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Additional Information

Prenatal Laboratory and Diagnostic Tests

Goals

During the course of a pregnancy various laboratory and diagnostic tests will be ordered for the client. The information included in this section is designed to assist in providing the client with basic information on why the tests are ordered and when they are performed, as well as a description of the procedure and what the results might indicate.

Laboratory Tests

Hemoglobin/Hematocrit

Why: This test tells the medical provider if the client is anemic, which means she does not have enough iron in her red blood cells. Lack of iron can restrict the amount of oxygen that gets to her cells. Hemoglobin or hematocrit is required to determine WIC program eligibility. See Anemia in the Nutrition section for additional information.

When: Usually at the first prenatal visit and often again at 24-28 weeks. Sometimes it is repeated at the postpartum visit, especially if the client had heavy blood loss during delivery or during the postpartum period.

Procedure: Blood is drawn from a vein, usually in the arm.

Results: Test results of less than 11 gms for hemoglobin or less than 33% for hematocrit may indicate anemia; however, variations in these values can also be related to normal pregnancy changes. Clients whose results indicate anemia should be encouraged to eat foods high in iron and vitamin C. See the handouts on Anemia in the Nutrition section of this manual.

Rh/ABO factors

Why: Everyone has a blood type and a factor, Rh and ABO being the more commonly identified ones. When a woman who has a negative Rh factor is pregnant with a baby who has a positive Rh factor, the opposite factors can react to one another and harm the baby. The baby may be born severely anemic and, in rare cases, may die.

When: Blood tests ordered at the first prenatal visit will determine if the client is Rh negative or positive. If she is negative, the tests will further determine whether she has already been sensitized. If she is not sensitized, the test will be repeated at 28 weeks.

Procedure: Blood is drawn from a vein, usually in the arm.

Results: The test determines sensitivity to Rh. If the client is Rh negative and remains unsensitized at 28 weeks, she will be given Rh Immune Globin (RhIG). After delivery, if the baby's blood type is Rh positive, she will be given another injection of RhIG or Rhogam to help prevent sensitivity from developing, which could impact future pregnancies.

Urinalysis

Why: Urine may give indications of kidney problems, diabetes or infection, even though the client may not be aware of symptoms. All of these conditions can have serious consequences for the mother and the baby.

When: At the first prenatal visit and at each subsequent medical obstetric visit.

Procedure: The client is asked to urinate in a specimen container. If the specimen is to be cultured, she will be asked to obtained a "clean catch" specimen (practice protocols should include instructions).

Results: Specimens positive for protein may indicate kidney problems or pregnancy-induced hypertension; glucose may indicate the client has diabetes; and a positive culture is an indication of possible infection. All of these conditions require further evaluation by the medical provider.

Rubella

Why: Rubella, or German measles, is a viral disease that causes a generally mild illness. During pregnancy, however, a Rubella infection, especially in the first trimester, can cause serious congenital anomalies in the baby.

When: The test for Rubella antibodies is usually performed at the first prenatal visit.

Procedure: Blood is drawn from a vein, usually in the arm.

Results: A person is generally considered immune to Rubella if their test shows antibodies present at a ratio greater than 1:8. However, sometimes when a woman has been vaccinated for Rubella her results may show less than 1:8, even though she is immune. If the test shows no immunity and the client has not been immunized, she should be offered a Rubella vaccination after delivery that will protect her for future pregnancies.

Procedures

PAP Smear

Why: This is a screening test used to determine whether a woman has cancerous or precancerous cells on her cervix. The cervix is the part of the uterus (or womb) that is in the upper part of the vagina.

When: Done as part of the pelvic examination conducted at the first obstetric visit.

Procedure: The medical provider will use a small implement (wooden, like a small tongue depressor, or sometimes a small brush) to scrape a few cells from the cervix that are then placed on a small glass slide and sent to the laboratory for microscopic evaluation. The procedure is not painful.

Results: Actual wording of the test results may vary from laboratory to laboratory, but generally they give some indication whether or not abnormal cells were found. Sometimes cells are identified that are abnormal but not cancerous. These may be related to infections and should be evaluated by the medical provider.

Ultrasound

Why: This procedure allows the medical provider to check the size and position of the baby and the placenta and to check for multiple babies and internal organs. This is helpful in determining if the baby is growing well, whether there might be complications during delivery, and if there are congenital anomalies.

When: Can be performed at any time during the pregnancy. Timing depends on what the medical provider is trying to evaluate. Ultrasound is not recommended on a routine basis or only to determine the sex of the baby.

Procedure: Ultrasound is not an x-ray. The procedure uses sound waves to produce a picture of the baby and the contents of the uterus (similar to how a submarine uses sonar). A lubricating gel is placed on the client's abdomen and a scanner is rubbed over the entire abdomen. The sound waves are converted into a "picture". Other specific preparations may be necessary and the client should be referred to the laboratory that will do the ultrasound or check the practice procedure manual for those done onsite. Often the woman will be asked to drink fluids to fill her bladder prior to the ultrasound.

Results: The results depend on why the test was ordered. Some things it might show are: the baby's size and development as an indication of when the baby is due, which is important if a cesarean section is possible or to prepare for other pregnancy complications; determine the baby's position; see if the baby is growing at an appropriate rate; and to guide needle placement in amniocentesis.

Amniocentesis

Why: The fluid that surrounds the baby in the uterus can provide the medical provider important information about the baby. For instance, tests can determine if a baby has a genetic disorder such as Down's syndrome or Tay-Sachs disease, a neural tube defect such as spina bifida (open spine), immature lungs (important if preterm labor threatens), and Rh disease in clients who have already been sensitized.

When: As indicated, usually in the second or third trimester when there is sufficient amniotic fluid.

Procedure: An ultrasound is done to show the medical provider where the baby, placenta, cord, and pockets of fluid are located. A local anesthetic is used on the abdomen at the site of insertion and then a very fine needle is inserted through the abdominal wall and uterus into the "bag of waters". A very small amount of fluid is removed and sent to the laboratory for analysis. The client may feel some "pressure" as the needle is inserted. In general, the procedure is not painful.

Results: The woman will remain on a maternal/fetal monitor to make certain that the procedure does not start premature contractions. Occasionally this procedure can cause the woman to have premature labor. The provider may nick the umbilical cord, which can result in an immediate C-section. Their is a small chance of infection from this procedure.

Screenings

Syphilis

Why: Untreated maternal syphilis can result in fetal death or can damage the infant's internal organs and long bones in addition to the consequences of untreated infection in the mother and her sexual partners.

When: A screening for syphilis is required at the first prenatal visit. Women who are at high risk for sexually transmitted diseases (multiple sexual partners during the pregnancy and/or a partner with multiple sexual partners) should have another test during the third trimester.

Procedure: The test for syphilis is identified as Venereal Disease Research Laboratory (VDRL) or as rapid plasma reagin (RPR), both of which are tests on blood usually drawn from a vein.

Results: Either test will give results that indicate no infection, probable current infection or previously treated infection. Patients with suspected current infection not only need appropriate treatment but also need to be interviewed for previous sexual contacts and need to notify those people regarding their need for testing and possible treatment. Your local Health Department can assist you with this process. Infants born of women with syphilis infection during pregnancy will also need to be tested their birth. For additional information concerning sexually transmitted infections, see the Health Education section on STIs.

Chlamydia, Herpes, Gonorrhea

Why: These three diseases are sexually transmitted and each has the potential to harm an infant born while the mother is actively infected.

When: In some practices, all women are routinely screened for these infections; in others, they are screened only when the woman is symptomatic

or gives an at-risk history such as multiple sexual partners or is the partner of someone with multiple sexual partners. A woman with a herpes infection will probably notice painful blister-like sores in the genital area. Women with chlamydia and/or gonorrhea may or may not have a vaginal discharge.

Procedure: All of these infections can be diagnosed by examination/culture of the cervical secretions taken during a pelvic examination with a speculum. Laboratories usually provide instructions as to the appropriate handling of such specimens.

Results: Each test will give an indication of whether a current infection is present or not. Each infection has specific treatment and follow-up procedures that are the responsibility of the medical provider. Additionally, these infections are reportable to the local Health Department and also require sexual contact follow-up, with which the Health Department can assist. For additional information concerning sexually transmitted infections see STIs under Health Education.

HIV

Why: State law requires that all pregnant women be offered an HIV test in addition to education about HIV infection and the risks and benefits of testing (See HIV in the Health Education section). Many women who were later found to be HIV positive did not have identifiable risk factors. Thus it is important to talk about HIV testing as an important part of general preventative health services in addition to the importance of lowering perinatal transmission.

When: The test should be offered at the first prenatal visit but can be done at any time during the pregnancy.

Procedure: The most common test for antibodies to HIV (direct testing for HIV virus is not done as a screening procedure) is done on blood drawn from a vein in the arm. It is important to remember that specific written consent is required before doing an HIV test.

Results: Most generally the results will be negative (no evidence of infection) or positive (evidence of antibodies). Occasionally the test results are "indeterminate", which usually indicates that the test needs to be repeated; necessary follow-up for this test result should be decided by the medical provider. Positive test results should only be given by the medical provider or by a staff person who has extensive experience giving HIV positive test results and/or crisis intervention skills. It is important to remember that negative test results may not actually reflect the patient's HIV status as a person may be infected, and infectious, but not have developed sufficient antibodies to result in a "positive" test. This situation usually applies to the individual who engaged in risk behavior in the three months just prior to the test. Further testing will show more definitive results.

Serum Alpha Fetoprotein (AFP)

Why: Increased levels of serum alpha Fetoprotein have been associated with a higher risk of having a baby with a neural tube defect (defects of the spinal column, anencephaly, spina bifida).

When: The test must be done at 16 to 20 weeks of pregnancy.

Procedure: The test is performed on blood taken from a vein in the arm.

Results: Test results are given in a range, with positive tests being elevated. However, a positive test does not necessarily mean that the baby has a neural tube defect and those tests need to be followed by an amniocentesis and ultrasound.

Diabetes — Glucose tolerance test (GTT)

Why: Diabetic women have three time the potential for giving birth to babies with heart defects. They are also at risk for large babies and increased fetal mortality.

When: At about 24 weeks of pregnancy, usually between the 24th and 28th week of gestation. Some women may be screened more than once (See the Gestational Diabetes section of these guidelines).

Procedure: The client will be asked not to eat or drink after midnight the night before the test. Blood will be drawn for the fasting blood sugar and then she will be asked to drink a very sweet soda-like liquid. Her blood sugar will be checked one hour later to measure the amount of sugar in her blood.

Results: The test will show if the woman's blood sugar level is within normal limits. If her blood sugar level is not within normal limits, more tests may be required.

Introduction to Managed Care

Background

Managed Care is a coordinated approach to providing health care services. The goal is to provide prompt quality service in a cost-effective manner. Over the past few years, the State of California has expanded managed care within the Medi-Cal Program in order to improve women's and children's access to preventive and primary care health services.

Many of the most populated counties within California have Medi-Cal managed care systems already in place, and others are in the process of developing such systems. If you currently see Medi-Cal patients who are enrolled in a managed care system, or if you are expecting to see managed care patients in your practice, the following information may be useful to you.

Steps to Take

Eligibility and Enrollment

Enrollment in Medi-Cal managed care is required or mandatory, for some people, and optional for others. People in the mandatory category include:

- Those on CalWORKs
- Medically Indigent Children

People receiving Supplemental Security Income (SSI) are in the optional group for Medi-Cal managed care. You may have some patients in your practice who are on Medi-Cal and never enroll in a managed care plan. Contact your local Medi-Cal managed care plan(s) for the specific aid codes that are covered. This eligibility information is subject to change under welfare reform.

In most counties, there is more than one Medi-Cal managed care plan. It is important to know which plan each of your patients belongs to, so that you can receive the appropriate information to best meet their needs. Your patients may carry cards from their specific plan that will help you to determine their eligibility and benefits. You can also use the patient's Benefits Identification Card (BIC), or the Automated Eligibility Verification System (AEVS) to get eligibility and enrollment information.

Because you may have patients from more than one plan in your county, it is important to have information on all of the plans. Try to establish a contact person at each plan that can give you information on member benefits and provider requirements.

Disenrollment

There are certain situations in which a member is automatically disenrolled from a Medi-Cal managed care plan. Some of those are:

- member moves out of the plan's service area
- member no longer qualifies for Medi-Cal benefits
- member has changed aid codes and now has a code that is not covered by the plan
- member does not keep up with paperwork needed to maintain qualification - may still be eligible, but not qualified

Members may also voluntarily disenroll from their managed care plan and enroll in another plan. The managed care plan(s) in your county may have different disenrollment procedures.

Primary Care Physician

In managed care, the usual way that a member accesses care is through her PCP (Primary Care Physician). All members are to receive a physical exam whey they first enroll with their managed care plan, and regularly thereafter. The PCP will then

monitor the care of the member on an ongoing basis, to be sure that all of the member's health care needs are being met. The member should discuss all of her health-related concerns with her PCP.

The PCP provides standard care, including:

- routine examinations
- preventive screenings
- treatment of routine injuries and illnesses.

A PCP also coordinates the patient's care, and offers assistance to patients in getting the full benefits of the managed care systems. The PCP refers patients to specialty services as needed, and monitors the care that the patient receives from other providers.

Obstetric care is an exception to this rule. In order to increase access to early prenatal services, members may self-refer to OB providers. You may provide routine perinatal services to Medi-Cal managed care patients without prior authorization if you are a provider in the patient's managed care plan.

If the OB doctor is not the member's PCP, it is important to coordinate with the patient's PCP so that all care needs are met. The OB provider must refer the patient back to the PCP for any primary care needs that arise during pregnancy, and at the conclusion of perinatal care. Prior Authorization is not needed for routine prenatal care services.

OB Services in Managed Care

Managed care plans follow the American College of Obstetrics and Gynecology (ACOG) standards as the standard for services provided to Medi-Cal pregnant women.

In addition, pregnant members are to receive support services consistent with the CPSP program requirements. These services include but are not limited to initial Health Education, Nutrition, and Psychosocial assessment, trimester reassessments, postpartum assessments, care plan development, and interventions. Each plan may implement these requirements in slightly different ways, so it is important to contact the Medi-Cal managed care plan to determine what their requirements are. It is also important to find out if the plan requires use of specific forms and/or written protocols.

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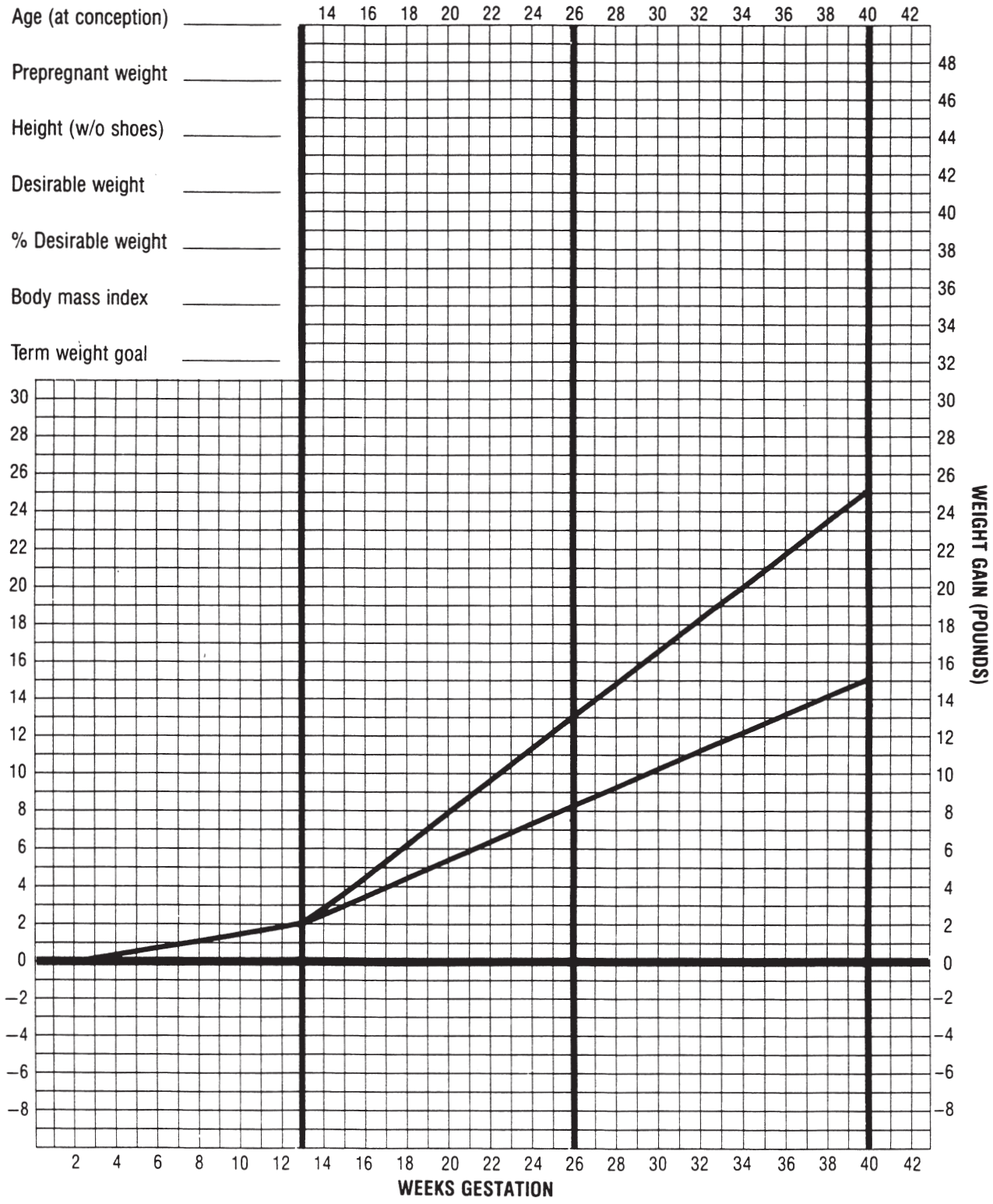
PRENATAL WEIGHT GAIN GRID
FOR OVERWEIGHT WOMEN



Note: Young adolescents, African American women, and smokers should strive for gains at the upper end of the recommended ranges. Short women (<62 inches) should strive for gains at the lower end of the range. Very overweight women should gain at least 15 pounds.

California Department of Health Services, MCH/WIC. Nutrition During Pregnancy and the Postpartum Period, 6/90.

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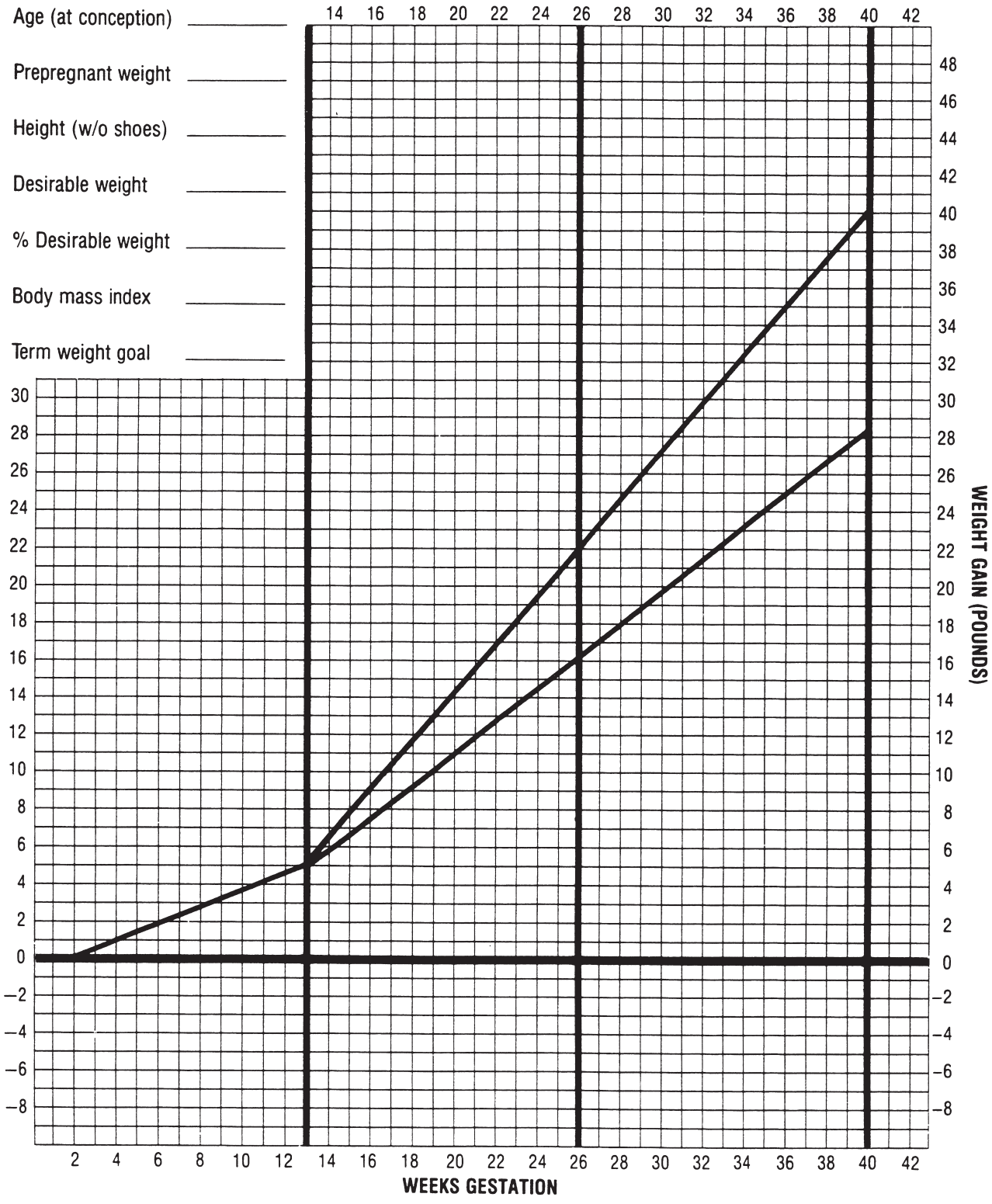
PRENATAL WEIGHT GAIN GRID
FOR UNDERWEIGHT WOMEN



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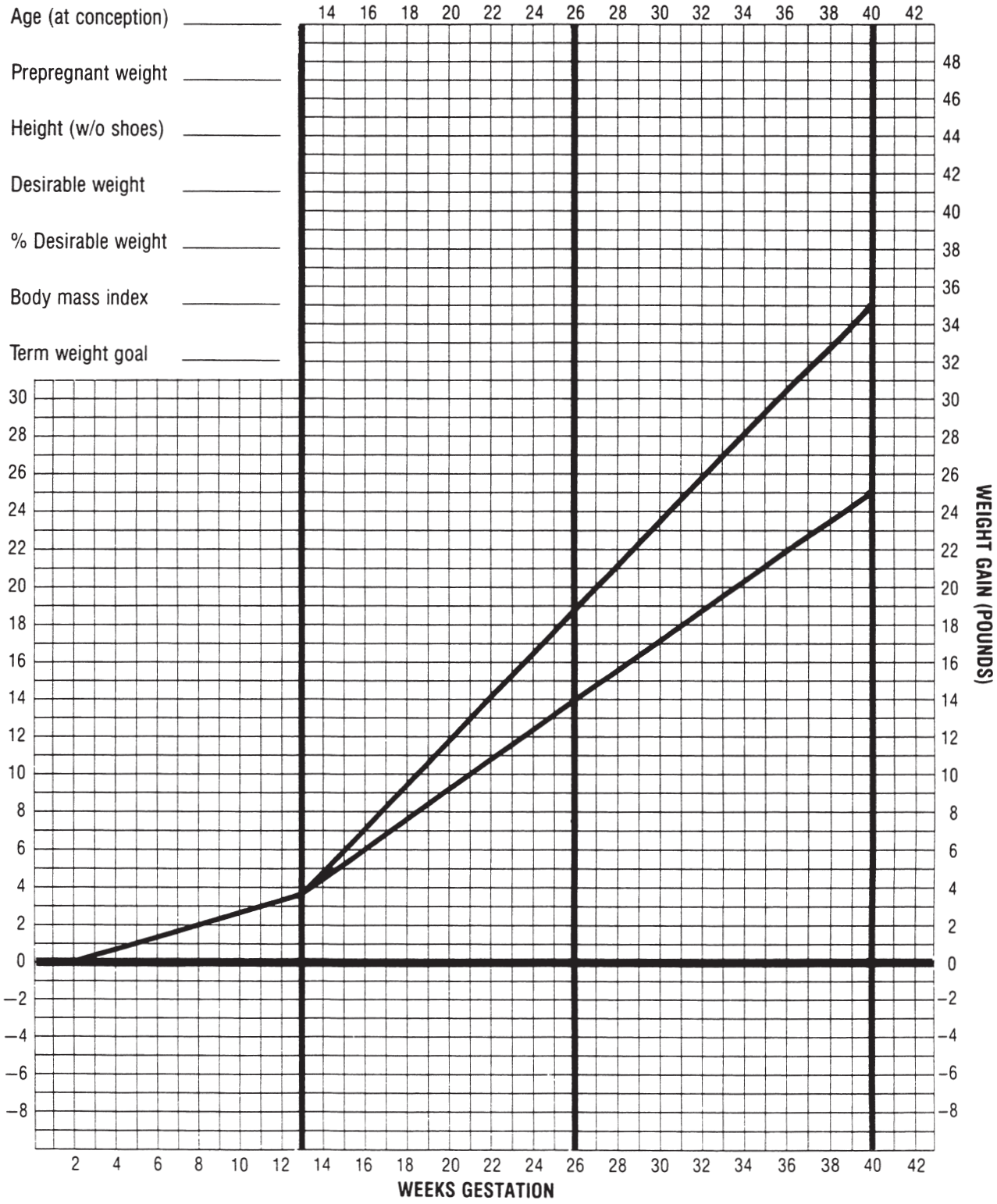
PRENATAL WEIGHT GAIN GRID
FOR NORMAL WEIGHT WOMEN



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