met.

If the client did not make any changes, ask what may have prevented them from doing so. Validate their feelings. Review the importance of calcium and ask about which benefits (if any) are important to the client. Together, identify strategies for removing or reducing barriers.

If the client made changes but still falls short of the recommended intake, provide praise and encouragement for the changes that were made. Together, revise their action plan (change or add goals).

If the client has made changes and achieved the recommended intake, provide praise and encouragement for the changes that were made. Help the client choose a new action plan from another section in the Guidelines.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
USDA: What Counts as a Cup of Dairy? webpage	Webpage	www.choosemyplate.gov/foodgroups/dairy_counts.html
FDA: Background Information for Educators What You Need To Know (About Listeriosis) Includes information about soft cheeses tailored for Hispanics.	Document (PDF)	http://www.fda.gov/downloads/Food/FoodborneIllnessContaminants/ucm106713.pdf
CDC: Listeriosis (Listeria) and Pregnancy Information on which foods to avoid in pregnancy	Webpage	www.cdc.gov/pregnancy/infections-Listeria.html
Medline Plus: Food Allergy	Webpage	http://www.nlm.nih.gov/medlineplus/ency/article/000817.htm
WIC approved foods list	Webpage	http://www.cdph.ca.gov/programs/wicworks/Pages/WIC-AuthorizedFoodListWAFL.aspx
How Much Calcium Am I Getting?	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-HowMuchCalciumAmIGetting.pdf
My Action Plan for Calcium	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-CalciumActionPlan.pdf
Best Bones Forever Teen-friendly website with quizzes and videos. Promotes bone health through calcium intake and bone-strengthening physical activity.	Website	www.bestbonesforever.gov/
California MCAH Calcium webpage Includes resources for professionals and handouts on calcium foods and lactose intolerance in English and Spanish.	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/Calcium.aspx
California MCAH Vitamin D webpage	Webpage	http://www.cdph.ca.gov/healthinfo/healthyliving/nutrition/Pages/VitaminDResourcesandInformation.aspx
California WIC handout: Calcium	Document (PDF)	**English** www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-Calcium.pdf **Spanish** www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-CalciumSpanish.pdf
California WIC	Document	**English**

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handout: Which Milk is Healthiest?	(PDF)	www.cdph.ca.gov/programs/wicworks/Documents/HealthyHabits/WIC-HHED-LowfatMilk-WhichMilkIsHealthiestHandout.pdf **Spanish** www.cdph.ca.gov/programs/wicworks/Documents/HealthyHabits/WIC-HHED-LowfatMilk-WhichMilkIsHealthiestHandoutSpanish.pdf
California WIC handouts Available in multiple languages. Includes handouts about lactose intolerance and choosing soy products and cheese.	Webpage	www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsHealthyEating.aspx
United States Department of Agriculture dairy handout This handout has tips to improve dairy intake.	Document (PDF)	www.choosemyplate.gov/food-groups/downloads/TenTips/DGTipsheet5GotYourDairyToday.pdf
National WIC calcium resources Includes Dietary Reference Intakes and relevant websites.	Webpage	http://wicworks.nal.usda.gov/topics-z/calcium
Milk Matters	Website	www.nichd.nih.gov/milk/pages/milk.aspx

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How Much Calcium Am I Getting?

Amount of Calcium in Some Good Calcium Foods

Calcium Food	Serving Size	~ Calcium Content (mg)	# Servings I Have per Day	My Calcium Intake (mg)
Dairy Foods				
Plain yogurt, nonfat	1 cup	488		
Milk powder (dry milk), nonfat	1/3 cup	391		
Fruit yogurt, nonfat	1 cup	350		
Ricotta cheese, part skim	1/2 cup	337		
Milk, nonfat or 1%	1 cup	311		
Lactose-free milks, such as Lactaid®	1 cup	300		
Plain Greek yogurt, nonfat	1 container (~6 oz)	187		
Sliced cheese, such as nonfat or lowfat Muenster, Cheddar, Mozzarella, Provolone, or Swiss	1 slice (3/4 oz)	111-173		
American cheese	1 piece (3/4 oz)	144		
Cottage cheese, nonfat or lowfat	1 cup	133		
Frozen yogurt or ice cream, nonfat	1/2 cup	104		
Foods with Added Calcium				
Soy milk with added calcium, such as Silk®	1 cup	450		
Almond milk with added calcium, such as Almond Breeze®	1 cup	450		
Rice drink (milk) with added calcium	1 cup	283		
Tofu with added calcium, soft or firm	1/2 cup	197		
Orange juice with added calcium	1/2 cup	174		
Cereal or cereal bar with added calcium	1 ounce	Label says_____		
Supplement with calcium	1	Label says_____		
Other Foods				
Sardines, canned, drained with bone	1 can (3.75 oz)	351		
Collard greens, cooked	1 cup	313		
Turnip greens, cooked	1 cup	223		
Salmon, canned, drained with bone	1/4 can (3 oz)	208		
Mustard greens, cooked	1 cup	191		
Other cooked greens, such as chard, kale, dandelion, or beet	1 cup	102-164		
Soybeans, green, boiled	1 cup	131		
Navy beans, not sprouted, cooked	1 cup	126		
			Enter total here →	

Calcium Recommendations

Age	9-13 Years	14-18 Years	19-30 Years
Females and Males	1300 mg	1300 mg	1000 mg
If pregnant or breastfeeding		1300 mg	1000 mg

Amount of calcium I need for my age _____ mg

Amount of calcium I am getting now — _____ mg

How much more calcium I need each day _____ mg

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My Action Plan for Calcium

Name: _____

Check the box for each step you are doing now to get enough calcium. Check the boxes for the steps you plan to take. Write down other ways you plan to improve your calcium intake.

Things that I can do to get enough calcium every day	Am Doing	Steps I Will Take
• Include a calcium-rich food or beverage with every meal. Try the *Fruity Delight*, *Macaroni and Cheese,* or *Rice Pudding* recipes, found at www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx or type "Easy Meals and Snacks: A Healthy Cookbook for Teens" into a web search engine.	☐	☐
• Choose a calcium-rich food or beverage for a snack every day. Ask your case manager to help you fill out the *How Much Calcium Am I Getting?* handout. www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-HowMuchCalciumAmIGetting.pdf	☐	☐
• Use a drink with calcium instead of water in hot cereal, soups, pancake mix, and other recipes. Use nonfat or lowfat milk. Or use soy, almond or rice drink/milk that have added calcium.	☐	☐
• Drink less soda. I will reduce my soda intake by _____ (cans, bottles, glasses) per day.	☐	☐
• Along with eating calcium-rich foods, I will take a supplement with calcium as directed by my medical provider.	☐	☐
• Drink all the milk that I put on my cold cereal.	☐	☐
• My ideas for improving my calcium intake:		
_____	☐	☐
_____	☐	☐

Signature: _____ Date: _____

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Iron

What is Iron?

Present in all cells of the human body, iron is a mineral that has several vital functions. As the major part of hemoglobin in red blood cells, it carries oxygen from the lungs to all parts of the body and facilitates oxygen use and storage in muscles. Every cell in the body needs iron to produce energy.

What is Iron Deficiency?

When a person has used up the iron stored in her body, she is said to be "iron deficient." Iron deficiency doesn't always result in anemia, but it may cause other health problems such as lethargy or a weakened immune system. Iron deficiency occurs when the diet does not include enough iron rich foods, if there is blood loss, or if there is an increased need for iron in the body, such as during adolescence and pregnancy.

When the body does not get enough iron, it cannot make enough red blood cells to adequately carry oxygen throughout the body. The condition of having too few red blood cells is called "anemia." A person with anemia may look pale and feel tired. Severe anemia can lead to an irregular or increased heart rate as the heart must pump more blood to make up for the lack of oxygen.

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I-1 What is Iron Deficiency?

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Adolescent girls are at high risk for iron deficiency because they often have diets lacking iron and because they lose iron during menstruation.[1] Iron deficiency is the most common cause of anemia[2] so adequate intake of iron should be encouraged.

According to the 2010 Pediatric Nutrition Surveillance for California, approximately 14% of low-income adolescent girls and 13.1% of low-income boys have low hemoglobin or hematocrit, indicators of anemia. Racial/ethnic breakdowns of anemia indicate that among those 15-19 years of age, African-American girls (28.9%) and boys (26.0%) have the highest prevalence. Pacific Islander boys (17.9%) and girls (16.0%) have high prevalence of anemia indicators.[3]

More racial/ethnic breakdowns are available here.

Due to the high prevalence, it is important to address adequate iron intake with all adolescents.

Adolescent athletes with low body stores of iron may be at risk of anemia; intensive or excessive exercise can cause iron to be excreted through the gastrointestinal tract.

What are the Consequences of Iron Deficiency?

In the early stages of iron deficiency, a person may experience tiredness, decreased intellectual performance, reduced resistance to infection, and increased susceptibility to lead poisoning. Later stages may result in irritability, pallor, decreased tolerance for exercise, appetite loss, rapid heart action (tachycardia), enlargement of the heart (cardiomegaly), and risk for other nutrient deficiencies (see the *Vegetarian Teens* section).

In pregnancy, iron deficiency increases the risk of low birth weight and potentially pre-term delivery and perinatal mortality.[4]

During pregnancy and at other times, people who are iron-deficient may have intense cravings to eat non-human foods, such as dirt. This can be a symptom of iron deficiency and can pose a danger to one's health. A healthcare provider should be contacted if this behavior is suspected.

Adolescents need more iron due to increasing blood volume and muscle mass. See Table I-1 for recommended amounts.

How Much Iron is Enough?

Table I 1 Recommended Daily Dietary Reference Intakes for Iron (milligrams per day)

Age	Females	Males
9-13	8	8
14-18	15	11
19-30	18	8
Pregnancy		
14-18	27	
19-30	27	
Lactation		
14-18	10	
19-30	9	

Source: Institute of Medicine, Food and Nutrition Board, 2001[5]

The iron needs for adolescents are listed below:

What are Good Sources of Iron?

Lean red meat, fish, poultry and iron-fortified grains, such as WIC-approved cereals, are good sources of iron.

Legumes and dark green vegetables, such as kale, collard greens and spinach, are part of a healthy diet. They also have iron. It is easier for the body to use the iron in meat than the iron in plant foods. To help the body use iron from plant foods, vitamin-C-rich foods, such as citrus fruits/juices, or a small amount of meat should be eaten at the same meal.

Using cast-iron skillets for cooking can add iron to the food cooked.

Coffee, tea, soda, and excessive milk intake can reduce iron absorption and should be avoided, especially at mealtimes.

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Note that iron absorption varies from person to person, which means that different people can eat the same foods but have different levels of iron in their bodies. Iron absorption often increases significantly when iron stores are low.

What about Iron Supplements?

During pregnancy, some teens may need a supplement containing iron to reduce their risk of adverse birth outcomes. This should be discussed with the primary healthcare provider at prenatal visits.[4,6]

Do not recommend iron supplements unless a healthcare provider prescribes them. Consuming more iron than needed may be unhealthy. In fact, too much iron can be harmful or fatal. Just 10 iron pills can kill a child!

Screening

- Use the How Much Iron Am I Getting? handout to help the client determine how much iron she is getting from her diet. You can use the sheet to help her identify iron-rich foods.
- Has the client ever been told by her healthcare provider that she is anemic? If yes, what information and/or counseling was she given?

Interventions/Referrals

If you suspect your client might be anemic — because of symptoms or responses to the Risk Questionnaire — **refer her to a health care professional.**

Print handouts back-to-back to save paper.

- Use the How Much Iron Am I Getting? handout to teach what foods are good sources of iron.
- Use the Why Do I Need Iron? handout to discuss symptoms of iron deficiency. Clients with these symptoms should be encouraged to discuss them with her healthcare provider.
- Use the Iron Tips handout to discuss how iron intake can be increased.
- Use the Action Plan for Iron handout to assist the client in developing her plan to achieve the recommendation for optimal iron intake.

Follow-Up

Review the Action Plan for Iron handout with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes, talk with her about what prevented her from doing so. Review the importance of iron and see which (if any) are important to her. Validate her feelings. Work with her to identify strategies for removing any barriers.

If the client made changes but still falls short of the recommended intake, praise her for the changes that she made. Work with her to revise her action plan (change or add goals).

If the client has made changes and achieved the recommended intake, praise for the changes that she made. Help her consider a new action plan from another section in the Guidelines.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
2010 Pediatric Nutrition Surveillance California: Anemia Indicators by Race/Ethnicity and Age	Document (PDF)	http://www.dhcs.ca.gov/services/chdp/Documents/PedNSS/2010/17C.pdf
Institute of Medicine Dietary Reference Intake tables	Document (PDF)	www.iom.edu/Activities/Nutrition/SummaryDRIs/~/media/Files/Activity Files/Nutrition/DRIs/5_Summary Table Tables 1-4.pdf
Nutrition Risk Screening section from the California Nutrition and Physical Activity Guidelines for Adolescents	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Documents/MO-NUPA-02NutritionalRiskScreening.pdf
How Much Iron Am I Getting? handout	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-HowMuchIronAmIGetting.pdf
Why Do I Need Iron? handout	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-WhyDoINeedIron.pdf
Iron Tips handout	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-IronTips.pdf
Action Plan for Iron handout	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-IronActionPlan.pdf
Anemia Resources tailored for maternal, child and adolescent populations	Webpage	www.cdph.ca.gov/healthinfo/healthyliving/nutrition/Pages/AnemiaResources.aspx
Iron for Strong Blood handout from the California WIC Program – English version	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-IronForStrongBlood.pdf
Iron for Strong Blood handout from the California WIC Program – Spanish version	Document (PDF)	www.cdph.ca.gov/programs/wicworks/Documents/NE/WIC-NE-EdMaterials-IronForStrongBloodSpanish.pdf

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6. Office of Dietary Supplements, National Institutes of Health. Iron. 2007; http://ods.od.nih.gov/factsheets/iron/.

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How Much Iron Am I Getting?

In the list below, foods with the most iron per serving are at the top. The foods at the bottom of the list have less iron. But, they are still good iron sources.

Tip: Your body uses the iron in meat foods better than the iron in non-meat foods. Help your body use iron by eating some meat or a food that has vitamin C at the same time as a food that has iron. For example, eat tomatoes with beans or cereal with strawberries.

Amount of Iron in Some Good Iron Foods

Iron Food	Serving Size	Approximate Iron Contents (mg)	My Serving Size/Day	My Iron Intake (mg)
Clams, canned, drained	3 oz.	24		
WIC-approved cereals, dry	50g (about 2 oz.)	At least 14		
Oysters, cooked	3 oz.	10		
Organ meats: liver/giblets	3 oz.	5-10		
Fortified instant cereals, cooked	1 packet	5-8		
Cowpeas (blackeye peas), cooked	1 cup	4		
Beans, cooked (pinto, kidney, garbanzo, lima, navy, white)	1/2 cup	2-4		
Chili with meat and beans	1 cup	3		
Lentils, cooked	1/2 cup	3		
Tofu, firm	1/2 cup	3		
Spinach, cooked, drained	1/2 cup	3		
Ground beef, 15% fat, cooked	3 oz.	2		
Prune juice	3/4 cup	2		
Rice/pasta, cooked	1 cup	1-2		
Chicken, turkey	3 oz.	1		
Tuna, canned in water	3 oz.	1		
Salmon, cooked	3 oz.	1		
Corn or flour tortillas	1 tortilla	1		
Bread, enriched	1 slice	1		
Dried fruit (apricots, apples, plums)	About 10 pieces	1		
Peanut butter	2 Tbsp.	1		
Egg	1	1		
			Enter total here →	

Iron Recommendations

Age	9-13 Years	14-18 Years	19-30 Years
Females	8 mg	15 mg	18 mg
If pregnant		27 mg	27 mg
If breastfeeding		10 mg	9 mg
Males	8 mg	11 mg	8 mg

Amount of iron I need for my age and pregnancy or breastfeeding status _____ mg

Amount of iron I am getting now — _____ mg

How much more iron I need each day _____ mg

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Why Do I Need Iron?

Iron is a mineral found in some foods. If you do not eat enough foods high in iron each day, you may:

- Look pale, feel tired, and act cranky
- Not feel like eating
- Have headaches and get sick more easily
- Have trouble learning and do poorly in school or work

If you are pregnant, your baby could be born too small or too soon.

Look at the pictures below for examples of foods with iron.

Fish, chicken or other lean meats

Cooked dry beans

Egg yolks

Fortified cereals, such as WIC cereal

Dark green leafy vegetables

Photo credit for cereal photo: Debora Cartagena, Centers for Disease Control and Prevention

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Iron Tips

1 Eat foods that are good sources of iron every day.

- Just eating a little meat with other foods can increase the iron your body can get from foods. For example, try putting a small amount of meat into your cooked beans. Meat is an "iron helper" -- it helps your body use the iron from other foods.
- If you are a vegetarian, eat beans often.
- When preparing dry beans, soak beans for several hours in cold water before you cook them. Pour off the water and use new water to cook the beans. Your body will take in more iron this way.

2 Eat vitamin-C foods with iron-rich foods to help your body use iron better.

- Eat foods rich in vitamin C together with iron-rich foods. Vitamin-C foods are "iron-helpers" too. For example, eat an orange or strawberries with your breakfast cereal or have some salsa on your taco.
- Cook vitamin-C foods and iron-rich foods together. For example, cook your beans with tomatoes or chilies.
- For more examples of Vitamin-C and iron-rich foods, see *Iron Tips—Take Two*.

3 Coffee, tea and sodas may block iron from getting into your body.

- If you drink coffee or tea (including decaffeinated), drink them between meals.

4 Cook foods in cast-iron skillets, pots or pans to add extra iron to your food.

5 Follow your medical provider's recommendation about multivitamins or prenatal vitamins. They have extra iron that you may need.

Photo credit for cereal photo: Debora Cartagena, Centers for Disease Control and Prevention

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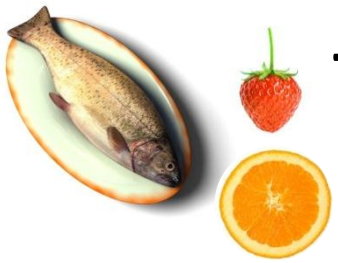
Iron Tips—Take Two!

Iron Helpers:

Foods rich in vitamin C or meats



+

Foods rich in iron

=

Your body uses ***more*** iron!

Foods rich in vitamin C

Vegetables

- Tomato
- Broccoli
- Cauliflower
- Bell pepper
- Chili peppers
- Cabbage

Fruits

- Oranges
- Cantaloupe
- Grapefruit
- Strawberry
- Kiwi
- Mango
- Papaya

Juices

- Orange
- Grapefruit
- Tomato
- Lemon/lime

Foods rich in iron

Meats

- Organ meats (liver, giblets); no more than once a week
- Beef
- Duck
- Lamb
- Shrimp
- Fish
- Shell fish, such as clams and oysters

Non-Meats

- WIC-approved cereals
- Fortified instant cereals
- Soybeans
- Pumpkin/squash seeds
- Dry beans, cooked
- Lentils
- Spinach
- Dark green leafy vegetables, such as collard and spinach
- Eggs
- Bread/tortillas
- Rice/pasta
- Tomato paste
- Prune juice
- Dried fruit

Read food labels!

Iron is added to many foods. Look for food labels that say "enriched" or "fortified." Some foods that may have extra iron are bread, rice, tortillas, cereals, and pasta.

Vitamin C is added to some foods because we need to have it every day. Look for labels that say "added vitamin C." Juices are a good example of a vitamin C enriched product. Check the label to see if each serving has 50% or more of the vitamin C that you need. Juice is high in natural sugar. **Limit juice intake to ½-1 cup per day.**

! Avoid buying "fruit drinks" and other sweetened drinks that are high in sugar. Look for labels that say "100% juice."

Limit juice intake to ½-1 cup per day.

Photo credit for cereal photo: Debora Cartagena, Centers for Disease Control and Prevention

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My Action Plan for Iron

Name: _____

Check the box for each step you are doing now to eat enough iron. Check the boxes for the steps you plan to take. Write down other ways you plan to improve your iron intake.

Things that I can do to get enough iron every day	Am Doing	Steps I Will Take
• Add one serving of vegetables such as broccoli or romaine lettuce to my diet most days of the week.	☐	☐
• Try a breakfast cereal that has been approved for WIC. These cereals have iron added to them. • To find cereals approved for WIC, visit www.cdph.ca.gov/programs/wicworks/Pages/WIC-AuthorizedFoodListWAFL.aspx. • Tip: Look for the WIC logo in the cereal aisle at the store. Some stores label foods approved for WIC.	☐	☐
• Eat an orange or another citrus fruit with my iron-rich foods.	☐	☐
• Try a fruit or vegetable from the iron-rich food list that I have never tried before.	☐	☐
• Add one serving of black beans, pinto beans, garbanzo beans or lentils to my diet most days of the week.	☐	☐
• My ideas for improving my iron intake: _____	☐	☐
_____	☐	☐

Signature: _____ Date: _____

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Folic Acid and Folate

What are "Folate" and "Folic Acid?"

Folic acid and folate are different terms for the same B vitamin.

- **Folic acid** is the synthetic form that is added to fortified foods and used in vitamin supplements. The body absorbs folic acid better than natural folate
- **Folate** is frequently used as the word to describe the vitamin found naturally in foods

Folic acid is necessary for the growth and repair of every cell in the body. Folic acid is needed for the growth and repair of hair, skin and nails.

Folic acid is important for the development of the human embryo. It is critical for the cell growth that occurs when fetal tissues and organs (brain, spinal cord) begin to develop very early in pregnancy.

Adolescence is a critical time in the life course to target for folic acid intake because 1) adolescents' nutritional needs tend to increase and 2) overwhelmingly their pregnancies are unplanned and may not occur in the most optimal of circumstances. Additionally, habits that are formed during the adolescent period may continue throughout their reproductive years.

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What are the Consequences of Insufficient Folic Acid/Folate Intake?

Because of its relationship to DNA production and cell growth, adequate folic acid/folate intake is essential to all females of reproductive age and can reduce the risk of neural tube defects by up to 70%. In the United States, 3,000 pregnancies are affected by neural tube defects annually. [1]

Many organizations, such as the Institute of Medicine,[2] recommend that all females capable of becoming pregnant --whether or not they are planning a pregnancy—consume 400 mcg of folic acid daily from fortified foods and/or a supplement, in addition to eating folate-rich foods.

Why not start folic acid when one is already pregnant?
Most neural tube defects that could have been prevented occur in the earliest weeks following conception, before women and teens realize they are pregnant and begin prenatal care.

Why not just target those who are planning a pregnancy?
Many pregnancies and repeat pregnancies are unplanned, particularly so among adolescents. By just targeting those who are planning a pregnancy, many opportunities to prevent birth defects will be missed.

How Much Folic Acid/Folate is Enough?

Adolescents need folic acid/folate due to their rapid growth and sexual maturation. See Table FA-1 for specific recommendations.*

Table FA 1 Recommended Daily Allowance of Folic Acid/Folate (micrograms per day)

Age	Females	Males
9-13	300	300
14-18	400	400
19-30	400	400
Pregnancy 14-18 19-30	600	
Lactation 14-18 19-30	500	

Source: Institute of Medicine, Food and Nutrition Board, 1998[2]

Individuals between 9 and 13 years of age should get 300 mcg of folic acid/folate daily. Individuals ages 14 years and older should consume at least 400 mcg per day. 600 mcg is needed during pregnancy and 500 mcg during lactation.

Individuals who have already had a baby with a birth defect may need more than 400 mcg of folic acid/folate each day before and during pregnancy. They should talk to their healthcare provider for the specific amounts needed, especially while planning a future pregnancy.

*Note: The recommendation is for Dietary Folate Equivalents, which takes into consideration that folate is not absorbed as well as folic acid. Many find this distinction confusing. For more information, see the Institute of Medicine Dietary Reference Intake tables.

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What is the Status of Folic Acid Intake among Teens?

According to 2010 data from California's Maternal and Infant Health Assessment, only 23.9% of adolescents aged 15-19 years reported consuming folic acid in the month before pregnancy compared to 31.1% of those aged 20-34 and 44.6% of those aged 35 and older.[3]

How Can Teens Consume Enough Folic Acid?

There are two ways to consume 400 mcg of folic acid each day:

A. **Eating a serving of a breakfast cereal that contains 100% of the recommended daily value (DV) of folic acid:** One serving of these cereals provides 400 mcg of folic acid.

or

B. **Taking a folic acid supplement:** Most over-the-counter multivitamins contain 400 mcg of folic acid, the amount recommended for the prevention of neural tube birth defects before pregnancy. For teens that prefer not to swallow pills, chewable vitamins with 400 mcg folic acid may be available.

Clients who are pregnant or breastfeeding their children have higher folic acid/folate requirements (Table FA-1). Prenatal vitamins may have the extra folic acid needed for pregnancy.

Remind clients that supplements should not replace a diet that includes foods such as fruits, vegetables, whole grains, and beans. A vitamin supplement can provide 400 mcg of folic acid, but also eating folate-rich foods is important.

What are Good Sources of Folate?

In addition to consuming 400 mcg of folic acid from a fortified cereal or vitamin supplement, a healthy diet also includes foods rich in folate.

Foods rich in folate include dark green, leafy vegetables (e.g., spinach, broccoli, asparagus, and romaine lettuce), beans, lentils, grains, and citrus and other fruits (e.g., kiwis and strawberries). Because folate is destroyed by the heat used in cooking and canning, adolescents should be encouraged to eat fresh fruits and vegetables. Farmers markets often have fresh, local-grown fruits and vegetables. Use this tool to find nearby markets. Payment options are also described (cash, card, WIC).

The body can absorb folic acid (the synthetic form of folate found in vitamin supplements and fortified cereals) better than natural folate. The amount of folate (the form that occurs naturally in food) absorbed from individual foods varies; overall absorption from food is estimated to be 50% of the folate available in an individual's diet. It is important to consume a variety of folate-rich foods every day.

Screening

Screen for adequate folic acid intake by first asking the client what she knows about folic acid and then asking whether she is doing one of the following daily:

A. Eating a cereal that has 100% of the daily value of folic acid
B. Taking a vitamin with folic acid

If she is not doing A or B or is not sure, be sure to talk about folic acid as described in the "Interventions" section.

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Interventions

As adolescents rarely are planning to become pregnant, traditional folic acid messages about birth defects prevention may not be effective. Focus on their interests, such as the beauty and overall health benefits of folic acid, specifically the benefits of healthy skin, hair and nails. Encourage them to make folic acid a part of their daily beauty regimen.

Print handouts back-to-back to save paper.

- Review the Folic Acid is a B-Vitamin Your Body Needs Every Day handout with the client. Talk about the importance of folic acid for healthy skin, hair and nails. Talk with her about how she can use food labels to find out how much folic acid is in cereal or a vitamin
- Use the My Action Plan for Pretty Skin, Hair and Nails handout to help the client achieve the recommended folate/folic acid intake

Follow-Up

Review the action plan with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes, talk with her about what prevented her from doing so. Review the benefits of folic acid and see which (if any) are important to her. Validate her feelings. Work with her to identify strategies for removing any barriers.

If the client made changes but still falls short of the recommended intake, praise her for the changes that she made. Work with her to revise her action plan (change or add goals).

If the client has made changes and achieved the recommended intake, praise for the changes that she made. Help her consider a new action plan from another section in the Guidelines.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
Institute of Medicine Dietary Reference Intake tables	Document (PDF)	www.iom.edu/Activities/Nutrition/SummaryDRIs/~/media/Files/Activity Files/Nutrition/DRIs/5_Summary Table Tables 1-4.pdf
Cereals that contain 100% of the daily value (DV) of folic acid	Webpage	www.cdc.gov/ncbddd/folicacid/cereals.html
Farmers market locator	Interactive tool	http://search.ams.usda.gov/farmersmarkets/default.aspx
Folic Acid is a B-Vitamin Your Body Needs Every Day	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-FolicAcidisaBVitamin.pdf
My Action Plan for Pretty Skin, Hair and Nails	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-FolicAcidActionPlan.pdf
CDC folic acid resources	Webpage	www.cdc.gov/ncbddd/folicacid/index.html
Go Folic! Project – comprehensive folic acid website	Webpage, blog	http://gofolic.org/
Comprehensive preconception health website with folic acid resources	Website	www.everywomancalifornia.org Spanish version: www.cadamujercadadia.org

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My Action Plan for Pretty Skin, Hair and Nails

Name: _____

For pretty skin, hair and nails, make sure you get 400 micrograms of folic acid every day. Make your folic acid beauty plan below.

Things that I can do for pretty skin, hair and nails	Am Doing	Steps I Will Take
Choose A or B to get 400 micrograms of folic acid:	☐	☐
A. Eat cereal that has 100% of my daily value (DV) of folic acid. I will read the labels to be sure.		
OR		
B. Take a vitamin with folic acid every day.	☐	☐
Eat foods with natural folic acid:	☐	☐
• Lightly cooked or raw vegetables such as broccoli, spinach, asparagus, or romaine lettuce	☐	☐
• Fruits such as berries, oranges or bananas	☐	☐
• Beans such as black beans, pinto beans or lentils	☐	☐

Useful Websites:

- Find out which cereals have 100% of your daily value of folic acid by visiting www.cdc.gov/ncbddd/folicacid/cereals.html
- Buy fresh fruits and vegetables with natural folic acid at a farmers' markets near you. To find the closest markets and those that accept WIC, visit http://search.ams.usda.gov/farmersmarkets/default.aspx

Signature: _____ Date: _____

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Folic acid is a B-vitamin your body needs every day.

Why take folic acid?

Folic acid helps every cell in your body. Taking folic acid will help your skin glow, your hair shine, and your nails stay healthy and strong. Make folic acid part of your beauty routine.

How much folic acid do I need?

You need at least 400 micrograms (mcg) of folic acid every day.

How can I get enough folic acid every day?

There are two ways to get the 400 micrograms (mcg) of folic acid your body needs every day.

Eat one serving of a cereal that has all the folic acid you need every day. Many cereals do not have enough folic acid, so read the nutrition label on the box.

OR

Take a vitamin that has all of the folic acid you need every day.

Nutrition Facts
Serving Size: 1 cup (55g)
Servings Per Container: About 12

Amount Per Serving	Cereal	With 1/2 cup skim milk
Calories	170	210
Calories from Fat	10	10
	% Daily Value	
Total Fat 1g	1%	2%
Saturated Fat 0g	0%	0%
Polyunsaturated Fat 0g		
Monounsaturated Fat 0g		
Cholesterol 0mg	0%	1%
Sodium 240mg	10%	13%
Total Carbohydrate 41 g	14%	16%
Dietary Fiber 5g	20%	20%
Sugars 20g		
Other Carbohydrate 16g		
Protein 4g		
Vitamin A	10%	15%
Vitamin C	0%	0%
Calcium	100%	110%
Iron	100%	100%
Vitamin D	10%	25%
Vitamin E	100%	100%
Thiamin	100%	100%
Riboflavin	100%	110%
Niacin	100%	100%
Vitamin B6	100%	100%
Folic Acid	100%	100%
Pantothenic Acid	100%	100%

Supplement Facts
Serving Size: One Tablet

Amount Per Serving		% Daily Value
Vitamin A	5000 IU	100%
Vitamin C	60 mg	100%
Vitamin D	400 IU	100%
Vitamin E	30 IU	100%
Vitamin K	25 mcg	31%
Thiamin (B1)	1.5 mg	100%
Riboflavin (B2)	1.7 mg	100%
Niacin	20 mg	100%
Vitamin B6	2 mg	100%
Folic Acid	400 mcg	100%
Vitamin B12	0 mcg	100%

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Fruits and Vegetables

Why are Fruits and Vegetables Important?

Most teens know they should eat fruits and vegetables every day, but they may not know why it is important. Fruits and vegetables are excellent sources of nutrients, specifically fiber, complex carbohydrates, and numerous vitamins and minerals. All of these nutrients are needed to support a healthy body and mind. They also help boost energy levels and promote a healthy weight.

Because adolescence is a period of rapid growth and development, it is important for teens to consume the recommended amount of fruits and vegetables for health promotion and disease prevention Diets that are rich in fruits and vegetables are associated with a decreased risk of chronic diseases such as heart disease and some cancers.[1-5]

Recommendations by age and sex are shown in Tables 1 and 2. Recommendations also vary by level of physical activity. In general, more fruits and vegetables are required for more active teens. Tables can be used and are available in Appendix A, under the Adolescent Nutrition section, to find specific recommendations. Individualized recommendations can be created by using an interactive tool available at ChooseMyPlate.gov.

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Table 1. Recommended Daily Fruit Intake for Adolescents

Age	Females	Males
9-13	1.5 cups	1.5 cups
14-18	1.5 cups	2 cups
19-30	2 cups	2 cups

Source: USDA Choose MyPlate [6]

Table 2. Recommended Daily Vegetable Intake for Adolescents

Age	Females	Males
9-13	2 cups	2.5 cups
14-18	2.5 cups	3 cups
19-30	2.5 cups	3 cups

Source: USDA Choose MyPlate [7]

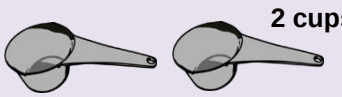
Figure FV-1 **Cups or Servings?**

With the conversion of the Food Pyramid to My Plate, the recommendation language for serving size changed from "servings" to "cups." This is confusing for both health care professionals and teens.

In general, 1 cup of fruits and vegetables is equal to:

1 cup raw or cooked vegetable or fruit

1 cup of 100% vegetable or fruit juice



2 cups leafy greens

To see specific examples of what counts as a cup of fruit or vegetables, visit the CDC webpage, What Counts as a Cup?

Or

For fruit examples visit the USDA ChooseMyPlate.gov webpage What Counts as a Cup of Fruit?

For vegetable examples, visit the USDA ChooseMyPlate.gov webpage What Counts as a Cup of Vegetables?

Fruit and vegetable recommendations for pregnant and breastfeeding adolescents are based on age, trimester, pre-pregnancy weight, and physical activity level. For general pregnant and breastfeeding nutrition recommendations, see the California MyPlate for Moms. Tailored recommendations for pregnant and breastfeeding adolescents are available using the Daily Food Plan for Moms.

In addition to making recommendations for the number of daily servings, the Dietary Guidelines for Americans further recommends eating a colorful variety of fruits and vegetables in order to get a broad range of nutrients in the diet. To learn more about the benefits of eating colorful fruits and vegetables, please explore Fruits and Veggies More Matters.

Why the Concern about Fruit and Vegetable Intake?

Many teens eat less than the recommended amounts of fruits and vegetables each day. The results from the 2012 California Teen Eating, Exercise and Nutrition Survey (CalTEENS) revealed that 49% of adolescents reported eating no servings of vegetables or salad the day before completing the survey and 18% reported eating no servings of fruit or fruit juices. Adolescents also reported consuming less than 1 cup of salads and vegetables a day.[8] Furthermore, in the 2013 national Youth Risk Behavioral Surveillance Survey (YRBSS) only 16% of students reported eating vegetables 3 or more times a day for the past 7 days.[9]

Eating a wide variety of fruits and vegetables every day is essential to support good health and development in adolescence, which sets the stage for a healthy future in adulthood. The best way to eat fruits and vegetables is without additional fat and sugar.

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Why Do Adolescents Avoid Fruits and Vegetables?

Teens often choose fast food or convenience foods over whole foods like fruits and vegetables. Some reasons for these choices include:

Availability

One of the most common reasons teens gave for not eating more fruits and vegetables was because they were not available.[8] For example, healthy food options from vending machines are generally limited to sodas, candy, and chips. Families, especially those with low incomes, may not purchase healthy foods because of their perceived high cost.[10, 11]

There appears to be an increased accessibility of unhealthy foods near schools and neighborhoods in urban areas, which leads to increased opportunity for adolescents to consume unhealthy convenience foods. Conversely, accessibility of healthy foods is a challenge to many families; particularly those living in low-income neighborhoods, communities of color, and rural areas.[12-14]

Social Norms

Studies show that adolescents are more likely to eat junk food and fewer fruits and vegetables if that is what their peers are doing.[15, 16]

Perceptions

Healthy food choices are perceived as inconvenient and lacking taste. [8, 17] (see Adolescent Nutrition for more information on adolescent eating behaviors)

Knowledge and/or Skills

Teens may not have the knowledge or skills needed to prepare healthy foods. For example, one needs to know how to purchase, prepare, and properly cook fresh foods in order to make healthy food and snacks. See Recipes/cookbooks for adolescents in Web Links Referenced/Additional Resources.

Parental role modeling

Studies show that parents have an influence on what adolescents eat. Adolescents are likely to consume fruits and vegetables if their parents eat fruits and vegetables.[18, 19] Busy parents often rely on convenience and fast foods for many family meals instead of preparing something fresh.

It is also possible that the parents of teens do not have the skills or knowledge necessary to make healthful meals.[20]

Additional Screening

Use the California My Plate for Teens, Super Tracker, or the Food Diary (NS-5) to screen for fruit and vegetable intake. Use the Fruit and Veggie Quiz to identify where the teen may increase fruit and vegetable intake.

Interventions/Referrals

Use the Fruit and Vegetable Tips handout to discuss ways to improve fruit and vegetable consumption. Encourage the teen to fill half of her plate with fruits and vegetables at each meal.

Use the Action Plan for Fruits and Vegetables to assist the client in developing a plan for behavior change.

Use the California teen cookbook to show teens how to make quick, easy, and healthy meals and snacks. Try a cooking demonstration and provide a copy of the cookbook for teens to keep. A teen cookbook is available at http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-TeenCookbook-English.pdf

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Follow-Up

Review the action plan with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes, explore what barriers prevented her from doing so. Discuss possible strategies for removing these barriers.

If the client made changes but still falls short of the recommended intake, praise her for the changes that she did make. Work with her to revise her action plan to change or add goals for behavior change.

If the client has made changes and achieved the recommended intake, praise her and consider developing a new action plan for maintaining the new behavior.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
MyPlate	Website	http://www.choosemyplate.gov
Fruit & Veggies More Matters	Website	http://www.fruitsandveggiesmorematters.org/
SuperTracker	Interactive tool	www.choosemyplate.gov/SuperTracker/createprofile.aspx
MyPlate for Teens	Document (PDF)	http://www.dcph.ca.gov/programs/NutritionandPhysicalActivity/Documents/MO-NUPA-MyPlateforTeens.pdf
MyPlate for Moms	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyPlateForMoms.pdf
MyPlate for Moms (Spanish)	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-SP_MyPlateHandout.pdf
Daily Food Plans	Webpage – Interactive Tools	http://www.choosemyplate.gov/supertracker-tools/daily-food-plans.html
What Counts as a Cup?	Webpage	http://www.cdc.gov/nutrition/everyone/fruitsvegetables/cup.html
Fruit & Veggies Calculator	Webpage – Interactive tool	http://www.cdc.gov/nutrition/everyone/fruitsvegetables/howmany.html
Fiber calculator	Webpage - interactive tool	www.healthcalculators.org/calculators/fiber.asp
California Food Guide: Fulfilling the Dietary Guidelines for Americans	Webpage	www.dhcs.ca.gov/formsandpubs/publications/Pages/CFGTableofContents.aspx
Recipes/cookbooks for adolescents	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx http://www.cdph.ca.gov/programs/cpns/Pages/Recipes.aspx http://harvestofthemonth.cdph.ca.gov/Pages/default.aspx http://cachampionsforchange.cdph.ca.gov/Pages/recipes.aspx
Farmers markets search tool	Webpage - interactive tool	http://apps.ams.usda.gov/FarmersMarkets/
Worksite nutrition and physical activity	Webpage - resources	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/WorksiteNutritionandPhysicalActivity.aspx
Nutrition and Physical Activity Initiative - Maternal, Child and Adolescent Health	Webpage	www.cdph.ca.gov/programs/nutiritionandphysicalactivity/Pages/default.aspx
Comprehensive website for adolescent girls' health	Website	www.girlshealth.gov/

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Fruit and Veggie Quiz

I need to eat _____ cups of fruit each day
I need to eat _____ cups of vegetables each day
I need a total of _____ cups of fruits and vegetables each day
(Check here: www.choosemyplate.gov/myplate/index.aspx)

For each cup of fruit or vegetable you eat, record a check mark in the box of the specific day and meal. For example, if you consume one small apple and about one cup of baby carrots (approximately 12 baby carrots) for a snack on Tuesday, then record two check marks in that box. Record the total daily number of checks in the last row. To see what counts as a cup, go to:
http://www.choosemyplate.gov/food-groups/fruits-counts.pdf
http://www.choosemyplate.gov/food-groups/vegetables-counts.pdf

	Monday	Tuesday	Wednesday	Thursday	Friday
Breakfast					
Lunch					
Snacks					
Dinner					
Total ✔					

If you have:

- **At least 5 total check marks each day (Or your specific total recommendation):** Great job. Keep up the good work.
- **3-4 total check marks each day:** You're doing well. Keep at it with a few more fruits and veggies each day.
- **Less than 3 total check marks each day:** You're making good progress, but may need help getting more colorful fruits and veggies in your life. Use the Eat a Colorful Variety of Fruits and Vegetables handout for more ideas. Check out the Fruit and Vegetable Tips for some ideas of how to add fruits and vegetables to your diet.

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Fruit and Vegetable Tips

Adapted from www.ChooseMyPlate.gov

- Eat a rainbow of fruits and vegetables to look and feel your best. Choose red, orange, deep-yellow and dark-green, leafy vegetables.
- Try using spinach, watercress, romaine and butter lettuces instead of iceberg lettuce in your salad. A rule of thumb is the darker the better.
- Buy fruits and vegetables in season. They are fresher, taste better and usually cost less. Find seasonal fruits and veggies at a farmer's market near you. Visit http://apps.ams.usda.gov/FarmersMarkets/
- Try a new vegetable each week. Some of the vegetables that you did not like as a child may taste good to you now. Brussels sprouts, Swiss chard, kale, parsnips, beets, bok choy, okra, spaghetti squash, and many others may all surprise you.
- Put veggies in your cooked soups, rice and pasta dishes.
- Fill half your plate with fruits and veggies. This is a good rule of thumb for each meal.
- Keep cleaned, chopped up fruits and veggies in your refrigerator for a quick and easy snack.
- Carry fresh fruit (or dried fruit) and chopped veggies with you for a healthy bite on the go.
- Apples, oranges, and bananas make great snacks or additions to recipes. Try putting sliced apples or oranges in your salads.

- Make most of your choices whole or cut-up fruit rather than juice, for the benefits that dietary fiber provides.
- Try cooking some fruit and veggie-filled meals using a healthy cookbook for teens.

Eating recommended amounts of fruits and vegetables every day is an easy way to get the vitamins and minerals you need to stay healthy and look your best.

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Be Sure to Get Your Fruits and Veggies Every Day

Fruits and vegetables have fiber and are filled with vitamins and minerals that help you look and feel your best. Eating a variety of fruits and vegetables every day will ensure a broad range of nutrients in your diet. For more information, please visit: www.fruitsandveggiesmorematters.org/

Nutrient	Benefits	Fruit Sources	Vegetable Sources
Fiber	Can lower your risk of diabetes and heart disease	Apples, berries, pears, bananas, guavas, kiwi, oranges	Lentils, lima beans, pinto beans, black beans, spinach
Calcium	Supports healthy bones and teeth	Calcium-fortified orange juice, figs, oranges, strawberries	Collard greens, soybeans (edamame), spinach, turnip greens
Iron	Provides energy Maintain healthy cells, skin, hair, and nails	Prune juice, dried fruit (Citrus fruits help absorption)	Beans, kale, collard greens, spinach
Potassium	Helps maintain healthy blood pressure	Apricots, bananas, tomatoes, cherries, kiwi	Pink beans, large Lima beans, white beans, broccoli, chickpeas, lentils, sweet potato,
Vitamin A	Promotes healthy skin and eyes Supports a healthy immune system	Apricots, cantaloupe, grapefruit, mangoes, watermelon	Carrots, collard greens, carrots, lettuce, sweet potato, spinach
Vitamin C	Supports your immune system and helps maintain healthy teeth and gums	Apricots, berries, papaya, pineapple, oranges, guavas, lemons, limes, tomatoes, melons, grapefruit	Asparagus, bok choy, broccoli, Brussels sprouts, cabbage, cauliflower, leafy greens, potatoes

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Eat a Colorful Variety of Fruits and Vegetables

Eat a colorful variety of fruits and vegetables every day to help you look and feel your best. For more ideas on fruits and vegetables visit ChooseMyPlate.gov or Fruits and Veggies More Matters

Red and Orange

Red apples	Apricots
Beets	Mangoes
Cranberries	Oranges
Red Pears	Carrots
Radishes	Grapefruit
Raspberries	Cantaloupe
Cherries	Tangerines
Strawberries	Nectarines
Pomegranates	Papayas
Red Peppers	Pumpkins
Radicchio	Butternut squash
Rhubarb	

Green

Green apples	Cabbage
Avocados	Cucumbers
Green grapes	Endive
Honeydew	Kale
Kiwi	Leafy greens
Limes	Leeks
Artichokes	Okra
Arugula	Peas
Asparagus	Spinach
Broccoli	Sugar snap peas
Celery	Zucchini

Yellow

Yellow apples	Parsnips
Lemons	Mushrooms
Yellow pears	Yellow peppers
Cantaloupe	Yellow onions
Pineapples	Potatoes
Summer squash	Corn
Cauliflower	Bananas

Blue and Purple

Purple cabbage	Eggplant
Blueberries	Figs
Blackberries	Plums
Boysenberries	Dried plums
Concord grapes	

Underline the fruits and vegetables that you eat now.

Circle the fruits and vegetables that you will try to add to your diet.

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Action Plan for Fruits and Veggies

Name: _____
Date: _____

Check the boxes that describe what you are presently doing and what you plan to do:

	Am Doing	Plan to Do
Eat one more fruit or veggie every day.	☐	☐
Eat fruit for dessert instead of ice cream, cookies or cake.	☐	☐
Eat a fruit or veggie that I have never tasted or that I disliked in the past.	☐	☐
Drink 100% or diluted fruit or vegetable juice instead of soda.	☐	☐
Eat fruit for a snack instead of potato chips or other high-calorie, low-nutrient snack food.	☐	☐
Choose raw fruits and vegetables at least once a day	☐	☐
	☐	☐

My idea for improving my fruit and veggie intake:

_____

_____

_____

_____

Signature: _____ Date: _____

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Body Image & Disordered Eating

What is Body Image?

Body image is a complex concept that affects how people feel about themselves and how they behave. The National Eating Disorder Association (NEDA) defines body image as, "how you see yourself when you look in the mirror or when you picture yourself in your mind."[1] Negative body image and stress can lead to disordered eating.

Adolescence is a critical time for both body image and self-esteem. Adolescents are adjusting to a new physical sense of self, along with a sexually maturing body. This may make teens feel uncomfortable and/or self-conscious. Many male and female adolescents may begin to develop a negative self-image, especially about how they look.[2]

Poor Body Image

Many adolescents are dissatisfied with their body shape and weight. Poor body image is when a person has a distorted perception of his or her body shape. Feelings of shame, embarrassment, and anxiety are not uncommon among individuals with a poor body image.

Physical body changes that occur during puberty may influence an adolescent's satisfaction with

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Nutrition and Physical Activity
Guidelines for Adolescents

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their personal appearance. After their growth spurt, females may accumulate fat rapidly, especially in their hips, thighs, and buttocks. This may lead to negative thoughts towards one's body.

Adolescents who mature early or late may be more dissatisfied with their appearance, and may need more reassurance that they are developing normally.

Males may have a mild weight increase before their growth spurt (around 9-13 years of age). This pre-pubertal weight gain is more pronounced in some males and may trigger a fear of becoming overweight. Generally, the increased height and muscular development that occurs with later adolescence improves body image. In an attempt to build muscle, some adolescents may use supplements, such as creatine, protein powders and/or anabolic steroids.

Influences on Body Image

Anyone in our culture is at risk for developing a poor body image, which may result in harmful practices around weight loss. In 2013, the national Youth Risk Behavior Surveillance System (YRBSS) showed that 31% of high school students in grades 9-12 felt that they were overweight and 48% were trying to lose weight.[3]

Body image is influenced by both biological and environmental factors. Environmental influences, such as family/peer expectations, societal/cultural beliefs, and media portrayals can play a large role in developing a positive or negative body image. (see Figure BI-1)

Examples of factors that may lead to distorted body image include:

- Children and adolescents often feel personal pressure as parents, teachers, coaches, and friends urge them to achieve the "perfect" body.[4, 5]
- Overweight children and adults may be socially isolated and may be viewed as individuals who have failed themselves or society.
- "Fear of becoming fat" has become a common phenomenon in a society that worships thinness.
- Sexual trauma and/or Body Dysmorphic Disorder (BDD) can also be factors that lead to distorted body image. For referral information see Web Links Referenced/Additional Resources

Adults themselves often model body dissatisfaction by making negative comments about other's or their own bodies. Studies have shown a link between parents commenting on body shape and adolescent body dissatisfaction.[4]

The media and advertising industry can have serious and detrimental effects on adolescents' self-image. In one research study, adolescents who attempted to look like media figures were more likely to be very concerned about their weight than those who did not.[5] In the same study, those who reported that thinness was important to their fathers were more likely to be constant dieters than their peers.[5] Unattainable body images in the media can also lead to increased depression, anger, anxiety and decrease self-esteem, all of which are often times warning signs and symptoms of eating disorders.[6]
(See the box below for risk factors of developing disordered eating)

Risk Factors for Developing Disordered Eating

- Family history of disordered eating
- Family dysfunction
- Low self-esteem
- Poor body image
- Focus on weight
- Self-mutilation
- Stress
- Depression
- Anxiety
- Obsessive-compulsive disorder
- Genetics
- Weight focused sports
- Dieting
- Trauma

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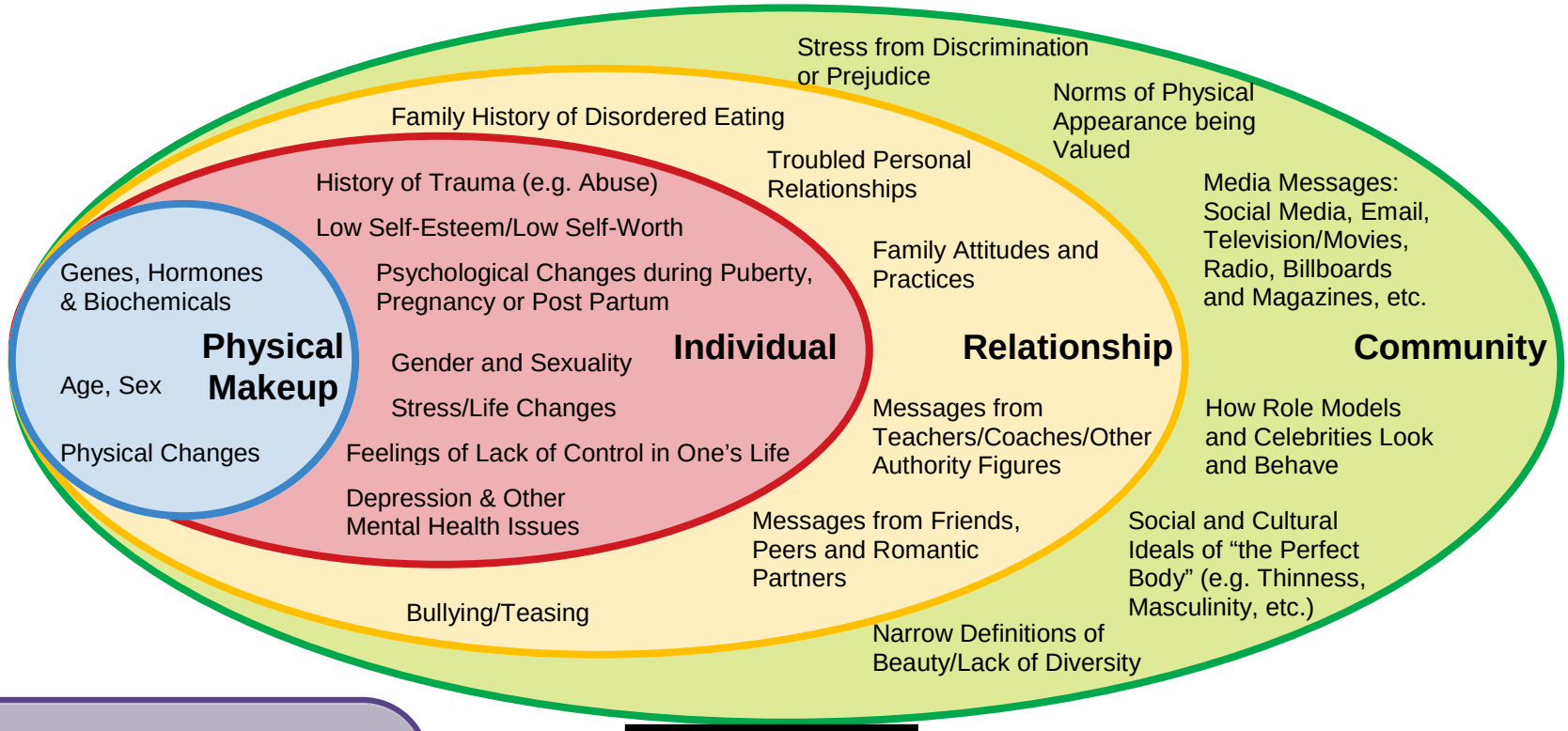
Poor Body Image Can Lead to Disordered Eating

Figure BI-1. Possible triggers/causes of poor body image using the socio-ecological framework



Opportunities for Prevention!

- Screening for risk factors for having or developing disordered eating.
- Support by the AFLP Case Manager, a supportive, caring adult who helps foster self-esteem and navigate individual, relationship and community-level stressors.
- Referral to a health care provider who is experienced in treating eating disorders.

May lead to

Disordered Eating/Disordered Exercise

May lead to

Eating Disorders

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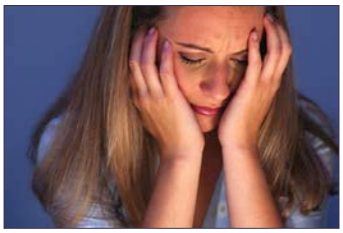

Disordered Eating

Disordered eating includes a wide range of eating behaviors: high fat intake, high calorie intake, calorie restriction, food group elimination, chronic dieting, skipping meals and others. What distinguishes disordered eating from an eating disorder is the frequency and severity of such behaviors. Disordered exercise patterns, ranging from exercise addiction to abstinence of physical activity may also be used to manipulate body size. (See Figure BI-2)

In 2013, 5% of teens in the US reported having tried diet pills, powders or liquids in order to control their weight.[3] When disordered eating patterns are not extreme, they may not appear serious to immediate family, friends and social networks. However, unhealthy eating or physical activity behaviors that are not frequent or intense enough to meet a formal diagnosis may still be dangerous to one's health. These behaviors can also be precursors to future severe eating disorders.[7, 8]

Eating disorders are real, treatable medical illnesses with complex underlying psychological and biological causes. They frequently co-exist with other psychiatric disorders such as depression, substance abuse, or anxiety disorders.

Eating disorders may result in numerous health complications including loss of menstrual cycle, dehydration, bowel or kidney dysfunction, brain shrinkage, diabetes, TMJ (temporomandibular joint) syndrome, misalignment of the teeth, esophageal tears, stomach ulcers, joint pain, arthritis, digestive and absorption problems, acid reflux disorders, cancer of the mouth and throat, low or high blood pressure, heart arrhythmia and cardiac arrest, infertility, dilation of the intestines, osteopenia, osteoporosis, liver damage, or depression and suicide. This list is not exhaustive.

Eating Disorder Warning Signs

Learn to recognize the physical and mental signs of eating disorders, keeping in mind that there may be co-existing psychological illnesses and/or addictions to alcohol or drug abuse.

*The following was taken directly with permission from the National Eating Disorders Association: **https://www.nationaleatingdisorders.org**

Anorexia Nervosa

- Inadequate food intake leading to a weight that is too low.
- Intense fear of weight gain, obsession with weight and persistent behavior to prevent weight gain.
- Self-esteem overly related to body image.
- Inability to appreciate the severity of the situation.
- Binge-Eating/Purging Type involves binge eating and/or purging behaviors during the last three months.
- Restricting Type does not involve binge eating or purging.

Binge Eating Disorder

- Frequent episodes of consuming very large amount of food but without behaviors to prevent weight gain, such as self-induced vomiting.
- A feeling of being out of control during the binge eating episodes.
- Feelings of strong shame or guilt regarding the binge eating.
- Indications that the binge eating is out of control, such as eating when not hungry, eating to the point of discomfort, or eating alone because of shame about the behavior.

Bulimia Nervosa

Frequent episodes of consuming very large amount of food followed by behaviors to prevent weight gain, such as self-induced vomiting

- A feeling of being out of control during the binge-eating episodes.
- Self-esteem overly related to body image.

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Figure BI-2. **Disordered Eating and Disordered Exercise**

Disordered Eating - Abnormal eating patterns that may range from less to more extreme patterns. Disordered eating includes a collection of interrelated eating habits; weight management practices; attitudes about food, weight and body shape, and physiological imbalances that may be experienced by men or women.

Eating Disorder - An extreme expression of disordered eating leading to a range of weight and food issues. They include binge eating disorder, anorexia nervosa, and bulimia nervosa. All are serious emotional problems that can have life-threatening consequences. Below are some categories of eating disorders.

- **Binge Eating Disorder -** Also called compulsive overeating, "is defined as recurring episodes of eating significantly more food in a short period of time than most people would eat under similar circumstances, with episodes marked by feelings of lack of control. This disorder is associated with marked distress and occurs, on average, at least once a week over three months."[9] While there is no purging, there may be sporadic fasts or repetitive diets. Body weight may vary from normal to mild, moderate, or severe obesity.

- **Anorexia Nervosa -** Characterized by emaciation, a relentless pursuit of thinness and unwillingness to maintain a normal or healthy weight, a distortion of body image and intense fear of gaining weight. Anorexia nervosa has the highest mortality rate of all psychological disorders.

- **Bulimia** - Self-perpetuating and self-defeating cycles of binge eating and purging. During a "binge," the person consumes a large amount of food in a rapid, automatic, and helpless fashion. This may anesthetize hunger, anger, and other feelings, but it eventually creates physical discomfort and anxiety about weight gain. The food is then "purged," usually by induced vomiting and/or other inappropriate behaviors, such as restrictive dieting, excessive exercising, laxatives, and diuretics.

- **Other Specified Feeding or Eating Disorder (OSFED)** – Characterized by impairment or distress and not less serious than other eating disorders, but does not meet the criteria for other disorders. It includes binge eating or bulimia nervosa with less frequent episodes, anorexia nervosa without meeting the weight criteria, night eating syndrome and purging without binge eating.[10] For more information on OSFED, please visit: https://www.nationaleatingdisorders.org/other-specified-feeding-or-eating-disorder

- **Unspecified Feeding or Eating Disorder (UFED) –** Clinically significant physical/mental distress; however, does not fit into the other DSMV eating disorder categories, perhaps due to insufficient information available.

Orthorexia Nervosa (Orthorexia) – Not included in the DSM; however, recognized by some experts as a condition that stems from a desire to eat healthfully that becomes excessively restrictive and may result in adverse health outcomes and social isolation. Orthorexia nervosa is less about weight but more about controlling the quality of food intake.[11]

Disordered Exercise - Any abnormal exercise pattern, such as exercise addiction experienced by men or women. It may include abstinence of physical activity to manipulate their body size.

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Common Misconceptions about Eating Disorders

Thoughts people may have about eating disorders…

I know an anorexic... If I just get him/her to eat it will solve the problem. I know a bulimic... if I can keep him/her out of the bathroom it will solve the problem. I know someone who is a compulsive overeater... a diet will fix everything.
False. Concentrating only on the food is a very common mistake. People who suffer from eating disorders use negative coping mechanisms that involve food as a way to deal with unpleasant emotions or pain.

The key to recovering from an eating disorder is to learn to manage all areas of one's life: stress, pain (past and present), emotions, and finally, eating healthfully. Learning not to use food as a coping mechanism cannot be addressed until the person begins to address these underlying issues. The sooner a person gets help, the easier it will be to treat the person and help them get well. When habits become ingrained, eating disorders may be more difficult to treat.

Note that labeling someone by their eating disorder may be hurtful. For example, instead of calling someone "anorexic," say "a person with anorexia."

Only "young, White females" get eating disorders.
False. Anyone can develop an eating disorder. Regardless of previously held beliefs, eating disorders affect individuals from every age, sex, socioeconomic status, culture, and race/ethnicity.

You can tell by looking whether a person has an eating disorder.
False. There are many people with eating disorders who are of average weight. The devastating effects of eating disorders are usually unseen, such as nutrient deficiencies, electrolyte imbalances, and other physical dangers.

Eating disorders are a vanity issue.
False. Eating disorders are not necessarily about appearance. Often, eating disorders can be coping mechanisms for dealing with stress, self-hate, hurt, shame, or lack of control in the rest of the person's life.

People with binge eating disorders are lazy and have no willpower.
False. People suffering with binge eating disorder may use food as a way to fill a psychological void, to cope with stress, to take away pain, and/or to comfort themselves. For some, it is also a way to keep from being vulnerable. They may feel that if they stay overweight, no one will want to get close to them.

My family member/friend eats normally around me. He/she can't possibly have an eating disorder.
False. People with anorexia or bulimia may eat "normally" around others. They may look forward to their time alone to be able to "make up for" the time they have spent "normally" around others. Once alone, people with anorexia may completely starve themselves, those with bulimia may binge and purge, and people with binge eating disorder may binge.

If the doctor says there is nothing to worry about, then there is not.
False. Not all doctors are trained to identify or screen for adolescents with eating disorders. They may not be aware of all the warning signs or may test for other possible physical problems instead. Routine blood tests may not provide adequate information for diagnosing eating disorders.

Adolescents might say…

"I cannot be anorexic because I do eat when I have to."
False. Restriction of food occurs in many ways and does not necessarily mean that one abstains from food completely. For example, some restrict certain types of foods and limit calories to below normal on a daily basis. Others fast for a certain number of days and then eat "normally" for the next few days and repeat the cycle.

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"I don't have an eating disorder because I do eat at times and I never binge eat."
False. When people with anorexia cannot avoid a meal or food, they may follow consumption with self-induced vomiting or laxative abuse.

"I eat a lot of candy and can't possibly be anorexic."
False. It is possible that some people who suffer from eating disorders eat candy and/or use drugs, alcohol, coffee, tea, and/or cigarettes. These may serve as a false sense of energy and/or appease extreme cravings.

"I eat three meals a day or I eat a lot during the course of the day. I never purge. I can't have an eating disorder."
False. Disordered eating does not always mean restricting, bingeing, or purging. If the overall calorie intake is too low, this could be considered anorexia. The individual may not be "starving" themselves of food per se, but may be restricting themselves of sufficient calories and nutrients. For example, someone may eat meals consisting of only lettuce, salad, or yogurt, or other comparably low-calorie, low-fat foods, which are also insufficient at providing all the necessary nutrients.

"I don't make myself vomit or use laxatives. I can't possibly have bulimia."
False. There are other methods of purging following a binge. In addition to laxative use or induced vomiting, purging can be accomplished with exercise or fasting.

"This is just a phase."
False. Anorexia, bulimia, and binge eating disorder are not phases that anyone just "goes through." Some may experiment with different "diets," but this is different from having an eating disorder.

"I take vitamin/mineral supplements so I know I will stay healthy."
False. Vitamin/mineral supplements will not protect against the physical and mental devastation of an eating disorder. While taking vitamins and minerals may help to provide a sense of security, or even prolong certain aspects of health (such as warding off infection or anemia), they will not prevent the complications of an eating disorder.

"Everyone who is overweight eats too much."
False. There are other reasons an individual may be overweight, including medical reasons or a genetic predisposition to a larger body size. Some individuals who are overweight may actually be healthier and more physically fit than normal weigh persons.

Adapted from Eating Disorders Shared Awareness <www.something-fishy.org> Accessed in 2000. No longer available.

People with Eating Disorders May Not Ask for Help

People with eating disorders may not recognize they need help or they may not want help. In situations where youth do want help, they still may not ask for it for the following reasons:

- "I'm ashamed."
- "I'm not thin enough. He/she won't believe me."
- "I'm not sick enough. He/she won't think I need help."
- "The doctor won't take this seriously, no one else does."
- "The doctor won't take my complaints seriously. He/she thinks I'm too young to be worried about such things."
- "He/she will tell my parents. People will find out."
- "He/she will just see me as fat, they won't believe it's an eating disorder."
- "The doctor is just going to make me gain (lose) weight!"
- "My doctor (therapist) will tell me to 'just eat' but it's so much more than that!"
- "My therapist refuses to treat me because I've lost (gained) weight."
- "I'm a man and I know they'll think I'm a 'freak,' or they won't believe me."

As a care provider, it is critical to validate feelings and promote positive body image at every opportunity possible. Use the tips and activity handouts to facilitate these important conversations.

Adapted from Eating Disorders
Shared Awareness <www.something-fishy.org>
Accessed in 2000. No longer available

Interventions/ Referrals

Use videos, such as Young Women's Thoughts on Body Image and lead a discussion.

Use the Develop a Positive Body Image activity sheet to encourage positive thoughts and activities.

Use the Ask Yourself activity sheet as an interactive activity that encourages client self-assessment of attitude.

Use the Web Links Referenced/Additional Resources information sheet for other sources of information on these topics.

Use The Important People in My Life handout to assist your client with value clarification

Use the Accept All Body Shapes activity sheet to discuss size acceptance with clients.

If you suspect that the adolescent has an eating disorder, refer to a health care professional or agency that specializes in the treatment of eating disorders. See Web Links Referenced/Additional Resources

Help the adolescent develop a positive body image by doing the following:

- Ask the adolescent: "What is one thing you really like about yourself?" or "What is one thing you are proud of yourself for?" If he or she has a hard time, prompt the adolescent--for example, "I see that you are really good at math" or "you are really caring towards your family."
- Encourage the adolescent to think about how they view others. Help them come up with positive ways of describing their peers. He or she can participate in Operation Beautiful by anonymously giving a note to someone with a positive message on it. www.operationbeautiful.com
- Avoid using the term "diet" with adolescents. Adolescents may associate this term with certain eating and physical activity patterns that are not healthy—for example, skipping meals or not eating a certain food group.
- If an adolescent says he or she is "dieting," he or she may not be eating enough calories or may have disordered eating patterns. This can be dangerous to anyone, but is even more so in adolescent pregnancy.
- Make sure the adolescent understands that weight gain is a normal part of development, especially during puberty and pregnancy.

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- Avoid negative statements about food, weight, body size and shape.
- Help the adolescent make healthy decisions about food, such as by encouraging nutritious meals and snacks. Encourage regular physical activity that is consistent with public health recommendations.
- Compliment the adolescent on her or his efforts, talents, accomplishments, and personal values.
- Discuss images shown in the media with the adolescent (e.g. imagery on the internet, in magazines, in television advertisements, etc.).
- Keep communication lines with the adolescent open.

For referral information, see Web Links Referenced/Additional Resources.

How to Start the Conversation

"I've noticed you make negative comments about your body and blame it on the food you eat. When I hear you say you hate your fat thighs, it makes me sad and concerned. These thoughts can lead to an unhealthy relationship with food and your body image. If these thoughts continue they may lead to an eating disorder. I would like to help and support you to improve that relationship. How do you feel about that? Can you talk more about your body image and feelings around food?"

Quote provided by Krista Flores, RD, a registered dietitian who specializes in eating disorders treatment at the Eating Recovery Center of California

Another example:

"I think you're smart, funny, creative, good at yoga, (fill in the blank). But I'm concerned that there might be a part of you that's in trouble right now. In the future, I don't want to look back and regret not voicing my concern for you and your health. Can we talk about this? How can I help?"

Adapted Quote provided by Dr. Judith Brisman[12]

How to Help Someone

It can be extremely difficult to reach out to someone who is struggling with an eating disorder. However you decide to approach the individual, know that help always begins with a conversation. Follow these helpful tips.

- Speak with her one-to-one in a comfortable location, a coffee shop or a walk through a park.
- Indicate specific behaviors that led to your concern. Be sure to use "I" phrases. For example: "I'm concerned because…" "I have noticed…"
  Stay away from accusatory language, "You should…" "You need…"
- Be sure to let the person know that you care. You are there to listen and you will support her however you are able.
- Focus on the word health and stay away from weight, food or any words that may trigger negative thoughts.
- Offer suggestions for guidance: speaking to a therapist, guidance from a registered dietitian, treatment programs, see additional resources for more.
- If you feel comfortable, offer to accompany her to the first appointment.
- Do NOT offer simple solutions like, "If you'd just stop, then everything would be fine!" Remember this can be a serious biological illness.
- Remember the individual may respond with denial or by lashing out. Listen to her response, acknowledge her feelings and share that seeking help is a sign of strength. Add that you are always there for support and tell the individual to feel free to reach out to you for help at any time.
- If the conversation does not go as planned, consider reaching out again a couple of weeks later or let someone else close to the individual know your concerns.

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Follow-Up

Discuss the client's answers to the questions on the Ask Yourself activity sheet. Use the answers to help the client evaluate how her body image is influenced by internal and external messages. Awareness of the type of positive and negative messages she receives is the first step toward change.

Let the adolescent know that there is more than one way to be beautiful.

- Help the adolescent understand that self-perceptions may be reactions to the negative media images received about body image.
- Encourage the adolescent to discuss the origins of body dissatisfaction and eating disorders in a group setting, so that he/she can compare his/her responses to those of peers.
- Encourage acceptance of all body types.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
Academy of Nutrition and Dietetics	**Website**	www.eatright.org
National Eating Disorders Association	**Website**	www.nationaleatingdisorders.org
The National Center for Overcoming Overeating	**Website**	www.overcomingovereating.com
United States Department of Health and Human Services Office on Women's Health	**Webpage**	http://www.womenshealth.gov/body-image/index.html?from=AtoZ
Body image and the media	**Website**	www.about-face.org
Girls Health	**Webpage**	www.girlshealth.gov/feelings/bodyimage/bi.thoughts.html
Operation Beautiful	**Website**	http://www.operationbeautiful.com/
Finding Balance	**Website**	https://www.findingbalance.com/
Eating Disorder Hope	**Website - resources**	http://www.eatingdisorderhope.com/
Eating Disorders and LGBTQ	**Webpage**	https://www.nationaleatingdisorders.org/eating-disorders-lgbt-populations
Overeaters Anonymous	**Website - resources**	www.oa.org
National Association of Anorexia Nervosa and Associated Disorders	**Website- resources**	www.anad.org
Monte Nido Treatment Facility	**Treatment Center**	http://www.montenido.com/
Eating Recovery Center of California	**Treatment Center**	http://www.eatingrecoverycenterca.com/
UCLA Neuropsychiatric Institute Eating Disorder Program	**Webpage Treatment Center - Resource**	http://eatingdisorders.ucla.edu/
Child Health and Disability Program (CHDP)	**Treatment Center - Resource**	www.dhcs.ca.gov/services/chdp/pages/default.aspx
Intuitive Eating	**Website**	https://www.intuitiveeating.com/
Stanford-Disordered Eating Program	**Treatment Center -**	http://www.stanfordchildrens.org/en/topic/default?id=eating-disorders-in-children-90-P01601&sid=33170
Healthy At Every Size (HAES)	**Website**	http://www.haescommunity.org/
BingeEating Disorder.com	**Website**	http://www.bingeeatingdisorder.com/
Academy for Eating Disorders	**Website**	http://www.aedweb.org/web/index.php

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What is Body Image?

Adapted from BodyTalk Facilitator's Guide

Body image is the picture of your body that you hold in your mind. Body image is made up of many events in your life. Some examples are below:

- How your family members react to your body
- How your body changes as you grow
- Any experience of physical or sexual abuse you may have had
- How your body feels
- How you feel about being a girl or boy
- How you feel about your body
- Dance, sports or other exercise classes that you attend
- Accidents and illnesses you may have had
- Your culture
- Messages from media, such as on the internet, in magazines and in television or movies

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Develop a Positive Body Image

Turn negative thoughts into positive and powerful energy!
Choose 5 of the following positive activities to practice every week.

- ☐ Exercise for the joy of feeling my body move and grow stronger.
- ☐ Do activities that make me happy. I deserve to do things that I enjoy!
- ☐ Wear clothes that make me feel happy.
- ☐ List at least 5 good qualities that I have, such as, being kind, clever, or creative. I can repeat these to myself whenever I start to feel bad about my body.
- ☐ Surround myself with people and things that make me feel good about who I am.
- ☐ Treat my body with respect and kindness. I will nourish it, move it, and listen to its needs. My body will carry me to my dreams!
- ☐ Appreciate all that my body can do.
- ☐ Remind myself that beauty is a state of mind, not a state of my body.

Treat your body: Do something nice for your body that you can enjoy. Take a bubble bath, paint your toe or fingernails, read a book, make time for a nap, pet an animal, find a peaceful place outside to relax. The options are endless!

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Ask Yourself …

Adapted from BodyTalk Facilitators Guide

How have you used food or eating to cope with bad feelings?

Have you ever dieted? If yes, what situations lead you to begin a diet, how does your body and mind feel when you are dieting?

How often do you eat when you are hungry, eat what your body wants, and stop when you are full?

Observe the messages about beauty in your surroundings. What messages do you see and hear?

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Make a list of the comments you have made about your body — both in your head and out loud. Are these thoughts and comments negative or positive? If some are negative, where do they come from?

Think about how many times in one day you judge other people's looks. How does this practice make you feel? How does it affect the people around you?

What would you be free to do if you accepted your body?

How would you feel if you really loved your body as it is?

What are you going to do to help yourself feel good about your body?

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The Important People in My Life

How much do looks really matter? Answer the questions below about the important people in your life. You can use the same person more than once. Why are they important to you? It is probably not because of the way they look, but because of the way they make you feel about yourself. We value other people because they care about us, not because of how they look.

A friend who is always there for you _____

A teacher who makes you happy _____

A relative who shows you love _____

An adult who has reached out to help you _____

Someone who makes you laugh a lot _____

Someone you love very much _____

Someone you can tell your troubles to _____

Someone who makes you feel good about yourself _____

Someone you are there for _____

Someone you wish felt better about him/herself _____

Someone you want to be like _____

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Accept All Body Shapes

Adapted from Joanne Ikeda, Health at Every Size

- Human beings come in many shapes and sizes. We should celebrate our differences.
- There is no perfect body size, shape, or weight that everyone should have.
- Every body is a good body, no matter its size or shape.
- Judging people based on how they look is unfair. It is based on factors over which the person has little or no control.
- We must respect the bodies of others even though they may be different from our own.
- We must take care of our body, self and mind.
- Good health is not defined by body size. It is physical, mental and social well-being.
- People of all sizes and shapes can improve their health by living a balanced lifestyle.

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Weight Management

Why is Weight Management so Controversial?

The subject of weight is a complex and controversial public health issue for all individuals. Most people agree that overweight and obesity have risen and that poor nutrition and physical activity habits play an important role. However, not everyone agrees on how to reverse this trend.

Some researchers and clinicians argue that the health risks for overweight and obese individuals are so great that the only way to decrease the risk is weight loss. Others point to study results indicating that overweight/obese individuals can reduce their health risks by becoming physically fit through exercise and healthy food choices, but not necessarily losing weight.

Weight management becomes even more complicated for adolescents because they are experiencing rapid growth and development that may be jeopardized by unsupervised caloric intakes and restrictions reinforced by the media. Pregnant adolescents may face additional health risks for themselves and the developing fetus.

June 2013

California
Nutrition and Physical Activity
Guidelines for Adolescents

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How are Overweight and Obesity Defined?

The Body Mass Index (BMI) (see Figure WM-1) is a screening tool that uses weight in relation to height to identify an individual's weight status category. For children and most adolescents, percentile rankings are used to assess weight status based on age and sex in addition to height and weight. The percentile indicates the relative position of the adolescent's BMI number among others of the same sex and age.

To determine an individual's weight category, height and weight measurements need to be obtained from health records or measured at home. For individuals who are pregnant, **pre-pregnancy weight** should be used.

Once height and weight is collected, weight categories can be determined using an online calculator (quick method) or mathematically (if internet is not available).

For individuals 2-19 years of age:

- **Quick method:** Use the BMI calculator for children and teens, which incorporates age and sex. The calculator will automatically provide the percentile and weight category. Growth charts are not needed.

Or

- **If internet is not available:**
  1. Calculate the individual's BMI using the equation in Figure WM-1.

Figure WM-1 Calculating BMI

Formula:
weight (lb) / [height (in)]^2 x 703

Calculate BMI by dividing weight in pounds (lbs) by height in inches (in) squared and multiplying by a conversion factor of 703.

Example:
Weight = 150 lbs
Height = 5'5" (65")
Calculation: [150 ÷ (65)^2] x 703 = 24.96

  2. Use CDC BMI-for-age growth charts to obtain a percentile ranking. Charts for females and males are available in Appendix D.
  3. Use the percentile ranking in Table WM-1 to the weight category to identify the weight category.

Table WM 1 BMI Percentiles and Weight Categories Ages 2 19 Years

Percentile	Weight Category
Less than the 5th	Underweight
5th to less than the 85th	Healthy weight
85th to less than the 95th	Overweight
95th or greater	Obese

Source: Centers for Disease Control and Prevention[1]

For individuals 20 years of age and older:

- **Quick method:** Use the online BMI calculator for adults. It will automatically provide the BMI and weight category.

Or

- **If internet is not available:**
  1. Calculate the individual's BMI using the equation in Figure WM-1.
  2. Use Figure WM-2 to identify the weight category based on BMI.

Table WM 2 BMI & Weight Categories Ages 20 Years and Older

BMI	Weight Category
Below 18.5	Underweight
18.5 to 24.9	Healthy weight
25.0 to 29.9	Overweight
30.0 or above	Obese

Source: Centers for Disease Control and Prevention[2]

Consider:

- Body fatness varies greatly within healthy weight individuals. Everyone should eat healthfully and engage in regular physical activity, even if BMI is in the healthy range.
- BMI does not measure the percentage of weight due to bone or muscle, which weighs more than fat. Bigger, more muscular teens can be perfectly healthy.

Overall, BMI is accepted as an effective screening tool. Alone, it is not a diagnostic tool. Adolescents should be referred to their primary health care provider for diagnosis and to assess for underlying medical/psychological conditions that resulted in underweight or overweight/obesity.

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Who is Affected by Obesity?

According to the California Health Survey administered in 2009:[*3]

- About 16.7% of adolescents 12-17 years old were overweight and about 11.9% were obese.
- About 31.8% of males were overweight or obese, versus 25.1% of females.
- African-American (38%) and Latino (38.2%) adolescents are more than twice as likely to be overweight or obese as their White counterparts (17.7%).

What Factors Contribute to Overweight/ Obesity?

Genetics

The term "genetics" refers to the molecular codes that exist in all human beings. Genes are expressed to carry out a variety of functions throughout the body. Research is emerging on how gene expression can be altered by factors outside of the body (epigenetics). For example, a woman's nutritional habits in pregnancy may be able to alter the genes expressed in her fetus.[4]

Some studies show that children who have parents who are obese or overweight are at a higher risk of becoming obese or overweight themselves, even if they are not living in the same home.[5]

Some genes have been identified that may affect appetite or metabolic rate.[6-8] These genes exist in various combinations in humans because they probably offered survival advantage. During periods of food availability, these genes may have increased the efficiency of fat deposition so an individual can survive longer during periods of food insecurity.[9]

The interplay between genetics and environmental causes for overweight and obesity can be confusing. Families may share genetics and behaviors.

Despite the presence of some genetic factors, it is unlikely that genetics are responsible for the obesity epidemic, which correlates with changing lifestyle patterns. Genetics take generations to change (although changes in gene expression are being studied). Even for those who feel they are genetically predisposed, genes do not supersede all other factors in terms of achieving a healthier weight.

Environment

In the context of genetics, "environment" refers to any factor that is not determined by genes.

- **Lack of physical activity:** Many adolescents do not meet physical activity recommendations. Also, many spend much of their day sitting (being sedentary) whether it is at school/work or leisure time spent in front of a television, computer, etc. See the *Physical Activity* section for more information.
- **Poor nutrition:** Many adolescents do not consume healthy foods and consume too many high-calorie and low-nutrient foods, which are often readily available. See the *Adolescent Nutrition* section for more information.
- **Food as a coping strategy:** Adolescents may respond to uncomfortable emotions related such as neglect, abuse, bullying, or poor body image with compulsive overeating or excessive inactivity (e.g. watching too much television). For more information on body image, see the *Body Image and Disordered Eating* section.
- **Built Environment:** Often, community design is not conducive to physical activity and healthy eating, especially in low-income neighborhoods.[10] There may not be safe and inviting opportunities for physical activity. Healthy foods may not be conveniently located or affordable for low-income families. On the other hand, unhealthy foods and beverages are widespread and are heavily marketed to youth through multiple media channels, such as through television commercials, billboard advertisements, social media, etc.[11,12]

  For more information on food marketing to youth, visit the Weight of the Nation: Marketing Food to Children.

[*] Using the 2013 CDC's weight interpretations for children and teens. Data was originally analyzed using older terminology.

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Health Issues

Health issues, such as medical or psychological issues, can interfere with weight in many ways. Some examples are listed below:

- **Asthma/Allergies:** To avoid asthma attacks and other allergies, adolescents may reduce their physical activity levels.
- **Orthopedic problems:** Like asthma, these may interfere with an adolescent's ability to meet physical activity recommendations.
- **Polycystic Ovary Syndrome (PCOS):** One of the most common female endocrine disorders, PCOS can result in weight gain.
- **Prescription drug side effects:** Some drugs affect weight by increasing appetite. Others may have hormonal effects that cause weight gain.

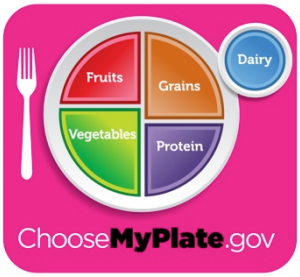
Adolescents with medical or psychological issues should receive ongoing clinical care and counseling as needed. Other adolescents may have underlying and undiagnosed conditions. Refer to an appropriate health care provider if underlying medical or psychosocial issues are suspected.

Contraceptives

Side effects of hormonal contraceptives, such as the Combination oral contraceptive pill, progestin-only contraceptive pill and the Depo-Provera™ injection can include nausea, changes in appetite, bloating and/or weight gain or loss. These may also interfere with breastfeeding. For details, visit the California Department of Public Health's Contraception during Breastfeeding webpage.

If concerned about side effects, adolescents should discuss other effective forms of contraception with their primary health care provider and use another one that meets their needs.

More information about birth control choices is available from Family PACT.



What are Healthy Weight Recommendations?

Interventions for overweight and obese adolescents should not promote the achievement of thinness as the goal or unhealthy weight loss practices (e.g. vomiting, skipping meals/food groups or using pills/powders/laxatives). Diets are often not sustainable and may result in inadequate dietary intake and various deficiencies. These can lead to poor body image, disordered eating and health problems.

Weight management should be healthful and sustainable by improving nutrition and physical activity. Goals should be realistic, so small steps are usually required. Tips for healthy lifestyle changes are listed below:

Redesign the plate. Make half the plate colorful vegetables and fruits, about one quarter whole grains, about one quarter healthy protein and include nonfat or lowfat dairy or other calcium-rich foods. Eat a variety of different foods—for examples, see www.choosemyplate.gov or the MyPlate for Moms handout (also available in Spanish).

Make healthy choices most of the time. Choose foods that are high in fiber and low in sugar, solid fats and salt (sodium). Substitute unhealthy ingredients with a healthier choice. For example, use avocado instead of mayonnaise, nonfat yogurt instead of sour cream and choose 100% whole grain products.

Control portions. At home, serve food on a plate. To avoid overindulging, do not eat straight from the package and do not place serving dishes on the table. Keep healthy foods at eye-level and unhealthy foods out-of-sight. When eating out, share a large entrée, or put some into a to-go box before enjoying your meal.

Rethink your drink. Choose water and nonfat or lowfat milk instead of sugary drinks, like soda, which is a source of hidden calories and extra sugar. Try water chilled or with a slice of lemon or other fruit. For more information on healthy beverages, see the Rethink Your Drink campaign resources.

Balance healthy eating with regular physical activity. Limit screen time, whether it is from a television, computer or phone.

Encourage adolescents who are not meeting physical activity recommendations to gradually improve their physical activity. Help them explore something they enjoy, such as walking with a friend or dancing. It all counts!

Adolescents who are under 18 years of age (and not pregnant) need at least one hour of physical activity daily. The American College of Obstetricians and Gynecologists recommends consulting with a physician on when one can safely begin exercising during and after pregnancy.

For more physical activity recommendations and resources tailored to pregnancy and postpartum, see the *Physical Activity* section.

Achieving weight management goals can be challenging. The amount of adolescent physical activity tends to decrease with age, while consumption of high-calorie/low-nutrient foods and beverages often increases as adolescents spend more time away from home.

A family approach to improving nutrition and physical activity habits has been used successfully in some cases. This approach may not be as effective with adolescents who may spend less time with their family and may resist parental influence. However, for others, this period may increase bonding with family members who can support healthy habits.

Pregnant and parenting adolescents may be especially inspired to engage in such behaviors for a healthier pregnancy and to model these behaviors for their child(ren).

For more information and resources on healthy eating, see *Adolescent Nutrition* section.

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What are Adolescents Doing about Weight?

Adolescents overweight or not, are at risk of using unhealthy weight-loss practices. Weight-control methods used may include: very low-calorie and unbalanced diets, over-the-counter diet pills, diuretics, laxatives, and self-induced vomiting. Adolescents were surveyed about their weight loss practices and the results are shown in Table WM-3:

Table WM 3 Weight Beliefs and Unhealthy Weight Loss Practices among 9th 12th Grade Students in the U.S.

Percentage who…	Females	Males
Described themselves as slightly or very overweight	34.8	23.9
Were trying to lose weight	61.2	31.6
Did not eat for 24 or more hours to lose weight or to keep from gaining weight	17.4	7.2
Vomited or took laxatives to lose weight or to keep from gaining weight during the 30 days before the survey	6.0	2.5
Took diet pills, powders or liquids to lose weight or to keep from gaining weight	5.9	4.2

Source: Youth Risk Behavior Surveillance – United States, 2011[13]

Female and male adolescents indicated they are trying to lose weight and many resorted to unhealthy weight loss practices. Adolescents are vulnerable to such practices because of their changing bodies and social environments. Additionally, they may desire quick weight loss and are surrounded by a marketing environment that advertises extreme thinness as ideal.

Unhealthy weight loss claims abound in such an environment: some promise a large amount of weight loss in a short period of time and yet others suggest that one can eat anything and/or not exercise and still lose weight. For more examples of bogus weight loss claims and to report them, visit the Federal Trade Commission's website.

Some consequences of unhealthy weight loss are described below.

What are the Consequences of Unhealthy Weight Loss Practices?

Weight loss and "dieting" are big business in the United States. The weight loss industry (including diet books, diet fads, diet programs, and other weight loss gimmicks) generates more than $40 billion in income per year. Adolescents are especially vulnerable to the marketing techniques of this industry at great cost to their health.

All adolescents who diet are at risk for compromised health and well-being.

Unhealthy weight loss practices, such as skipping meals, eating very low-calorie and unbalanced diets, using over-the-counter diet pills, diuretics, laxatives, and self-induced vomiting, can result in poor body image, eating disorders and health problems.

Some serious side effects include:

- Delayed sexual development
- Weakness
- Dizziness
- Persistent irritability
- Poor concentration
- Bad breath, hair loss, dry skin
- Permanently stunted growth
- Menstrual irregularities
- Fatigue
- Depression
- Constipation
- Sleep difficulties
- Poor pregnancy outcome

Mental and social consequences may be undetected.

For more information about body image and eating disorders, see the *Body Image and Disordered Eating* section.

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Interventions/Referrals

All Adolescents

Help adolescents appreciate themselves as they are and realize they are not defined by their body type.

Help the client measure their weight and height (if possible). Identify the client's weight category using their current height and weight. If they are pregnant, use the pre-pregnancy weight. See page WM-2.

For healthy weight, encourage the healthy behaviors described on page WM-5 and use the 13 Tips for a Healthy Weight handout to discuss healthy habits.

Help adolescents recognize bogus weight loss claims. Talk about dieting. Discuss why this is not a healthy way to lose weight and often does not work. Use the handouts, The Truth about Dieting and Why Many Diets Do Not Work....

Encourage healthy beverages. Use the Teens, Soda and Weight handout to discuss how drinking soda can affect body weight. Fill an empty 20-oz plastic soda bottle with 1/3 cup of sugar to demonstrate soda's high sugar content.

Review the What Are My Snack Choices handouts with clients who have limited access to healthy snacks.

Use the My Action plan for Weight Management handout to help the client identify choose realistic healthy steps to take.

Follow the directions below if applicable.

Dieting or Poor Body Image

If the client considers herself or himself overweight: This could be a sign of poor body image. Use the BMI calculator (page WM-2) and growth charts to reassure them that their weight is appropriate for their age and height.

If they are not reassured, refer to their primary health care provider. Use the *Body Image and Disordered Eating* section for interventions and referrals.

If the client is dieting or may be using unhealthy weight loss methods: Use The Truth about Dieting and Why Many Diets Do Not Work.... handouts to discourage low-calorie diets.

Refer to the health care provider or a Registered Dietitian for nutrition assessment and counseling or Medical Nutrition Therapy.

Underweight

Refer to the primary health care provider.

Overweight or Obese

Refer to the primary health care provider.

Adolescents who desire weight loss should be referred to a Registered Dietitian or health care provider for nutrition assessment, counseling, and treatment.

Find a Registered Dietitian!
To find a registered dietitian nearby, ask the health care provider or use the Academy of Nutrition and Dietetics' Find a Registered Dietitian Locator.

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Interventions/Referrals for Pregnant Adolescents

For adolescents who are pregnant, Table WM-4 is a reference for appropriate weight gain.

Table WM 4 Pregnancy Weight Gain Recommendations

Prepregnancy BMI	BMI (kg/m^2)	Total Weight Gain (lbs)
Underweight	Less than 18.5	28-40
Normal weight	18.5-24.9	25-35
Overweight	25.0-29.9	15-25
Obese	Greater than or equal to 30.0	11-20

Source: Institute of Medicine, Institute of Medicine (US) and National Research Council (US) Committee to Reexamine IOM Pregnancy Weight Guidelines, 2009 [14]

Do not advise the client to lose weight. Even overweight adolescents need to gain weight in pregnancy.

If you suspect that weight gain or loss differs from what is in this table, refer the client to her primary health care provider who will evaluate.

The handouts provided in this section can be used to provide education.

Refer to the California WIC Program!
Women, Infants and Children Program (WIC)
WIC helps eligible pregnant women, new moms, infants and children up to age 5 to stay healthy, eat well, and be active.

WIC provides:

- Healthy foods
- Nutrition and health education
- Education and support for breastfeeding moms
- Help to find health care and other services

WIC has offices across the state. Many offices are open in the evenings and on Saturdays.

To learn more and find a local WIC office, visit the California WIC website. Information is also available in Spanish.

Or call toll-free 1-888-WIC-WORKS (1-888-942-9675).

Follow-Up

Review the My Action Plan for Weight Management handout with the client to determine if goal(s) for behavior change were met.

If the client did not make any changes, ask what may have prevented them from doing so. Validate their feelings. Review the importance of weight management and ask about which benefits (if any) are important to the client. Together, identify strategies for removing or reducing barriers.

If the client made changes but still falls short of the recommended intake, provide praise and encouragement for the changes that were made. Together, revise their action plan (change or add goals).

If the client has made changes and achieved the recommendations, provide praise and encouragement for the changes that were made. Help the client choose a new action plan from another section in the Guidelines.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
Measuring Height and Weight Accurately At Home	Webpage	www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/measuring_children.html
BMI Calculator for Children and Teens	Webpage - interactive tool	http://apps.nccd.cdc.gov/dnpabmi/
About BMI for Children and Teens	Webpage	www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/about_childrens_bmi.html
Adults BMI Calculator	Webpage - interactive tool	www.cdc.gov/healthyweight/assessing/bmi/adult_BMI/english_bmi_calculator/bmi_calculator.html
About BMI for Adults	Webpage	www.cdc.gov/healthyweight/assessing/bmi/adult_BMI/index.html
Weight of the Nation: Marketing Food to Children	Webpage	http://theweightofthenation.hbo.com/themes/marketing-food-to-children
Polycystic ovary syndrome (PCOS) fact sheet	Webpage	http://womenshealth.gov/publications/our-publications/fact-sheet/polycystic-ovary-syndrome.cfm
Family Planning and Contraception during Breastfeeding	Webpage	www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Pages/FamilyPlanningandContraceptionDuringBreastfeeding.aspx
Family PACT: Choosing a Birth Control Method	Webpage	www.familypact.org/Clients/choosing-a-birth-control-method
United States Department of Agriculture's website: Choose My Plate	Website	www.choosemyplate.gov
MyPlate for Moms	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyPlateforMoms.pdf
MyPlate for Moms (Spanish)	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-SP_MyPlateHandout.pdf
California *Rethink Your Drink Campaign* materials (two websites) Shows the hidden sugar in common beverages	Webpages	www.californiaprojectlean.org/ryd/default.html www.cdph.ca.gov/programs/wicworks/Pages/WICRethinkYourDrink.aspx
Youth Risk Behavior Surveillance – United States, 2011	Document (PDF)	www.cdc.gov/mmwr/pdf/ss/ss6104.pdf
Federal Trade Commission: Bogus Weight Loss Claims	Webpage	www.ftc.gov/bcp/edu/microsites/redflag/falseclaims.html
13 Tips for a Healthy Weight	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Documents/MO-NUPA-TipsForAHealthyWeight.pdf
The Truth about Dieting/Why Many Diets Do Not Work …	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Documents/MO-NUPA-Dieting.pdf
Teens, Soda and Weight	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Documents/MO-NUPA-Soda.pdf

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What are my Snack Choices?	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Documents/MO-NUPA-SnackChoices.pdf
My Action Plan for Weight Management	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Documents/MO-NUPA-WMActionPlan.pdf
The Dietary Guidelines for Americans	Document (PDF)	www.cnpp.usda.gov/Publications/DietaryGuidelines/2010/PolicyDoc/PolicyDoc.pdf
SuperTracker Free tool for nutrition and physical activity tracking	Webpage - interactive tool	www.choosemyplate.gov/SuperTracker/createprofile.aspx
Celebrating Diversity: Approaching Families through Food	Document (PDF)	www.mchlibrary.info/pubs/pdfs/CelebratingDiversity.pdf
California Food Guide: Fulfilling the Dietary Guidelines for Americans	Webpage	www.dhcs.ca.gov/formsandpubs/publications/Pages/CFGTableofContents.aspx
California Food Guide: Fulfilling the Dietary Guidelines for Americans – Life Cycle: 9-18 Year Olds	Document (PDF)	www.dhcs.ca.gov/dataandstats/reports/Documents/CaliforniaFoodGuide/12.9-18YearOlds.pdf
Recipes/cookbooks for adolescents	Webpage	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Pages/EasyMealsandSnacks.aspx
Farmers markets search tool	Webpage - interactive tool	http://apps.ams.usda.gov/FarmersMarkets/
Worksite nutrition and physical activity	Webpage - resources	www.cdph.ca.gov/HealthInfo/healthyliving/nutrition/Pages/WorksiteNutritionandPhysicalActivity.aspx
Nutrition and Physical Activity Initiative - Maternal, Child and Adolescent Health	Webpage	www.cdph.ca.gov/programs/nutiritionandphysicalactivity/Pages/default.aspx
Comprehensive website for adolescent girls' health	Website	www.girlshealth.gov/
Los Angeles obesity campaign website Includes an interactive calculator to show the amount of sugar in sugary drinks and costs of sugary drinks	Website	www.choosehealthla.com/
Weight Management and Obesity Resource List A resource list of websites, with information for adults and adolescents	Document (PDF)	www.nal.usda.gov/fnic/pubs/weight.pdf
Understanding Nutrition Labels Tools to teach how to read nutrition labels	Webpage	www.nutrition.gov/shopping-cooking-meal-planning/food-labels

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The Truth about Dieting

What is Dieting?

Dieting is not eating a certain type of food or eating a very low number of calories. For example, some popular diets may tell you not to eat "carbs." They often promise you quick and easy results.

Health Effects of Dieting

Dieting is not a healthy way to lose weight and can cause health problems. Here are some possible effects:

- Bad breath
- Yellow teeth
- Hair loss
- Dry skin
- Constipation
- Growth problems
- Delayed sexual development
- Irregular periods
- Feeling weak and tired
- Feeling dizzy
- Feeling sad
- Feeling irritated often
- Poor concentration
- Sleep problems
- **If you are pregnant, there can be serious health problems for you or your baby.**

For a Healthy Weight the *Healthy* Way:

- Eat plenty of colorful vegetables and fruits
- Choose whole grains most of the time
- Eat or drink nonfat or lowfat dairy and calcium foods
- Go lean or lowfat with your protein foods
- Quench your thirst with water, not soda
- Be physically active every day

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Why Many Diets Do Not Work …

When you do not give your body the energy that it requires, it thinks you are starving.

- Then, your body slows down how fast it burns calories.
- So rather than helping you to lose weight, very low-calorie diets can actually make it **easier to gain weight.**

If you do not give your body adequate fuel, it will resort to using its own supplies.

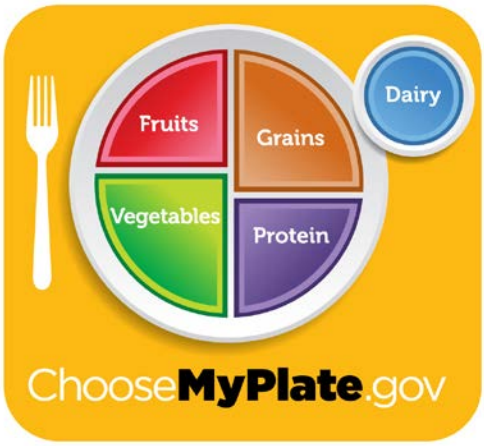
- Instead of burning only fat, it will also burn muscle tissue, which is the very thing you want to keep! Burning muscle tissue will make you feel tired, depressed, and without energy.
- You will have less energy to be active, which is one of the best ways to keep your body toned, strong and healthy.
- Popular diets are often not balanced. You may lose or not get enough of the nutrients you need. **Your hair, nails, skin and teeth may suffer and look sickly.**

Dieting often can make it harder to lose weight.

- Your body may get used to fewer calories and slow everything down.
- Trying to change your weight too often is not good for your health. It may make it harder for you to keep a healthy weight.
- **If you are pregnant, dieting can be even more dangerous.**

The bottom line: It's not a diet, it's a lifestyle!

- Keep a healthy weight by eating **balanced meals and being physically active every day.**
- Make half your plate vegetables and fruits, about one quarter grains and one quarter protein. **Use the MyPlate icon to guide you.**
- Choose foods that are high in fiber and low in sugar, solid fats and salt (sodium).
- For tips and free nutrition and physical activity trackers, visit www.choosemyplate.gov .



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13 Tips for a Healthy Weight

1. Do not go on a very low-calorie diet!

When your body does not get the calories it needs, it slows down how fast it burns the calories. And you might get so hungry you eat a lot at once (binging). So rather than helping you to lose weight, fad diets or very low-calorie diets can make it easier to gain weight.

2. Try not to skip meals, especially breakfast.

When you skip meals, you put stress on your body. You may feel tired and grumpy. When you are very hungry, you may eat more later, especially foods that are not healthy.

3. Eat foods from all the food groups.

Eating a variety of foods gives your body what it needs -- energy and nutrients -- to look good and feel great. For more information, visit www.choosemyplate.gov .

4. Squeeze in vegetables and fruits throughout your day.

- When you are thirsty, grab some fruit instead of soda or juice.
- Grab a fruit or vegetables as a snack-to-go.
- Eat cut-up, fresh vegetables like broccoli with a yogurt dip for a snack or at parties.
- Make half your plate vegetables and fruits, like in the picture at the top of this page.
- Add spinach and tomatoes to your sandwiches. Use avocado instead of mayonnaise.
- Try fresh salsa or avocado instead of dressing on salads.
- Eat your vegetables at dinnertime.

5. Keep healthy foods ready for snacks and to take with you.

That way when you are hungry or on the go, you will have something prepared. You will not have to rely on whatever is available, which may not be healthy. Also, you can save money!

Some ideas for healthy snacks:

- Carrot sticks (or other vegetables) with hummus or peanut butter
- Your favorite fruit, fresh or dried
- Plain popcorn
- Hard-boiled egg
- Nonfat or lowfat yogurt with fruit
- Nuts, such as slivered almonds or pistachios
- Whole wheat tortilla with nonfat or lowfat cheese
- Keep water with you in a reusable bottle

6. Enjoy your favorite foods. Just enjoy them a little at a time.

When you deny yourself something you like to eat, you may spend time and energy thinking about it. Later, you may end up eating more than you would have if you had just eaten a little of it in the first place. Moderation is best.

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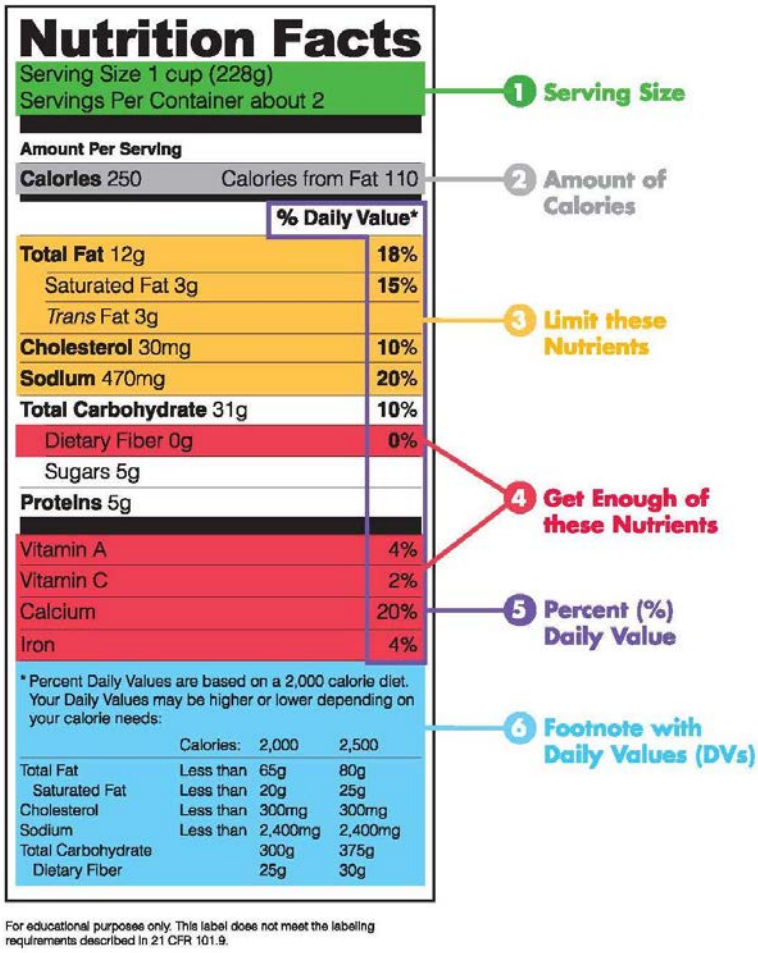
7. Read nutrition labels.

Choose foods with less saturated and trans fat, salt (sodium) and sugar. Note that Total Fat can include healthy fats and oils (low in saturated fat and no trans fat, such as safflower and olive oil).



8. Listen to your body's hunger cues.

- Eat when you are hungry.
- Stop eating when you are full. Not sure if you are still hungry? Wait 20-30 minutes. If you are still hungry, then serve yourself another small portion.
- Try not to eat when you really want something else.
  - Sleep when you are tired.
  - Be physically active when you need energy.
  - Breathe deeply when you are stressed.
  - Do an activity you enjoy when you are bored.

9. Do not trick your body into thinking you are hungrier than you are.

- Do not leave prepared food at the table.
- Do not put food on very large plates.
- Serve yourself the correct portion size. You can always take more later.

10. Be mindful while you eat!

Eat slowly and consciously, savoring each bite. Try not to mix eating with other activities, like watching TV or using other electronics. This can help you from overeating without realizing it. If you have to snack while watching TV, choose healthy snacks like plain popcorn, pretzels, fruit salad, or vegetables with a yogurt dip.

11. Have fun moving your body.

Being physically active — whether in sports, dancing in your room, taking a walk — is a great way to feel and look good. Physical activity also helps reduce stress.

12. Try to get enough sleep.

Getting enough sleep can help you focus in school, give you energy and may even help you have a healthier weight! Most teens need about 9 hours of sleep every night.

13. Show yourself some love!

Appreciate your body for all that it does for you. Discover your unique beauty, inside and out!

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Part I - What are my Snack Choices?

Every day, you make choices about what you eat. What snack options do you have? Assess your environment —at school, home, and any other place you usually eat. Write down the healthy foods you find to snack on. As you do, list each option under its food group. Check out www.choosemyplate.gov for more information on food groups!

		Vegetables	Fruits	Grains	Protein	Dairy	Healthy Beverages	Combination Foods
School	Cafeteria							
	Vending Machine							
	School Store							
	Other							
Home	Refrigerator							
	Freezer							
	Cabinet/ Pantry							
Other Places	Convenience Store							
	Fast Food							
	Other							

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Part II - What are my Snack Choices?

Now that you know what your snack options are, these may - or may not - be all the food choices you need. This is your chance to put a plan in place to expand your food world and to get the food group snacks you want or need.

Consider Your Options. Of all the options you have now, what snacks would you choose today or tomorrow? Write down your choices and why they are best for you.

Choice	Why?

Plan for Change: What would be easy to change? What would be hard to change?

	At Home	At School	Other Places
Easy			
Hard			
Impossible			

Find **Partners for Change** who can help you.

At Home	At School	Other Places

Make a Difference:
Share your plan of action with your family, friends, teachers and others who can help you.

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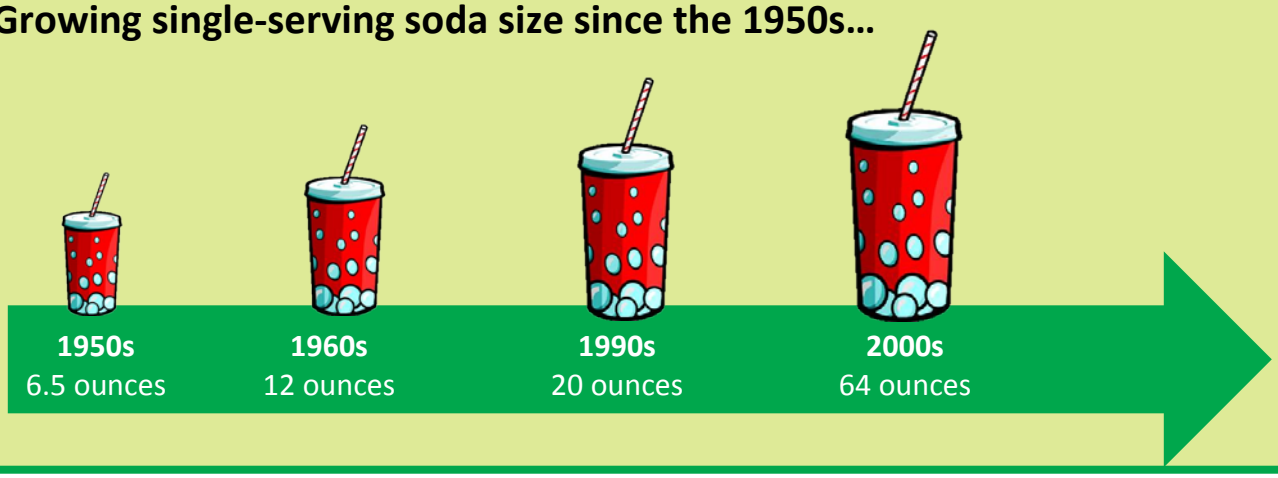
Teens, Soda and Weight

Did you know that sugary drinks, such as soda, are often a source of hidden calories and sugar?

Amount of regular (non-diet) soda an average teen drinks each day

Year	Boys (12-18 years old)	Girls (12-19 years old)
1977-78	7 ounces	6 ounces
1987-88	12 ounces	7 ounces
1994-96	19 ounces	12 ounces

Growing single-serving soda size since the 1950s…



How can soda or other sugary drinks affect your weight?

It takes about an extra 3,500 calories to make 1 pound of body weight.

- One 12-oz can of soda is about 150 calories. One can of soda per day for one year is about 55,000 calories. Therefore, one 12-oz soda per day translates into about 16 pounds of extra body weight over one year!
- One 20-oz bottle is about 250 calories. One bottle of soda per day for one year is about 91,000 calories. This translates into about 26 pounds of extra body weight over one year.

A 20-ounce soda has about 22 packets of sugar! You would not eat that much sugar, so why drink that many?

Find out how much sugar you are drinking and how much money you are spending on sugary drinks: http://www.choosehealthla.com/multimedia/sugar-calculator/ .

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My Action Plan for Weight Management

Name: _____

Check the box for each step you are doing now to manage your weight. Check the boxes for the steps you plan to take. Write down other ways you plan to manage your weight.

Things that I can do to manage my weight:	Am Doing	Steps I Will Take
I will make a snack change (from high-sugar/high-fat snacks to low-sugar/low-fat snacks)	☐	☐
I will increase my fruit and vegetable intake by _____per day.		
Instead of skipping breakfast, I will try some new ideas for quick and easy morning meals.	☐	☐
I will reduce my soda consumption by _____cans or _____bottles per day.	☐	☐
I will cut back on the time I spend watching television, going online or playing video games by _____hours per day.	☐	☐
When eating at my favorite fast food restaurant, I will look at the calories per serving to make healthier choices.	☐	☐
Instead of eating fast food, I will plan a meal and prepare it at home.	☐	☐
I will be physically active daily.		
My ideas for managing my weight:		
_____	☐	☐
_____	☐	☐

Signature: _____ Date: _____

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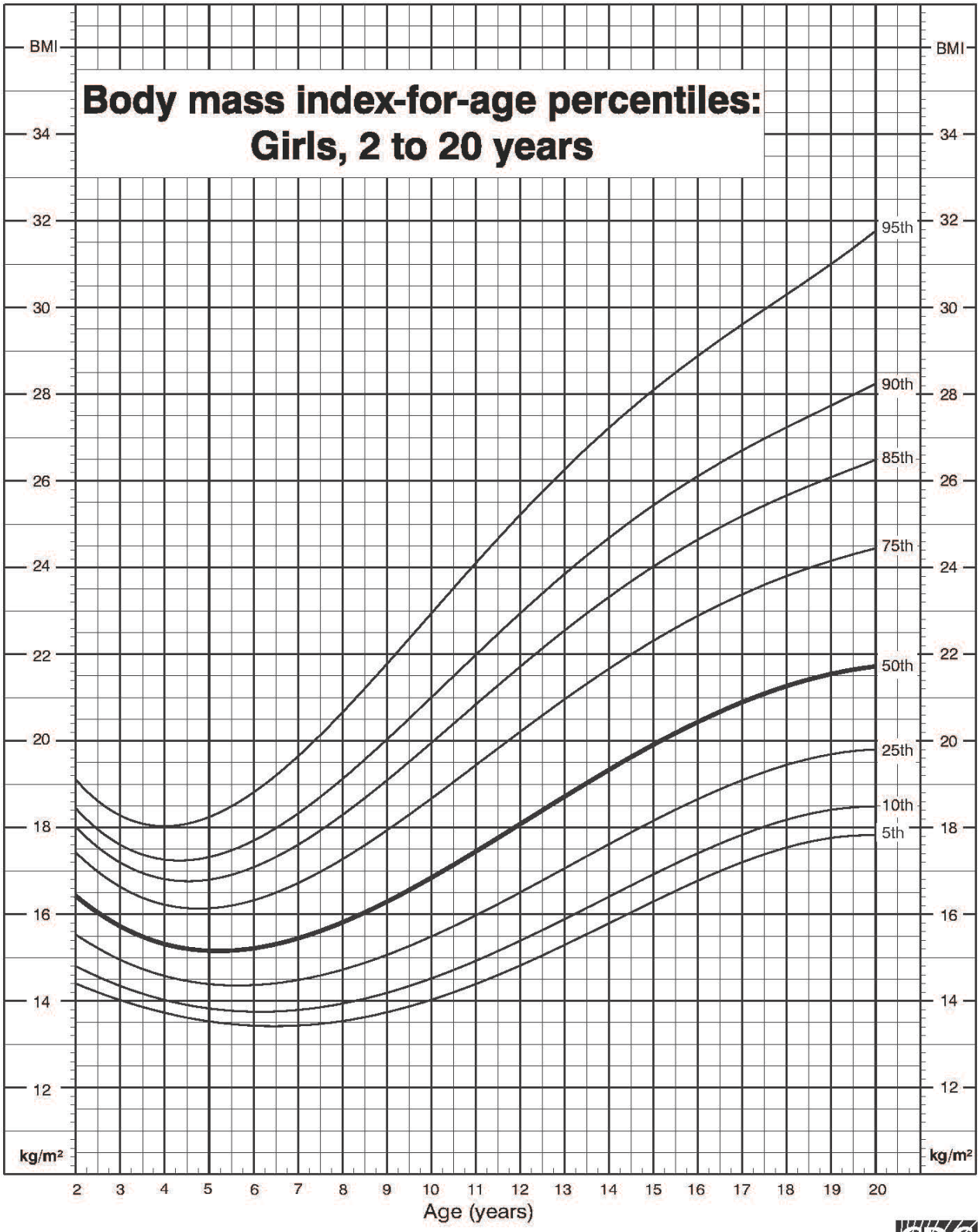
Appendix D

CDC Growth Charts: United States



Published May 30, 2000.

SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

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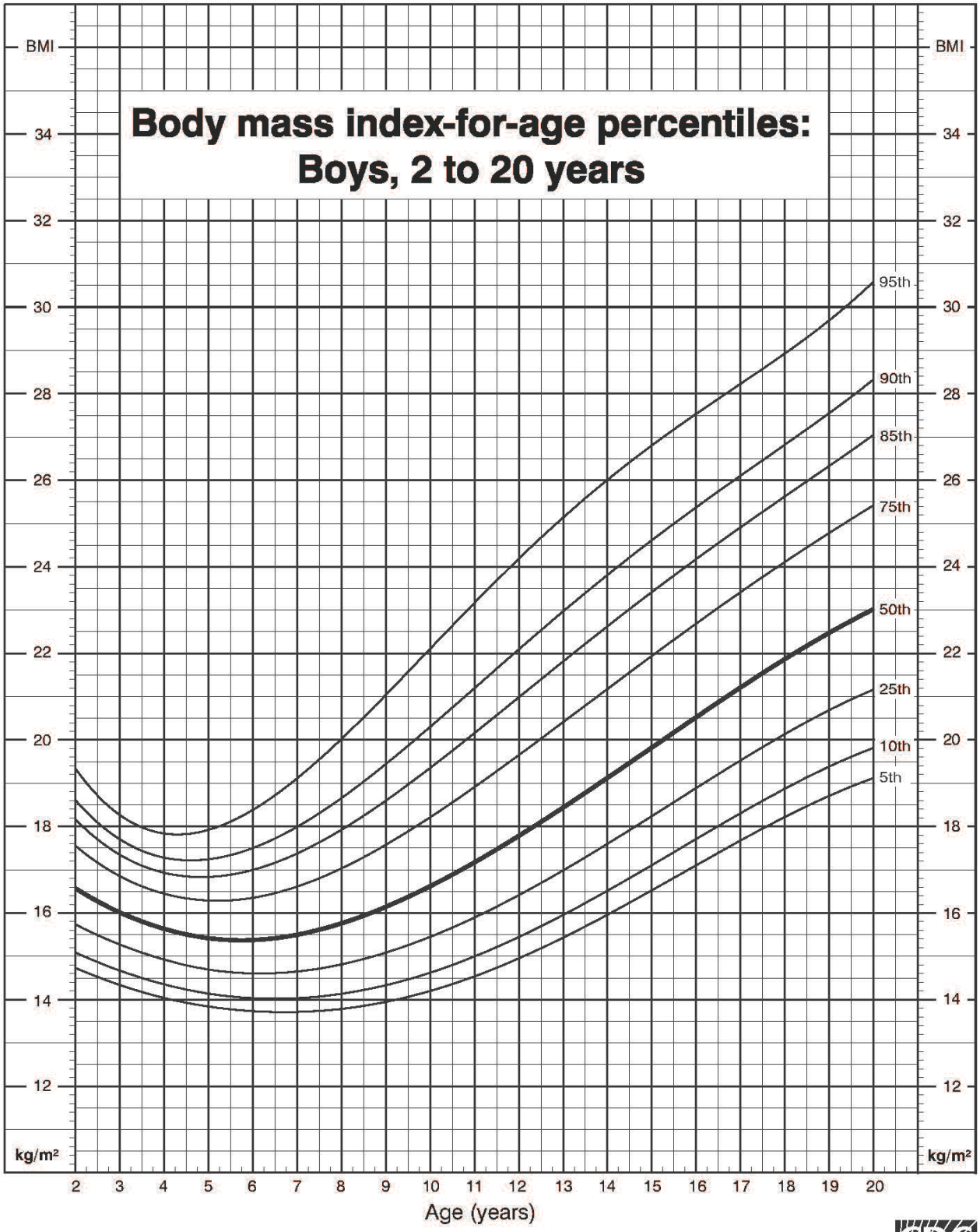
CDC Growth Charts: United States



Published May 30, 2000.
SOURCE: Developed by the National Center for Health Statistics in collaboration with the National Center for Chronic Disease Prevention and Health Promotion (2000).

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Physical Activity

What is Physical Activity?

Physical activity is any body movement that uses more energy than one would use while resting. Physical activity may be unplanned movement, whereas exercise generally refers to planned activity. Physical activity is divided into two intensity levels:

- **Moderate-intensity aerobic physical activity** increases heart rate. Brisk walking, biking, taking the stairs, dancing, and raking leaves are examples.
- **Vigorous-intensity aerobic physical activity** causes one to sweat and breathe rapidly. Running, jogging, playing soccer, fast dancing such as salsa dancing and fast biking are examples.

Physical fitness is a measure of the ability to perform activities that require endurance, strength and/or flexibility.

- Health-related fitness includes cardiovascular fitness, muscular strength and endurance, body composition and flexibility.

Regular physical activity with healthy eating habits is the most efficient and healthful way to achieve physical fitness.

October 2012

California
Nutrition and Physical Activity
Guidelines for Adolescents

Inside this Section

Page

PA-1 What is Physical Activity?

PA-2 Why is Physical Activity Important?

PA-2 Physical Activity Statistics

PA-3 Barriers and Opportunities

PA-5 Physical Activity Recommendations

PA-6 Physical Activity for Pregnancy and Parenting

PA-8 Screening

PA-8 Interventions

PA-8 Interventions/Referrals for Pregnancy and Parenting

PA-9 Follow-Up

PA-10 Tips for Addressing Physical Activity Concerns: A Guide for Case Managers

PA-12 Web Links Referenced/Additional Resources

PA-14 References

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Why is Physical Activity Important?

Physical activity has many benefits during adolescence, as shown in Figure PA-1.

Figure PA-1 Benefits of Physical Activity

In adolescents, physical activity has been linked with the following:

- Improved academic performance[1-4]
- Reduced teen pregnancy[5]
- Improved self-esteem[6,7]
- Improved bone[7] and mental health[6]
- Less illegal drug use[8]
- Physical activity later in life[9,10]

On the other hand, as shown in Figure PA-2, low activity levels may have negative consequences that can appear as early as childhood and adolescence.

Figure PA-2 Risks of Physical Inactivity and Poor Diets[11]

- Obesity
- Type 2 diabetes
- Hypertension (high blood pressure)
- Heart disease
- Cancer
- Weak bones

In California, a large percentage of adolescents do not meet healthy weight recommendations. According to the 2009 California Health Interview Survey (CHIS) about 12% of adolescents aged 12-17 years were overweight/obese (highest 5th percentile) and approximately 16.7% of adolescents surveyed were at risk of overweight (85th to 95th percentile).[12,*]

These percentages are comparable with the 2007 National Children's Health Survey, where about 15.5% of children aged 10-17 years were overweight and about 15% were obese.[13]

The obesity epidemic has not affected all demographics equally. African-American and Hispanic adolescents are more likely to be overweight, elevating their risk of type 2 diabetes.[14]

Promoting and supporting regular physical activity in adolescents will help decrease the risk for these health conditions.

Physical Activity Statistics

Only 15.2% of California adolescents aged 12-17 years reported being physically active for at least one hour every day in a typical week, according to CHIS.[15] This translates into poor fitness for California youth. The California Department of Education conducts annual fitness tests, one of which includes tests for aerobic capacity. In school year 2010-2011, of the ninth graders tested, 25.5% fell in the category of 'needs improvement' and 12.8% were in 'needs improvement – high risk.[16] This is problematic because low cardiorespiratory fitness in adolescence may be associated with more body fatness in adulthood.[17]

Physical Activity Level by Age

The percent of physically active adolescents decreases as they get older; for example, 17-year-olds are less active than 12-year-olds.[11,18] This decline is greater in adolescent females who are African-American than those who are White.[19]

Some reasons for this decline may include lack of time for physical activity and lack of support from family and friends.[20] Consequently, time management techniques or tips may be useful. Involving parents and friends—either as participants in the activity, or to provide support, such as rides and encouragement, is another strategy that may help increase physical activity in adolescents.

[*] For children and adolescents, overweight is age and gender-specific BMI greater than or equal to the 85th percentile but less than the 95th percentile. Obese is age and gender-specific BMI greater than or equal to the 95th percentile. More definitions from the Centers for Disease Control and Prevention

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Adolescents may prefer certain terms over others. In one focus group, teens said they are more familiar with the word "exercise" than "physical activity." However, in another focus group, teen girls said that the term "physical activity" sounds more appealing and that "exercise" sounds like a chore.[21] If "physical activity" is used, the term should be explained to teens to ensure they understand its meaning.

Physical Activity by Race/ Ethnicity

Hispanic, Asian and African-American adolescents are less physically active than White adolescents. Among Hispanic adolescents, physical activity levels appear to decrease with longer acculturation to the U.S.[22]

A Family Approach

Many cultures place importance on the family. Try to stress benefits of physical activity for the entire family. For example, physical activity may help prevent diseases in parents and may promote positive behaviors in children. If children are active and healthy, the whole family will benefit. Promoting exercise as a family activity can be very effective in diverse settings.

Some family activities to suggest include:

- Playing traditional games
- Dancing to music, such as salsa dancing
- Taking a walk around the block
- Playing soccer at the park

Reaching an ethnically-diverse population may require promoting non-traditional[10] forms of physical activity. Examples include indoor chores that are physical in nature, playing catch, running/jogging and playing with or carrying children. These activities are commonly reported by African-American and Hispanic teen girls.[23]

It is important to be aware of cultural beliefs about physical activity. Some are passed down from elders and may interfere with the client's ability to be active. Examples:

- "Exercise is only for boys"
- "Girls should not wear pants"
- "Girls should not exercise during their period"
- "You need to be heavy to be healthy"

Physical Activity by Gender

Generally female teens are less physically active than male teens. According to CHIS, only 8.4% of female teens aged 12-17 years reported engaging in physical activity all seven days in a typical week compared to 21.6% of male teens in 2009.[15]

Barriers and Opportunities

Barriers to physical activity for boys have included lack of time, being tired and pain. Benefits of physical activity cited by boys included improved health and appearance.[24] Figure PA-3 lists benefits and barriers to physical activity as reported by adolescent girls. Most were identified as Hispanic or African-American in these studies.

Figure PA-3. Benefits and Barriers to Exercise for Teen Girls

The following were seen as benefits that motivated physical activity:

- Improved body image or appearance[21,25,26]
- Being part of a team
- Staying healthy
- Fun activities[21,25]
- Mental health benefits[21]
- Being healthy[21]
- Being able to choose the physical activity[2,21]
- Having a chance to play and be active[3,24]
- Having social support and encouragement[25,27]

The following were seen as barriers that limited physical activity:

- Lack of time[27]
- Concerns about appearance during or after activity,[23,25,26] such as fears of ruining hair and makeup[26] and sweating[3,23]
- Self-consciousness[27]
- Fear of looking masculine[28]
- More accepting of larger body size[28]
- Negative experiences in physical education classes[25,26]
- Lack of opportunity[25,26]
- Lack of role models who look like them[28]
- Injury and discomfort[24]
- Safety

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"I do not have enough time."

According to the 2004 California Teen Eating, Exercise and Nutrition Survey (CalTEENS), the main reason adolescents did not participate in physical activity was due to lack of time or being too busy (46%).[29] This was especially true for parenting adolescents.

Focusing on short opportunities to add physical activity into existing routines may be the most successful approach. More tips are in the "Barriers to Physical Activity" section on page PA-7 and "Tips for Addressing Physical Activity Concerns: A Guide for Case Managers" on page PA-10.

Beauty/Appearance

Hair and makeup concerns may be a primary reason why an ethnically diverse group of adolescent girls did not exert themselves during physical education classes.[26] Case managers can discuss this with the teen. If it is a barrier, they can provide examples of alternate activities that do not damage hair and makeup, such as dance, yoga, fast walking and lifting weights. Sweating can be minimized by wearing light clothing and exercising at cooler times, such as in the morning or evening. Case managers can also discuss ways to apply makeup quickly after exercising.

A focus group study found weight and fat loss as the teen girls' strongest motivation to being physically active.[26] Emphasizing the benefit of improved appearance through exercise **without focusing on weight** may be effective in this population.

Hair Care & Exercise

Teens of any race/ethnicity but especially those who are African-American may cite hair concerns as a barrier to physical activity.

Case managers can assure clients that hair care and regular exercise are not mutually exclusive by providing the following tips:

- Ask the stylist about hairstyle options that are workout-friendly such as ponytails or "wash and go styles."
- To prevent sweat from building up in hair, wash hair with a pH-balanced shampoo weekly and condition hair.
- Comb hair with a wide-tooth comb to keep it tangle-free in between workouts.
- Tie hair back with a satin scarf to absorb moisture and keep hair pressed down during workouts.
- If hair is relaxed or flat-ironed, smooth hair into a high ponytail to keep hair off the neck and away from sweat and leave it that way until hair is dry to reduce frizz.
- If hair is natural, simple styles such as two-strand twists are workout-friendly.
    - To avoid dry, crunchy hair, mix some water and leave-in conditioner and spray it on hair post-workout.
- Use a support system to hold each other accountable to working out and deter them from using hair as an excuse.

More tips are available from the booklet, *Hair Care Tips for Sisters on the Move.*

Every teen is different and has different interests. Case managers can be more effective if they actively listen to teens to find out what activities they enjoy. Providing multiple choices,[21] encouragement and sharing personal experiences may be successful strategies to promote physical activity. [21,30]

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Physical Activity Recommendations

Note: These recommendations are for adolescents who are not pregnant.
For pregnant adolescents, see page PA-6.

All adolescents should be physically active daily, or nearly every day.

Children and Adolescents Ages 6-17 Years[31]

- Children and adolescents should do 1 hour (60 minutes) or more of physical activity every day. Most of the 1 hour or more a day physical activity should be either moderate- or vigorous-intensity aerobic physical activity.

- As part of their daily physical activity, children and adolescents should do vigorous-intensity activity on at least 3 days per week. They should do muscle- and bone-strengthening activity on at least 3 days per week.

Key Terms

In **bone-strengthening activities,** feet, legs, or arms support body weight. Walking, jumping rope, stair-climbing, dancing, soccer and lifting weights are examples of bone-strengthening activities.

Muscle-strengthening activities include lifting weights, push-ups and sit-ups, yoga, resistance band exercises and gardening.

Note that many activities are bone-strengthening and muscle-strengthening.

Definitions of moderate and vigorous physical activity are listed on page PA-1.

Adolescents Ages 18 Years or Older[31]

Physical activity recommendations are the same as those for adults:

- At least 2 hours and 30 minutes of moderate-intensity per week or 1 hour and 15 minutes of vigorous-intensity physical activity every week.
- Muscle-strengthening activities should be done at least 2 times per week.

For more details and tips refer to the 2008 Physical Activity Guidelines for Americans.

It is important to encourage young people to participate in physical activities that are appropriate for their age, that are enjoyable and that offer variety.

Physical activity can be performed continuously or intermittently throughout the day. The U.S. Surgeon General states that physical activity need not be strenuous to be beneficial. For example, brisk walking for 10 minutes at a time can count towards meeting the recommendation.

Increasing the frequency, time, or intensity of physical activity adds even more health benefits, up to a point. It should begin gradually. For example, one might try fast walking for 10 minutes each day for the first week and then progress to 15 minutes the following week and so forth.

Avoiding Pain and Injury

One study found injury to be the most commonly reported barrier to physical activity by teen girls.[23] Pain from exercise can be reduced by properly warming up for 5-10 minutes and stretching prior to exercising. Cooling down—continuing activity at a lower intensity—is important after the activity.[32] Some useful links are below.

Stretching information
Sample stretching exercises

Injury Prevention Tips

Teens should follow preventive measures to avoid injury. These depend on the activity but can include the following:[33]

- Proper nutrition
- Wearing a helmet while bicycling
- Wearing a helmet and pads when skiing, skate boarding, etc.
- Wearing a mouth guard for contact sports
- Wearing shin guards for soccer

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Physical Activity for Pregnancy and Parenting

For pregnant teens, physical activity provides additional benefits that lead to a healthier, happier pregnancy, thus improving outcomes for mothers and babies. Some benefits are listed in Figure PA-4.

Figure PA-4. Benefits of Physical Activity during Pregnancy[35,36]

- May help baby and mother gain the proper amount of weight
- Helps reduce discomforts of pregnancy such as backaches, constipation, bloating and swelling
- May help prevent or treat gestational diabetes
- Increases energy
- May improve mood
- May improve posture
- May improve sleep quality
- Promotes muscle tone, strength and endurance
- May make labor easier and shorter
- May lead to an easier recovery from childbirth
- May help mother to return to a healthy weight

Recommendations

Due to the benefits of exercise, the American Congress of Obstetricians and Gynecologists (ACOG) recommends regular physical activity during pregnancy for 30 minutes per day, most days of the week. It does not all have to be at one time.[34] Exercise should not be performed to lose weight.[35]

Teens and women who are pregnant or recently gave birth should speak with their primary health care provider before exercising. This is important to screen for complications that would limit physical activity.[34] Also, the safety of specific exercises can be verified.

For beginners, walking, swimming, cycling on a stationary bike and aerobics are good exercises during pregnancy. Walking and swimming are good choices because they exercise the whole body and are easy on muscles and joints. Swimming can also help prevent legs from swelling.[35]

Teens who exercised vigorously prior to pregnancy may be able to continue running, do strength training and play certain racquet sports for some time. However, teens should consult with a physician and perform all activities in moderation.

Many teens may enjoy walking, so the following might be encouraged:

- Walking to nearby places
- Going on walks with friends, family members, or a partner
- Walking around while doing other activities, such as talking on the phone or listening to music

See “Interventions/Referrals for Pregnancy and Parenting” on page PA-8 for sample activities or view resources available from the California Women, Infants and Children Program (WIC).

Special Considerations for Pregnancy

During pregnancy, physiological changes occur that limit certain exercise choices. The heart must work harder to supply blood to the body, so heart rate is a concern. Being able to talk while exercising indicates that the heart rate is in a safe range.

Body changes can also affect balance and stability. This includes extra weight and more mobile joints, which increases the risk of falls and injury.

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Care must be taken not to become overheated. The client should not exercise during hot weather or if she has a fever. She should be sure to drink enough water when exercising. [35] She should avoid hot tubs, as she might overheat.

Figure PA-5 lists specific activities to avoid in pregnancy.

Figure PA-5. Activities to Avoid during Pregnancy[35]

- High-risk activities that may lead to injuries, falls, or loss of balance. Adolescents should not participate in contact sports or physical activity that has a high risk for falling. Physical activity to be avoided during pregnancy include, but are not limited to soccer, football, martial arts, roller skating, roller blading, skate boarding, ice skating, scuba diving and skiing.
- Activities that require standing for long periods of time or lying on one's back after 20 weeks (4-5 months) of pregnancy. After the first trimester, the weight of the uterus can limit the circulation of blood, limiting circulation to the placenta and nutrients to the baby. Lying flat on the back after the first trimester may lead to low blood pressure. During pregnancy, long periods of inactivity should be avoided.
- Strenuous activity during the first trimester should also be avoided because it may overheat the fetus. Overheating may lead to birth defects. Pregnant teens should stop exercising when fatigued. Do not exercise to exhaustion.

"Interventions/Referrals for Pregnancy and Parenting" on page PA-8 lists some symptoms that may indicate medical problems. A health care provider should be contacted immediately if a client reports any of these symptoms, or if she says she is concerned about her health for **any reason.**

After Childbirth

Regular physical activities should be resumed gradually after childbirth.[36] The client should seek her health care provider's advice for how and when she should exercise based **on her unique situation.** When physical activity resumes to normal levels, use the recommendations on page PA-5 for non-pregnant adolescents.

Adolescents who breastfeed their babies can and should be physically active. Exercise does not affect milk production or quality.

Physical activity helps prevent many chronic conditions (listed earlier in the chapter). Being physically active and following a healthy diet after childbirth helps to lose excess weight.[37]

Parenting teens who are physically active are role-modeling healthy behaviors for their child and by including them, help them to be healthy too. Activities that can be done together include:

- Taking the child for a walk using a baby carrier or stroller, or walking with other mothers
- Running or playing active games with children
- Carrying children
- Doing physical activities at the playground (e.g., using monkey bars for pull-ups).
- For more ideas, visit this WIC webpage.

Barriers to Physical Activity for Pregnant and Parenting Adolescents

Engaging in physical activity may be challenging for pregnant and parenting adolescents. They may lack a friend with whom to exercise, or they may worry about their safety. In focus groups, pregnant and parenting adolescents indicated walking as their preferred activity. Ask the client about whether this is something she would enjoy.

Many pregnant and parenting adolescents are busy, so suggest breaking up their activity into 10-minute intervals. Encourage activities that can be incorporated into their lives and include their children as described above. They can perform household chores such as washing the car, vacuuming, or taking a child for a walk. When children are older, parenting teens can run and play with them.

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Screening

Complete How Active Am I? with the client to assess her level of physical activity.

Interventions

See the next section for resources tailored to pregnant teens or those who recently gave birth. Print handouts back-to-back to save paper.

- Use the Benefits of Exercise handout to discuss the benefits of being active every day. Suggest exercising with friends or family, which would allow them to spend time together, motivate each other and improve the family's health
- Use the Get Active! handout to discuss recommended types and amounts of physical activity and sample activities
- Use the Fitness Tips for Teens handout to strategize with the client how she can increase her physical activity
- Use the Body Basics handout to learn the muscles that specific exercises engage
- Use the How to Make a Home Gym handout to identify simple no-cost exercises
- Use the My Action Plan for Exercise handout to help the client develop a plan to be more physically active. Help her come up with measurable short- and long-term goals. Discuss changes that the client can make today, tomorrow and in a few weeks. Remind the client that for all individuals, some activity is better than none
- Use Tips for Addressing Physical Activity Concerns: A Guide for Case Managers to help the client address specific challenges
- Help the client balance physical activity with healthy eating. Help her create a profile and register on the Supertracker website so she can:
    - Create a personalized food plan based on factors such as age, sex and physical activity level
    - Assess her current habits by entering in specific foods and activities
    - Monitor her eating and physical activity habits over time

Interventions/Referrals for Pregnancy and Parenting

Note: Pregnant and postpartum clients must receive permission from their primary health provider before starting to exercise.

- Review the physical activity handouts described in the previous section with the client
- Help the client learn about exercises she can do during specific stages of her pregnancy by reviewing handouts which are available in English and Spanish (after clicking on the link, scroll to handouts for physical activity)
- If the client has children, help her think of activities she can do with them. Go over the following WIC handouts for tips
- To balance physical activity with healthy eating, review the MyPlate for Moms/My Nutrition Plan for Moms handout with the client or help her create a profile and register on the Supertracker website for personalized food and physical activity plans (the pregnancy and breastfeeding option is only available for ages 18 and older)

Symptoms of a Medical Hazard

If the client is pregnant and reports the following symptoms, **seek medical attention immediately:**[38]

- Vaginal bleeding
- Dizziness or feeling faint
- Shortness of breath
- Chest pain
- Headache
- Muscle weakness
- Calf pain or swelling
- Uterine contractions
- Decreased fetal movement
- Fluid leaking from the vagina

She should contact her health care provider if she is worried or concerned about her health for any reason.

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Follow-Up

Review the action plan with the client to determine if she achieved her goal(s) for behavior change.

If the client did not make any changes, talk with her about what prevented her from doing so. Review the benefits of physical activity and see which (if any) are important to her. Validate her feelings. Work with her to identify strategies for removing any barriers.

If the client made changes but still falls short of the recommended physical activity, praise her for the changes that she made. Work with her to revise her action plan (change or add goals).

If the client has made changes and achieved the recommended physical activity, praise for the changes that she made. Help her consider a new action plan from another section in the Guidelines.

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Tips for Addressing Physical Activity Concerns: A Guide for Case Managers

Concern	Suggested Response/Tips
"I am self-conscious about my looks when I exercise"	• Try not to let this feeling stop you from being active. A lot of girls your age feel this way. • Getting active will help you look and feel better about yourself. • Think of places to exercise where you do not have to worry about how you look, such as in your room, basement or garage.
"I am not motivated"	• Think about the great things that exercise can do for you. Write them down and carry the list with you. • Do activities that you enjoy. Dancing, walking with a friend or jumping while watching a movie all count! Just have fun! • Change your exercise activities before you get bored. • Try doing some abdominal crunches or sit-ups to get some good results quickly. This may help you stay motivated and keep going.
"I do not have anyone to exercise with me"	• Ask a friend, neighbor, family member, or guardian to do some physical activity with you. • Think of things that you might like to do alone, such as jumping rope, dancing, jogging and biking. • Borrow an exercise video from the library or from a friend—some high-quality videos are also available for free on the CDC website. • Read about exercises you can do at home from handouts or websites. • Go on a walk with a child, or take a pet for a walk. You can make some money walking someone else's dog and get some physical activity at the same time. • Join an organization that offers physical activity opportunities and other people with whom to exercise. Some ideas: o Local Park and Recreation Departments o Local Public Health Department o After school programs o YMCA o Churches or community centers
"I am too busy"	• Your daily physical activity can be broken up into smaller times during the day for a total of 60 minutes. If you are a beginner, start with 5 to 10 minutes of activity each day for 1 week and then gradually increase the time each week. • Keep a daily physical activity log (on paper or electronically) to stay on track. • Try substituting exercise for TV a few times a week. If you are unable to do this, try doing some physical activity while you watch TV. For example, you can jog in place, do sit ups or crunches or ride an exercise bike or walker during your favorite shows. • Do one chore a day to increase your physical activity and accomplish some tasks at the same time. For example, rake leaves, wash windows, or wash your car.
"I don't have enough money to join a gym"	• Think about ways that you can exercise that are free. Here are some examples: o If you feel safe in the location, try taking a walk outdoors! A walk outdoors can lower your stress and lift your spirits too! o Use milk or water bottles or canned goods as dumbbells to strengthen your muscles. o Walk someone's dog and earn some extra money. o Find quality exercises that you can do at home from online videos, websites or handouts. You can also borrow a video from your library for free (just be sure to return it on time to avoid late fees!)
"I don't feel like exercising when I have a bad or tiring day at school"	• Exercising can help improve your mood and increase your energy. Say positive statements to yourself to help you stay motivated. Tell yourself you will feel good when you finish. • Turn on some wild music (that you like of course) to wake you up and put you in a better mood. Try making up a new dance.

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	• Tell yourself that you are going to start moving on the count of 10. And just do it.
"The weather is too bad"	• Create your own fun-filled, unique exercise program designed specifically for a rainy or other type of "bad" weather day. • Think about using exercise playlists or dancing to your favorite music. • Do floor exercises (e.g., push-ups, sit-ups, stretching) or jog in place while watching your favorite TV show. • Try walking in the mall on a rainy day, or put on a raincoat and go outdoors anyway.
"Physical activity is hard work"	• Think of the rewards you will get from physical activity instead of seeing it as an unwanted chore or burden. Think of all of the benefits you will reap from exercising, like staying healthy and keeping a healthy weight! • Do something that is easy and fun. You do not have to lift weights, run, or go to the gym. You can walk in the mall, dance, or walk with your pet – just move instead of sitting. • Make physical activity an important part of your life. Eventually doing physical activity should become easier for you when you do it on a regular basis.
"My schoolwork gets in the way of my physical activity"	• Do a good job on your schoolwork but try to be efficient so that no time is wasted. You need to have time to do the physical activities you enjoy. • Try combining some physical activity with your homework, like floor exercises with reading or memorizing information. Take physical activity breaks in between schoolwork! • Ask a friend to quiz you while you exercise.

This table has been adapted with permission from author Lorraine Robbins.[27]

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
CDC information on BMI for children and teens	Webpage	http://www.cdc.gov/healthyweight/assessing/bmi/childrens_BMI/about_childrens_BMI.html
Booklet on hair care and exercise: Hair Care Tips for Sisters on the Move	Document (PDF)	http://www.hsph.harvard.edu/healthliteracy/files/sisters.pdf
2008 Physical Activity Guidelines for Americans	Webpage	http://www.health.gov/paguidelines/
Stretching information from girlshealth.gov	Webpage	http://kidshealth.org/PageManager.jsp?dn=girlshealth&lic=175&article_set=52711&ps=204&cat_id=20591
Sample stretches from girlshealth.gov	Webpage	www.girlshealth.gov/fitness/exercise/stretching.cfm
WIC physical activity resources for mothers and children	Webpage	http://www.cdph.ca.gov/programs/wicworks/Pages/WICEducationMaterialsActiveLiving.aspx
How Active Am I?/ My Action Plan for Exercise handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-HowActiveAmIActionPlan.pdf
Benefits of Exercise handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-BenefitsofExercise.pdf
Get Active! handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-GetActive.pdf
Fitness Tips for Teens handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-FitnessTips.pdf
Body Basics Handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-BodyBasics.pdf
How to Make a Home Gym handout	Document (PDF)	http://www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-HomeGym.pdf
SuperTracker webpage for personalized nutrition and physical activity information	Webpage – interactive tool	https://www.supertracker.usda.gov/CreateProfile.aspx
Sample exercises for pregnancy from the Comprehensive Perinatal Services Program	Document (PDF)	www.cdph.ca.gov/HealthInfo/healthyliving/childfamily/Documents/MO-CPSP-STT-Handouts.pdf
MyPlate for Moms/My Nutrition Plan for Moms	Document (PDF)	www.cdph.ca.gov/programs/NutiritionandPhysicalActivity/Documents/MO-NUPA-MyPlateForMoms.pdf
Physical activity and healthy eating information for pregnancy and breastfeeding		www.choosemyplate.gov/pregnancy-breastfeeding.html

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CDC exercise videos	Webpage	www.cdc.gov/physicalactivity/everyone/videos/index.html
Best Bones Forever physical activity page	Webpage	http://www.bestbonesforever.gov/physical_activity/index.cfm
Best Bones Forever video/dance routine featuring teen girls and Michelle Obama	Video (~5 min.)	www.youtube.com/watch?v=TBYGjAzuu2E&lr=1&uid=QGLiqGUZeeOjhcLE2-2NDA
More nutrition and physical activity links from the California Department of Public Health, Maternal, Child and Adolescent Health Division	Webpage	www.cdph.ca.gov/healthinfo/healthyliving/nutrition/Pages/NutritionandPhysicalActivityLinks.aspx

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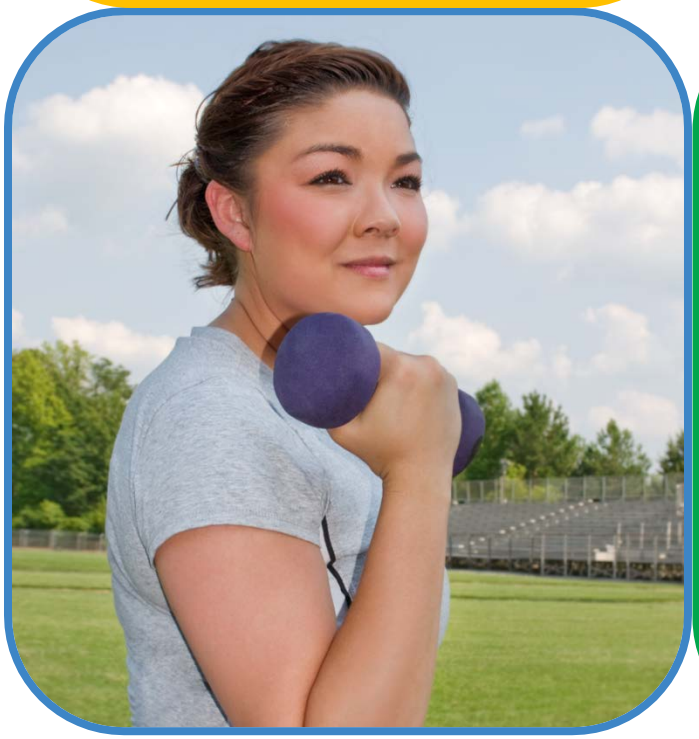
Benefits of Exercise

If you are pregnant, talk to your doctor before starting an exercise program.
Ask about the activities that are right for you.

Exercise can help you…

- look and feel great
- have more energy
- be more fit and flexible
- have firmer muscles
- lower your stress
- have stronger bones
- manage your weight
- have a stronger heart
- lower your blood pressure
- lower your cholesterol



In pregnancy, exercise has extra benefits. It can help…

- you feel less tired
- you sleep better
- improve your mood
- improve your posture and reduce back pain
- reduce constipation
- reduce bloating and swelling
- make your muscles stronger for labor
- prevent or treat diabetes

Photo credit for photo of female running: Amanda Mills, Centers for Disease Control and Prevention

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Get Active!

Key Words

- **Moderate aerobic exercise** makes your heart beat faster.
- **Vigorous aerobic exercise** makes you sweat and breathe faster.

The talk test: If you are vigorously active, you should not be able to talk comfortably and exercise at the same time.

Goals

- Aim for at least 1 hour of moderate to vigorous aerobic exercise every day. You can split the hour into sessions that are at least 10 minutes each. If you can't do 1 hour, do what you can. A little more exercise can make a big difference.
- Try to do vigorous aerobic activity at least 3 days per week. If you're not active right now, start with only 1 day per week and slowly increase to 3 days per week.
- Do muscle and bone strengthening activities at least 3 days per week to stay strong.
- Most pregnant teens should exercise 30 minutes or more on most if not all days of the week. Talk to your doctor before starting an exercise program. Ask about the activities that are right for you.

Examples of Vigorous Aerobic Exercises:

- Running or jogging with friends, family, or pets (if pregnant, usually okay if you ran before pregnancy, but ask your doctor first)
- Fast dancing or swimming
- Playing soccer, tag, basketball, or tennis (do not do if pregnant)

Examples of Moderate Aerobic Exercises:

- Walking briskly. Try walking with children or walking to school/work.
- Biking, climbing stairs, or dancing
- Raking leaves, sweeping, vacuuming or scrubbing floors, mowing the lawn

Examples of Easy Bone and Muscle-Strengthening Exercises:

Walking, lifting weights or children, climbing stairs

Photo credit for photo of female running: Amanda Mills, Centers for Disease Control and Prevention

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Fitness Tips for Teens

If you are pregnant, talk to your doctor before starting an exercise program. Ask about the activities that are right for you. See *Safety Tips* on the next page for more information.

Exercise –it is a way of life

- If you are not regularly active, start gradually. Walk a little more or lift light weights. Increase the amount of weights when you are ready.
- Choose activities that YOU like. Maybe you would like to dance at home. Walk briskly while you window-shop or while chatting with your best friend.
- Find out when you like to exercise. Are you a morning or an evening person? If you are busy, break up your exercise into 10-minute sessions throughout the day.
- Spare your coffee money and try exercising to stay awake! Exercise can give you the energy-boost that you need.
- Team up with friends so you can motivate each other. Or, join a group activity and make new friends while exercising!
- Map your walking or running route. Choose a safe route that is well-lit and does not have missing sidewalks. Use a city map or create a map online at www.mapmyrun.com/search.
- If you enjoy Wii Fitness®, use that to get moving. If you have a smart phone, use apps to help you exercise and stay on track with goals. If you are pregnant, make sure the activities you choose are safe for your pregnancy. Talk to your doctor and read the safety tips on the next page.

Just MOVE –every day, anytime and anywhere!

- Walk to places that are close by. Park your car or get off the bus farther away from you are going.
- Do chores that get you moving — walk the dog, mow the lawn, vacuum, pull weeds, or wash the car.
- Use any chance to get up and move around. Every little bit makes a difference! Here are some ideas:
  - Take the stairs instead of the elevator.
  - Walk or ride a bike to school.
  - Be active in physical education (P.E.) class.
  - Stretch or run in place while watching TV.
- Remember that all physical activity is good for you—sports, planned exercise, household chores, even yard work.

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Make it a family affair—exercise with your family!

- If you take care of younger children, don't just watch them play tag or kick a ball. Join them! You can also push swings or climb on the jungle gym.
- Take young children on a walk in the stroller. Not only does this exercise your whole body, it can help put children to sleep!
- Help your family stay healthy. Exercise with parents, grandparents, and children to help prevent heart disease or type 2 diabetes. They will be happy when you are healthy. Try dancing to music or walking with your family.

Get toned by building muscles

- When you work your muscles, they burn calories even when you are not working out! Working your muscles can also help you look more fit and toned. You can carry things more easily.
- You can do muscle-strengthening activities while listening to music or even in front of the TV! Try lifting weights or water bottles or do some crunches.

No gym? No problem!

- You do not need a fitness center or have to do high-intensity workouts. Making small changes, like walking more, is just as effective. And all you need is a pair of shoes!
- You can make a cheap gym right at home. Ask your case manager for the handout, *How to Make a Home Gym.*

Safety Tips

- Warm up and stretch before you exercise.
- Wear athletic shoes that are for walking or running.
- Wear bright clothing when it's dark.
- Use sunscreen. Drink enough water.
- To avoid overheating, do not exercise in hot, humid weather or when you have a fever.
- Wear a helmet and padding if skating or biking. Pregnant teens should not skate or bike.
- Talk to your doctor if you feel light-headed, your chest hurts, or if you have nausea, severe muscle pain, or joint pain as these could be signs of something wrong.
- If you are pregnant, talk to your doctor before starting an exercise program. After doing so, remember:
  - Do not scuba dive, ski, or play contact sports such as soccer, basketball and hockey. These activities can be harmful for your pregnancy.
  - Do not do jumping activities. Avoid quick motions that could strain your joints.
  - Do not do activities with a high risk of falling, such as gymnastics or horseback-riding.
  - After the first trimester, avoid exercises that require lying down on your back.

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Body Basics

Check out which activities work specific muscles of your body!

If you are pregnant, talk to your doctor before starting an exercise program. Ask about the activities that are right for you.

Exercises for Everyone *Good for Pregnancy*	Muscles Worked
Running (if pregnant, usually okay if you ran before pregnancy, but ask your doctor first)	Calves (lower leg), front/back thigh
Swimming	Nearly all major muscles
Walking	Arms, calves, front/back thigh, abdominals
Cycling on a stationary bike	Calves, front/back thigh
Dancing	Nearly all major muscles but varies by type of dance
Push-ups	Chest, shoulders, arms, abdominals
Squats -- See the *Fitness Tip*	Calves, front/back thigh, butt
Crunches (if pregnant, avoid after 1st trimester)	Abdominals

More Exercises *Do not do if Pregnant*	Muscles Worked
Jumping rope	Calves, thighs, abdominals, shoulders, arms
Skating	Inner/outer thigh, butt
Jumping Jacks	Calves, inner/outer thigh, butt

Adapted from the Office on Women's Health <www.girlshealth.gov/fitness/exercise/musclegroups.cfm>

Fitness Tip: How to do a Squat

1. In front of a sturdy, armless chair, stand with feet slightly more than shoulder-width apart. Extend your arms out so they are parallel to the ground and lean forward a little at the hips.
2. Lower yourself in a slow, controlled motion, to a count of four, until you are almost sitting. Do not sit down too quickly.
   - Make sure your knees **never** come forward past your toes.
   - Place more of your weight on your heels than on the balls or toes of your feet to help keep your knees from moving forward past your toes.
3. Pause, count to two. Slowly stand up. Keep your knees over your ankles and your back straight. Repeat.
   - Do not lean your weight too far forward or onto your toes when standing.

Note: If this exercise is too hard, start off by using your hands for help. If you are unable to go all the way down, put a few pillows on the chair.

Adapted from the Centers for Disease Control and Prevention <www.cdc.gov/physicalactivity/growingstronger/exercises/stage1.html>

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How to Make a Home Gym

If you are pregnant, talk to your doctor before starting an exercise program.
Ask about the activities that are right for you.

Get jumping!

- Jump rope for 30 seconds, rest, and repeat.
- Put the jump rope on the floor and jump from side to side for 20 seconds. Then rest and repeat. Do not do if pregnant.

Grab a towel

Grab the ends of a towel and raise it from behind your head to over your head. Do it 10 times, then rest, and repeat.

"Ab twist" with a ball (any size)

Sit on the floor with legs bent, feet shoulder-width apart, and toes pointing up so that you are resting on your heels. Hold the ball with both hands and extend your arms out in front of you. Twist your waist from side to side. Do 10 on each side, rest, and repeat.

Playground gym

- If you live near a park or take care of kids, use the jungle gym as a chin up bar! Do as many chin ups as you can.
- You can also hang and raise your legs, keeping them straight. Do this 10 times, rest, and repeat.

Home-made dumbbells

Use water bottles or milk jugs filled with dirt or sand, or canned food as dumbbells/weights:

- **Do bicep (upper arm) curls.** Stand with feet shoulder-width apart. Hold weights straight down at your sides, palms facing forward. Slowly bend your elbows and lift weights toward chest. Keep elbows at your sides. Hold the position for 1 second. Slowly lower your arms. Repeat 10-15 times. Rest, then repeat 10-15 more times.
- **Do front arm raises.** Stand with your feet shoulder-width apart. Hold weights straight down at your sides, with palms facing backward. Keeping them straight, raise both arms in front of you to shoulder height. Hold the position for 1 second. Slowly lower your arms. Repeat 10-15 times. Rest, then repeat 10-15 more times.
- **Do side arm raises.** You can do this exercise while standing or sitting in a sturdy, armless chair. Keep your feet flat on the floor, shoulder-width apart. Hold hand weights straight down at your sides with palms facing inward. Raise both arms to the side, shoulder height. Hold the position for 1 second. Slowly lower your arms. Repeat 10-15 times. Rest, then repeat 10-15 more times.

Adapted from Health Net of California's Fit Families for Life Program, 2009 and Go4Life from the National Institute on Aging at the National Institutes of Health

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How Active Am I?

Check off your time spent on the activities listed. If you are pregnant, talk to your doctor before starting an exercise program. Ask about the activities that are right for you.

Activity	1-2 x month	1-2 x week	3-4 x week	Every day
Sedentary (not moving)				
Watching television				
Video games or computer time				
Reading books/magazines				
Going to the movies				
Talking on the phone, texting or using the internet				
Taking a nap				
Active (for everyone—good for pregnancy)				
Walking				
Dancing				
Swimming				
Throwing a Frisbee				
Stretching or prenatal yoga				
Table tennis				
Lifting weights (dumbbells, canned soup, water bottles				
Yard work (weeding, mowing, raking)				
Housework (dusting, sweeping, vacuuming, mopping, washing windows)				
Cycling on a stationary bike				
Using apps or electronics for physical activity, such as Wii® (if pregnant, this depends on the activity, so ask your doctor about the activity first)				
Jogging or running (usually okay if you ran before you were pregnant, but ask your doctor first)				
Active (do not do if pregnant)				
Skating, skiing or skateboarding				
Jumping rope				
Riding a bike				
Team sports (for example, bowling, basketball, baseball, softball, soccer, football, volleyball)				

Try to have more active and fewer sedentary activities each day. Now complete *My Action Plan for Exercise* to achieve this goal!

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My Action Plan for Exercise

If you are pregnant, talk to your doctor before starting an exercise program, in case you have a health condition that limits your activity. Ask about what activities are right for you.

I plan to spend less time on sedentary activities that require little or no energy:

Activity (example: watching TV)	Time spent now? (per week or day)	How often will I do it? (per week or day)

I plan to spend more time on these active activities:

Activity (example: walking)	Time spent now? (per week or day)	How often will I do it? (per week or day)

I plan to add the following active activities:

New activity (example: dancing)	How often will I do it? (per week or day)

Exercise Tips

- ✓ Get your girlfriend, boyfriend, friends, or family involved! Everyone will be healthier. You can help each other stay on track. You will have more fun!
- ✓ Get a calendar (or make one) and mark off each day that you met your goal. Free calendars are available for download at www.printablecalendar.ca.

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Vegetarian Teens

What is a Vegetarian Diet?

In 2010, it was estimated that approximately 1.4 million youth in the United States eat a vegetarian diet.[1] A vegetarian diet is composed of mostly plant foods (grains, legumes, nuts, seeds, vegetables and fruit) while limiting or eliminating animal products. Animal products include: flesh foods (beef, pork, poultry and fowl, wild game and fish), dairy (milk, yogurt, and cheeses), eggs, and processed foods containing casein or whey.

There are various forms of vegetarian diets. A teen may choose a semi-vegetarian diet, which is comprised of mostly plant foods with the occasional beef, pork, poultry, or fish once or twice weekly. Others may choose to follow a vegan diet, in which all flesh foods, eggs, dairy products and sometimes honey are eliminated from the diet. A list of the most common types of vegetarian diets is located on page VT-2, The Spectrum of Vegetarian Diets.

While some vegetarian diets present a risk for nutrient deficiencies, a plant-based eating pattern is known to have numerous health benefits. Individuals who follow a healthy vegetarian diet have a lower risk of developing heart disease, diabetes, obesity and high blood pressure as well as colorectal, ovarian and breast cancers.[2]

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California
Nutrition and Physical Activity
Guidelines for Adolescents

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The Spectrum of Vegetarian Diets

Vegetarian diet: Devoid of all flesh foods, but may include egg or dairy products.

Ovo-vegetarian: Includes eggs, but excludes meat and dairy.

Lacto-ovo-vegetarian: Includes eggs and dairy, but excludes fish and meat.

Vegan: A strict vegetarian diet that excludes meat, fish, eggs, and dairy. (Sometimes excludes honey and all food products that come from animals)

Raw vegan: Very strict diet including only fresh and uncooked fruit, nuts, seeds, and vegetables.

Macrobiotic: A strict whole-foods, plant based diet that includes fish but no other flesh foods and includes mostly brown rice and whole grains supplemented with local vegetables, seaweed, beans, nuts, seeds, certain fruits, and miso soup.

Semi-vegetarian: A plant-based dietary pattern that includes beef, pork, poultry, or fish on occasion (once or twice weekly).

Eating a wide variety of healthy foods is the key to planning a vegetarian diet. A healthy vegetarian eating plan includes: fruits, vegetables, leafy greens, whole grains, legumes, nuts, seeds, dairy product alternatives and for some, dairy and eggs. Vitamin and mineral supplements may be recommended if a specific vegetarian diet is not providing adequate amounts of essential nutrients.

It is important to note that even though a plant-based eating pattern has many health benefits, not all vegetarian diets are healthy. Vegetarians need to be aware of the specific essential nutrients that may be missing from their diet because of the foods they avoid. To see what specific nutrients are of concern for common types of vegetarian diets, use the Nutrients of Concern handout.

It is possible to eat fries, chips, sweets and soda and technically be a "vegetarian." However, these foods do not support or promote health.

With proper education and planning, vegetarian diets can provide all of the essential nutrients that constitute a healthy, well-balanced diet.

Why Teens Choose to Go Vegetarian

Adolescents may choose to eat a vegetarian diet for various reasons including the following:

- Interest in animal rights
- Religious beliefs
- Health or wellness
- To lose or maintain weight
- Fitness (dance, sports)
- Popular among friends

Health care professionals should be aware of the possible use of vegetarian eating patterns as a method to restrict food consumption. Vegetarian dieting among adolescents may potentially lead to disordered eating.[3-4] To learn more about disordered eating see the Body Image and Disordered Eating section.

What Are the Nutrition Concerns for Vegetarian Adolescents?

Vegan Diets

Adolescents who practice a vegan diet may have a greater risk for deficiencies of nutrients, particularly n-3 fatty acids, calcium, vitamin D, iron, zinc, vitamin B_{12}. Referral to a registered dietitian (also known as registered dietitian nutritionist) is recommended.

Protein

Concerns about protein deficiencies arise when meat, poultry, seafood, eggs, or dairy products are eliminated in the diet. With careful planning, the protein needs of vegetarian teens can be met with consumption of a variety of plant foods. Legumes, nuts, seeds, and some grains (like quinoa) contain good amounts of protein. Some vegetables contain a *small* amount of protein like, broccoli, spinach, artichokes and potatoes. Use the Vegan Foods with Protein handout to recommend protein rich foods for vegetarians.

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Even though plant foods can provide protein, there is still a concern with only getting protein from plant sources because the amino acid composition of plant protein is very different from that of animal protein. Amino acids are the building blocks of protein. Our bodies need amino acids in order to grow and function properly. Two categories of amino acids are *essential* and *nonessential*. Essential amino acids cannot be synthesized in the body and must be provided through diet. Animal sources of protein like meat, poultry, seafood, eggs, and dairy, are called *complete* protein sources because they contain adequate amounts of all of the essential amino acids. Most plant proteins do not contain all of the essential amino acids and are known as *incomplete* proteins.

It is possible to get adequate amounts of all of the essential amino acids by combining two or more plant proteins. This combination of plant foods is known as a *complementary* protein. The most common complementary protein pairs are grains and beans or legumes. Classic examples of complementary meals include: rice and beans, rice and lentils, tortillas and beans, black-eyed peas and cornbread, bean or pea soup with whole grain bread, and peanut butter sandwiches.

A vegetarian diet may not provide sufficient amounts of amino acids, and thus protein, when only a single plant protein is consumed in a day. Therefore, adolescents following a vegetarian diet should consume a variety of plant protein foods every day. Non-meat sources of complete protein include: eggs, milk, cheese, yogurt, and soy products. For vegan sources of protein see the Vegan Foods with Protein handout.

CAUTION!

In general, almond and rice milk are **NOT** good sources of protein.

Almond and rice milk contain approximately 1g of protein in a 1 cup serving while cow's and soy milk contains 8-9g of protein.

n-3 Fatty Acids

Emerging and ongoing research suggests potential health benefits of specific fatty acids.[5] Because the human body cannot make n-3 fatty acids, it is essential to obtain them through the diet. The best sources of n-3 fatty acids are specific fish: salmon, sardines, tuna, hearing and trout. Vegetarian adolescents who do not eat fish should be sure to include flaxseeds, chia seeds, walnuts, and canola or soybean oil in their diet.[5]

Calcium and Vitamin D

Calcium and vitamin D are also nutrients of concern in a vegetarian diet. Vegetarians who avoid milk and other dairy products should supplement their diet with a calcium and vitamin D -fortified milk alternative, such as soy milk.

Some good nondairy sources of calcium include: tofu processed with calcium, unsweetened calcium-fortified soy beverages, broccoli, sunflower seeds, nuts, legumes, calcium fortified orange juice, and fortified breakfast cereal. See Calcium guideline for more information on dairy and nondairy sources of calcium.

To get the recommended amount of vitamin D, vegetarians who do not consume any eggs or dairy products should eat foods that are fortified with vitamin D such as breakfast cereals, juices, and unsweetened soy beverages. A supplement can also help achieve the Dietary Reference Intake of vitamin D for adolescents, which is 600 International Units per day.[6]

Iron

Iron intake can be a concern for all teens. Adolescents that follow a vegetarian diet should be encouraged to include iron-rich foods at every meal (see Iron section for more information).

Iron from plant foods, even when fortified, is not absorbed as well as iron from animal sources. However, there are ways to improve the absorption of iron in plant and fortified foods (such as legumes, whole-wheat bread, tofu, and spinach). One way is to include vitamin C foods (citrus fruits or juices, broccoli, tomatoes) at meals that include plant sources of iron. Semi-vegetarians who eat small amounts of meat, poultry, or fish are getting a great source of iron

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that the body can readily use. The iron in meat and fish also helps absorb the iron from plant and fortified sources.[7, 8]

Zinc

More than two-thirds of the zinc in the American diet comes from animal sources.[7] Vegetarians who include milk, cheese, yogurt, or eggs in their diet can get enough zinc. Vegans can get enough zinc by eating legumes, soy products, tofu, seeds, nuts, and whole grains. The zinc is in the germ and bran of whole grains.

Plant sources of zinc contain phytates and fiber that make it difficult for the body to absorb the zinc contained in them. A multivitamin supplement is an option for vegans and other strict vegetarians to get adequate zinc in the diet. Such supplements should contain 100% or less of the Recommended Dietary Allowance (RDA) of zinc. (See table below)

Table VT 1 Recommended Dietary Allowances for Zinc

Age	Females	Males
9-13	8	8
14-18	9	11
19-30	8	11
Pregnancy 14-18 19-30	 12 11	
Lactation 14-18 19-30	 13 12	

Source: Institute of Medicine, Food and Nutrition Board [9]

Vitamin B_{12}

Vegetarian teens that omit all animal products (especially vegans and raw vegans) are at a high risk of a vitamin B_{12} deficiency.[2, 10-12] Vitamin B_{12} is only found naturally in animal products. Unfortified plant foods do not contain significant amounts of active vitamin B_{12}. Deficiency of this vitamin can cause neurological problems that may be irreversible, especially in infants or young children.

Vegetarian adolescents who eliminate all animal products should include food products fortified with vitamin B_{12} and consider taking a vitamin B_{12} supplement or multivitamin that contains vitamin B_{12}.
Vegans should look for cereals, soymilk, or other soy products like vegetarian burger patties that are fortified with B_{12}. Seaweed, algae, spirulina, and fermented plant foods such as tempeh and miso are not good sources of B_{12} because it is in a form that cannot be used by the human body.[10]

Table VT 2 Nutrients of Concern

Diet	Nutrients	Sources
Ovo-vegetarian	Calcium Vitamin D	Spinach, kale, turnips, collard greens, broccoli, soybeans Vitamin D fortified cereals, juices, soymilk or vitamin D supplement recommended
Lacto-ovo vegetarian	As long as a wide variety of foods are eaten every day, this diet provides adequate amounts of essential nutrients. *Vitamin B_{12} supplementation	
Vegan or Raw vegan	Protein n-3 Fatty Acids Iron Zinc Calcium Vitamin D Vitamin B_{12}	See Vegan Foods with Protein Flaxseeds, chia seeds, walnuts, canola oil Soybeans, lentils, spinach, tofu Beans, nuts, whole grains Spinach, kale, turnips, collard greens, broccoli, soybeans Vitamin D fortified cereals, juices, soymilk or vitamin D supplement recommended Vitamin B_{12} supplement or Vegan multivitamin
Macrobiotic	As long as a wide variety of foods are eaten every day, this diet provides adequate amounts of essential nutrients. *Vitamin B_{12} supplementation	

Pregnancy

The nutrient and energy needs of pregnant and lactating vegetarian women do not differ from those of non-vegetarian women with the exception of higher iron recommendations for vegetarians.[2]

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Additional Screening

Use the Food Habits screening tool from the Nutrition and Physical Activity Screen section located on page NS-7 for an initial screening of dietary habits. If the teen follows a vegetarian diet, use the following questions to determine the specific type of diet followed.

Do you ever eat any flesh foods (beef, pork, poultry, or fish)?

Do you drink milk? If yes, what kind (cow, soy, almond, rice)?

Note: almond and rice milk are inadequate sources of protein.

Do you eat cheese?

Do you eat yogurt?

Do you eat eggs?

Do you eat cooked foods?

If the teen answered "no" to any of these questions, refer to the Smart Choices handout for suggestions on how to improve the teen's diet.

Use the Vegetarian Food Guide to educate the teen on how to incorporate all of the food groups into the diet to ensure a healthy eating pattern.

Interventions/Referrals

Use the screening questions to identify what food groups and nutrients need the most attention.

Use Vegetarian Food Guide activity sheet to educate the client on healthy eating pattern for a vegetarian diet.

Use the Tips for Vegetarians activity sheet to give the clients suggestions for how to have a healthy vegetarian diet.

Use Smart Choices activity sheet with clients to guide them on how to replace nutrients in their diet that may be missing due to food group elimination.

- Adolescents who do not substitute alternative nutrient rich foods for the foods they eliminate are at risk for nutrient deficiencies.
- If you suspect that the client's diet is inadequate, refer them to a registered dietitian (registered dietitian nutritionist).
- Refer adolescents who follow a vegan diet to a registered dietitian to assess the adequacy of their diet.
- Pregnant adolescents who are vegetarian or vegan are at a high risk for nutrient deficiencies. Refer to a registered dietitian.

Follow-Up

Review the completed Smart Choices activity sheet with the client. Ask her to fill out a new sheet and indicate the changes she has made since the nutrition intervention.

If the teen did not make any changes, explore what barriers prevented her from doing so. Validate her feelings. Discuss possible strategies for removing these barriers.

If the teen made changes but still falls short of the recommended intake, praise her for the changes that she did make. Work with her to revise her action plan to change or add goals for behavior change.

If the teen has made changes and achieved the recommended intake, praise her and consider if she needs to develop a new action plan in order to maintain the new behavior.

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Web Links Referenced/Additional Resources

Title	Resource Type	URL
USDA: My Plate	Webpage	http://choosemyplate.gov/healthy-eating-tips/tips-for-vegetarian.html
USDA: Vegetarian Nutrition	Webpage	https://fnic.nal.usda.gov/lifecycle-nutrition/vegetarian-nutrition
The Vegetarian Resource Group	Webpage	http://www.vrg.org/
Vegetarian Nutrition	Website	http://vegetariannutrition.net/
Physicians Committee for Responsible Medicine	Website	http://www.pcrm.org/
People for the Ethical Treatment of Animals (PETA)	Website	http://www.peta.org/
Vegan Health	Website	http://www.veganhealth.org/
VegWeb	Website	http://www.vegweb.com/
Vegetarian-Nutrition.info	Website-resources	http://www.vegetarian-nutrition.info/
Vegetarian Nutrition dietetic practice group	Website - resources	http://vndpg.org/
Medline Plus: Vegetarian Diet	Webpage	http://www.nlm.nih.gov/medlineplus/vegetariandiet.html
USDA: My Plate Super Tracker	Webpage-interactive tool	http://choosemyplate.gov/supertracker-tools.html
CDC: Nutrition for Everyone: Protein	Webpage	http://www.cdc.gov/nutrition/everyone/basics/protein.html

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Vegetarian Food Guide

Find out what you need by filling out a Daily Food Plan online at www.choosemyplate.gov/myplate/index.aspx.

If you are pregnant or breastfeeding, use this Daily Food Plan at www.choosemyplate.gov/tools.html.

Food Groups	Quantity Needed/Day	Examples	Nutrition Tip
Protein Foods	_____ **ounces**	**1 ounce=** • ¼ cup dried beans, peas, or lentils • ½ cup bean, pea, or lentil soup • 1 tablespoon peanut butter • ½ ounce nuts/seeds • ½ soy patty • ¼ cup tofu or tempeh • 1 egg, 2 egg whites, or ¼ cup egg substitute	Select tofu set with calcium sulfate for a calcium bonus: 1/2-cup can have as much calcium as 1 cup of milk
Dairy	_____ **cups**	**1 cup=** • 1 cup milk or yogurt • 1 cup unsweetened calcium and vitamin D-fortified soy milk or soy yogurt • 1 ½ ounces natural cheese or 2 ounces processed cheese	Protect your bones: Calcium-fortified juices, cereals, tofu with calcium sulfate, and calcium-rich plant foods like collard greens can also help meet calcium needs.
Grains	_____ **ounces**	**1 ounce=** • 1 slice whole grain bread • 1/2 cup cooked pasta or rice • 1 cup of ready-to-eat cereal • 1 small (6") tortilla	Make half your grains whole! Whole grains provide fiber, vitamins, minerals, and protein.
Vegetables	_____ **cups**	**1 cup=** • 1 cup of raw or cooked vegetables • 2 cups of raw leafy greens such as lettuce • 1 cup vegetable juice	Eat plenty of nutrient-rich, dark green, deep red, and yellow-orange vegetables. Vegetables provide fiber, vitamins, and minerals.
Fruits	_____ **cups**	**1 cup=** • 1 cup of sliced fresh or canned fruit • medium-sized or large piece of fruit • 1 cup 100% juice (diluted) • 1/2 cup dried fruit	Vitamin C-rich foods like strawberries and a ½ cup of orange juice boost iron absorption from legumes and iron-fortified cereals.
Fats/Oils	____**teaspoons**	**1 teaspoon=** • 1 teaspoon olive oil, vegetable oil, margarine, or butter • 1 teaspoon of mayonnaise-type salad dressing *avocado is considered a fruit ½ avocado ≈ 3 teaspoons of fat	Eat oils in moderation. When you purchase foods, look for choices that have no trans fats or are reduced in fat.

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Tips for Vegetarians

Get enough protein

- Soy milk can be a good substitute for cow's milk, but be sure to check the Nutrition Facts on the food label - some brands are fortified with calcium, but not all are. Some have large amounts of sugar, so look for unsweetened soy drinks.
- Experiment with soybean products such as tofu, tempeh, textured soy protein, and soy milk in your meal planning.
- Eat beans, such as black, pinto, and garbanzo beans every day.
- Eat unsalted nuts and seeds.
- Choose nonfat or low-fat milk, yogurts and cheeses.
- Eat tofu or soybean products.
- Most grains have some protein. Try some quinoa.

Eat your grains

- Choose whole grain more than half the time.
- For variety, try different types of breads, such as bagels, tortillas, pita bread, chapatis, focaccia, and naan.
- Choose fortified breakfast cereals for added nutrients such as iron, folic acid, Vitamin B_{12}, and zinc.

Vary your veggies

- Eat plenty of colorful veggies each day.
- Pick meals and snacks with several different vegetables.
- Choose vegetables that are good sources of calcium: dark green leafy veggies (kale, mustard, collard, or turnip greens), bok choy, and broccoli. These foods also supply iron.
- Choose vegetables that are high in Vitamin C, for example, broccoli, tomatoes, and green pepper. Vitamin C helps you absorb the iron in vegetables and eggs.

Focus on fruits

- Include plenty of whole fruit each day.
- Fruits high in Vitamin C include citrus fruits, melons, and berries.
- Eat fruit for dessert and snacks.
- When you drink juice, choose 100% fruit juice and dilute it with water. Try calcium-fortified juices, especially if you do not drink milk.

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Smart Choices

Identify the foods you don't eat in the "If I don't eat this..." column and circle the foods you can use to replace them from the "I can choose this..." column. Use this handout as an action plan for change.

If I don't eat this...	I can choose this...	
Meat **Fish** **Chicken**	Milk Dairy foods Eggs Eggs substitutes Beans Lentils Peas	Nuts and seeds including peanut butter Fortified, unsweetened soy beverages Soy meat alternatives (veggie burgers) Whole and fortified grains
Milk **Cheese** **Yogurt**	Fortified unsweetened soy beverages Calcium fortified juices Kale Broccoli Bok choy Tofu with calcium Oatmeal	Calcium fortified cereal Eggs or egg substitutes Fish Meat Chicken Almonds Sesame seeds

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Vegan Foods with Protein

Food	Amount	Protein (g)
Lentils, cooked	1 cup	18
Black beans, cooked	1 cup	15
Kidney beans, cooked	1 cup	15
Chickpeas, cooked	1 cup	15
Pinto beans, cooked	1 cup	15
Tofu, firm	1 cup	11
Tofu, regular	1 cup	10
Tempeh	1 cup	31
Bagel	1 medium (3.5 oz)	10
Quinoa, cooked	1 cup	8
Wild Rice, cooked	1 cup	7
Peas, cooked	1 cup	8
Peanut Butter	2 Tbsp	8
Almond Butter	2 Tbsp	7
Whole wheat spaghetti, cooked	1 cup	5
Almonds	¼ cup	8
Soy milk, commercial, plain	1 cup	7
Whole wheat bread	2 slices	7
Soy yogurt, plain	8 ounces	6
Sunflower seeds	¼ cup	6
Spinach, cooked	1 cups	3
Broccoli, cooked	1 cup	4
Artichoke hearts, cooked	1 cup	5
Potato, baked	1 small potato	3

Source: United States Department of Agriculture, Agricultural Research Service. National Nutrient Database for Standard Reference Release 27. Available at http://ndb.nal.usda.gov/. Accessed June 2015.

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