

Ciguatera Fish Poisoning Fact Sheet

What is ciguatera fish poisoning?

Ciguatera fish poisoning (ciguatera) is a foodborne illness caused by eating tropical reef fish, which have accumulated a naturally occurring toxin or poison called ciguatoxin.

Small sea plants, called dinoflagellates, which grow on and around coral reefs, naturally produce ciguatoxins. The dinoflagellates are food for small bottom-feeding fish; as these fish are then eaten by larger fish in the food chain, the ciguatoxins become progressively more concentrated. The highest concentration of ciguatoxin occurs in large predatory reef fish, such as barracuda, amberjack, moray eel, and certain types of grouper. Areas that are noted for toxic fish in or near U.S. waters include South Florida, the Bahamas, the U.S. and British Virgin Islands, Puerto Rico, and Hawaii.

How common is ciguatera in California?

Ciguatera is uncommon in California with only one to two cases reported each year. There may be more cases that were not reported to public health. Ciguatera occurs more often in the summer months worldwide.

How do you get ciguatera?

People get ciguatera from eating tropical reef fish, which have accumulated ciguatoxins. It is not possible to detect the ciguatoxins in fish by sight, taste, or smell. They also cannot be destroyed by freezing or cooking the affected fish.

What are the symptoms of ciguatera?

The symptoms of ciguatera begin a few minutes to 30 hours (usually between 6 to 12 hours) after eating contaminated fish and may include gastrointestinal, neurologic, and cardiovascular effects. Some of the more common symptoms of ciguatera include:

- nausea, vomiting, diarrhea, or abdominal cramps
- excessive sweating or headache
- weakness or fatigue
- joint or muscle pain
- numbness or tingling in the fingers, toes, or mouth
- itching
- reversal of temperature sensation in the mouth (hot surfaces feel cold and cold surfaces feel hot), unusual taste sensations, or aching teeth
- dizziness
- difficulty concentrating or hallucinations

Cardiovascular symptoms, such as low blood pressure and slow heart rate, may occur; but are uncommon. Ciguatera is rarely fatal. Symptoms usually resolve after a few days to weeks but may persist for several months and rarely for years. Some people who

have had ciguatera may have a relapse of symptoms after exposure to certain foods, or extreme sensitivity to further ciguatera exposure.

How is ciguatera diagnosed?

There is no clinical test available to diagnose ciguatera. However, ciguatera is the likely cause of illness if:

- the person reports eating a type of fish typically associated with ciguatera (such as barracuda);
- the person then develops symptoms characteristic of ciguatera (such as reversal of temperature sensations);
- and other causes are excluded.

All people are believed to be susceptible to ciguatera toxins.

How is ciguatera treated?

There is no specific treatment for ciguatera. Health care providers can only help the patient manage symptoms.

People recovering from ciguatera should avoid eating [reef fish](#), fish sauces, shellfish, nuts/nut oils, and alcoholic beverages for up to 6 months because these foods may provoke a recurrence of symptoms. A person who is exposed to a ciguatoxin does not develop immunity and future exposure can result in more severe symptoms.

What can a person do to prevent ciguatera poisoning?

The best way to avoid ciguatera is by not eating tropical reef fish. Ciguatoxins in fish cannot be detected by sight, taste, or smell nor be destroyed by freezing or cooking. Certain parts of the fish are known to have higher concentrations of toxins such as the head, gut, liver, eggs, and intestines, so avoiding consumption of these parts may reduce the risk of ciguatera.

What is the health department doing about ciguatera?

In California, ciguatera must be reported to the local public health department by the health care provider. Local public health departments are available to health providers for consultation and will investigate cases of ciguatera. If a commercial source of the contaminated fish is identified, it will be taken off the market.

Where can I get more information on ciguatera?

More information on ciguatera is available from:

The U.S. Centers for Disease Control and Prevention:

[Health Information for International Travel](#)

(<https://wwwnc.cdc.gov/travel/yellowbook/2018/the-pre-travel-consultation/food-poisoning-from-marine-toxins>)

[Fish Poisoning in Travelers: Ciguatera and Scombroid webpage](http://wwwnc.cdc.gov/travel/page/fish-poisoning-ciguatera-scombroid)
(<http://wwwnc.cdc.gov/travel/page/fish-poisoning-ciguatera-scombroid>)

The National Institutes of Health:

[Ciguatera Fish Poisoning: Treatment, Prevention and Management webpage](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2579736/)
(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2579736/>)

The Food and Drug Administration:

[The FDA Bad Bug Book](https://www.fda.gov/downloads/Food/FoodbornellnessContaminants/UCM297627.pdf)
(<https://www.fda.gov/downloads/Food/FoodbornellnessContaminants/UCM297627.pdf>)

December 2017