

A Hidden Danger Lurks Among the Reefs

Beware of Ciguatera (pronounced sig-wa-terra)

Florida's Marine Toxins

Marine toxins are produced by microscopic algae that form the base of the ocean's food chain. These tiny algae can produce toxins that concentrate in the organs and flesh of large carnivorous reef fish (such as barracuda, hogfish, red snapper and grouper). Some marine toxins are extremely potent and can cause human illness or even death. While historically, fish poisoning from marine toxins was common only in fishing communities, the growth of the global market for seafood has meant that almost every country now reports cases of these illnesses. Marine toxin poisonings are often under-reported to public health officials. Much remains unknown about why marine algae produce toxins.

Ciguatera Fish Poisoning

Ciguatera is the most common marine toxin disease worldwide, particularly in Florida, the Caribbean and the Pacific Islands. Large reef fish can accumulate high concentrations of a natural toxin in their flesh and organs. Fish that are "ciguatoxic" do not seem to be affected by the toxin. Ciguatoxic fish do not look or taste bad or appear sick. People who ate a ciguatoxic fish generally said the fish was delicious.

After people eat toxic fish, they may experience a variety of symptoms, some of which may persist for months (or even years). Symptoms typically appear within 6-24 hours, and may include vomiting, diarrhea, abdominal pain and cramping, as well as unusual sensations such as itching skin, aching teeth, muscles and joints, and painful urination. The classic symptom of ciguatera is the sensation that cold things (such as food, drinks, ice and water) feel hot to the touch or hot items feel cold. This unique symptom is called temperature reversal.

People reported symptoms recurring months or even years after eating ciguatoxic fish. Triggers may include consuming antihistamines, seafood, chocolate, chicken, nuts, caffeine or alcohol. Participating in strenuous physical activity, taking cold showers, and smoking, may also re-activate symptoms. People affected should avoid unprotected sex and breastfeeding until symptoms subside as, in rare cases, these activities may transmit the toxin to others.

Reducing Risk

It is possible to reduce your risk of ciguatera. Avoid eating large fish or species that have been reported to carry ciguatera, such as barracuda, hogfish, red snapper or groupers. Ask local fishermen or bait shops for the reefs and types of fish to avoid. Unfortunately, there is no approved test kit for ciguatera at this time.

At first sign of illness, contact your doctor or local emergency room and report your symptoms and what fish you ate. You can also call the toll-free Poison Help Hotline at 1-800-222-1222 for more information on this marine toxin.

For more information on how oceans and human health are linked, please visit

<http://yyy.rsmas.miami.edu/groups/ohh/>