Ciguatera Fish Poisoning

People may become ill with ciguatera fish poisoning after eating certain contaminated fish. The ciguatera toxin is created by microalgae that naturally live in warm-water oceans, and this disease has been known for centuries. Fish eat the toxin-containing algae, and as larger fish eat smaller fish, the toxin becomes concentrated in the larger fish. Tropical and subtropical fish that may contain the toxin include amberjack, grouper, snapper, and barracuda. The presence of toxin in fish is unpredictable, and the frequency of ciguatera toxin illness in the United States is unknown. Ciguatera fish poisoning is probably underreported in the continental United States, since most cases are of short duration and it is not well known outside areas where it is common, such as the Caribbean and Hawaii. A cluster of cases in New York City from August 2010 to July 2011 affected 28 people. Ciguatera toxin–producing algae may be increasing because of warmer sea temperatures.

SIGNS AND SYMPTOMS

Symptoms begin within 6 to 24 hours of eating affected fish and may include gastrointestinal, neurologic, and cardiovascular problems.

- Gastrointestinal problems include nausea, vomiting, and diarrhea.
- Neurologic symptoms may include numbness or tingling, pain in the joints or muscles, headaches, dizziness, and weakness. Some people report that hot things feel cold or cold things feel hot.
- Cardiovascular problems may include irregular heart rhythm, slow (most common) or fast heart rate, and low blood pressure.

DIAGNOSIS

There is no readily available test for diagnosing ciguatera fish poisoning in sick patients. The diagnosis is based on symptoms and dietary history. Public health officials may be able to test the fish if an outbreak is suspected and remains from the fish are available. This helps public health officials decide if ciguatera fish poisoning is a possible cause of symptoms.

TREATMENT

There is no specific cure for ciguatera fish poisoning, but symptoms can be treated until the illness resolves on its own. Most poisoning resolves in a few days or weeks, but in severe cases the neurologic symptoms may last for weeks or months. Sometimes, neurologic symptoms may return after being absent for months to years.

PREVENTION

Ciguatera toxin is not destroyed by cooking or freezing and is odorless, so the only prevention is to avoid eating fish from warm-water areas where ciguatera is known to occur. Greater public health awareness can help public health officials identify outbreaks and minimize their impact.


FOR MORE INFORMATION
- US Food and Drug Administration www.fda.gov/Food/FoodborneIllnessContaminants/CausesOfIllnessBadBugBook/ucm070772.htm
- Centers for Disease Control and Prevention www.cdc.gov/nceh/ciguatera
- California Department of Public Health www.cdph.ca.gov/healthinfo/discond/Documents/Ciguatera.pdf

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Denise M. Goodman, MD, MS, Writer
Jennifer Rogers, MS, Illustrator Intern
Edward H. Livingston, MD, Editor

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