

Domoic Acid and Amnesic Shellfish Poisoning Fact Sheet

What is domoic acid?

Domoic acid is a naturally-occurring marine-based toxin that is produced by certain algae that grow in the ocean. Low levels of domoic acid may normally be present in ocean water, and are unlikely to cause harm to people. However, when certain conditions are met, such as warm ocean temperatures, domoic acid-producing algae can grow quickly and cause an “algal bloom.” In an algal bloom, domoic acid levels are higher than usual, and shellfish may accumulate the domoic acid toxin in their flesh. This toxin can affect molluscan shellfish such as clams and mussels, crustacean shellfish such as crabs and lobsters, and small fish such as anchovies and sardines.

How do people get amnesic shellfish poisoning?

Eating shellfish during algal blooms can become a risk to people. Illness caused by domoic acid is rare and referred to as amnesic shellfish poisoning because symptoms can include permanent loss of short-term memory.

What are the symptoms of amnesic shellfish poisoning?

Symptoms of amnesic shellfish poisoning can occur within 15 minutes to almost 40 hours after eating shellfish depending on the amount of toxin in the fish.

Mild symptoms can last several days and can include:

- Vomiting
- Diarrhea
- Headache
- Abdominal cramps
- Dizziness
- Disorientation

People who experience any of these mild symptoms after eating shellfish should see their health care provider.

Rare but severe symptoms include:

- Trouble breathing
- Seizures
- Coma
- Loss of short-term memory
- Irregular heartbeat
- Confusion

People who experience severe symptoms should call 911 or go to the emergency room **immediately**.

Severe amnesic shellfish poisoning can be fatal.

How is amnesic shellfish poisoning treated?

There is currently no specific treatment for amnesic shellfish poisoning. People with mild symptoms typically recover within several days, but those with severe symptoms will need hospitalization and supportive care.

Who is at risk for amnesic shellfish poisoning?

Anyone who eats shellfish contaminated with domoic acid is at risk for amnesic shellfish poisoning. However, some people may be at greater risk for severe illness and should speak with their doctor about the decision to eat certain types of fish or shellfish. This includes the elderly and some people with chronic conditions, including

kidney diseases, and diabetes. Pregnant women, infants, and children may also be at risk and should speak to their doctor in making the decision to eat shellfish which could have high levels of domoic acid.

How can I reduce my risk of getting amnesic shellfish poisoning?

The best way to reduce your risk of domoic acid poisoning is to avoid eating shellfish that contain high levels of domoic acid. Contaminated shellfish appear, smell, and taste normal and cooking or freezing shellfish **does not** destroy domoic acid.

Thus, it is very important to read and follow any [public health warnings](#) that are posted if you catch your own shellfish.

Domoic acid is more concentrated in the internal organs of a crab, so if you prepare crab at home, remove internal organs (e.g., the “butter” or “guts” of crab). Dispose of any water used to prepare the crabs, rather than using it as an ingredient for other sauces or dishes.

Shellfish served in restaurants come from commercial harvesters that must follow all safety guidelines and inspections, and is heavily regulated. Therefore, these shellfish are considered safe to eat.

What is being done about domoic acid monitoring in California?

The [California Department of Public Health Marine Biotoxin Monitoring Program](#) has a monthly seawater monitoring program to detect domoic acid and paralytic shellfish poisoning toxins. Health warnings are issued if toxin levels become harmful to people.

State and local health departments monitor the number of people who get domoic acid poisoning in California, and raise awareness among healthcare providers and the public.

Where can I get more information on domoic acid and amnesic shellfish poisoning?

You can find additional information on amnesiac shellfish poisoning on:

The [CDPH Domoic Acid webpage](#)

The [U.S. Centers for Disease Control and Prevention Harmful Algal Bloom \(HAB\)-Associated Illness webpage](#)

March 2018