

Arsenic in Shellfish

What is arsenic?

Arsenic is a naturally occurring element that is found in water, soil, plants, and animals. It has been in food for as long as people have eaten food.

Isn't arsenic toxic?

There are two main forms of arsenic: inorganic and organic. Only inorganic arsenic is of concern to human health.

What about arsenic in shellfish?

The type of arsenic that typically accumulates in fish and shellfish is organic arsenic and is not considered toxic. Some inorganic arsenic is found in shellfish, but levels are typically very low and don't usually pose a health threat.

What level of inorganic arsenic in shellfish is considered a "safe" level?

While Food and Drug Administration (FDA) doesn't have a standard for arsenic in food, screening levels are developed and used by Department of Health to evaluate fish and shellfish. Those levels are based on a range of exposure risks, including consumption rates (how much a person eats).

What about the inorganic arsenic levels China found in geoduck?

We don't know what testing method China used, but we are trying to get that information. Until we know how the tests were performed, we can't assess China's results. To be safe, and until we know more, the harvest area that produced the geoducks China tested has been closed by the Department of Natural Resources.

Have you done arsenic testing in shellfish in the past?

We did targeted testing in Poverty Bay in 2007 because of concerns about possible contamination from a sewage treatment outfall in the area. In this 2007 study, we tested five geoducks from each of 24 sites in the bay, and did not find arsenic levels that were a health concern. More information on this is available online: [DOH 2007 Dumas Bay Geoduck metals assessment \(PDF\)](#) and [Assessment of Trace Metals in Tissues of Geoduck Clams from Eastern Puget Sound \(PDF\)](#).

More recent studies on geoducks have been conducted in 2009 near Eagle Harbor in Kitsap County (www.doh.wa.gov/Portals/1/Documents/Pubs/334-216.pdf) and in 2013 near McNeil Island in Pierce County (www.doh.wa.gov/Portals/1/Documents/Pubs/334-323.pdf). Both studies concluded that inorganic arsenic levels were not of health concern to either the general public or high consumers.

What about shellfish from other areas? Are they safe to eat?

Our data from elsewhere in Puget Sound hasn't shown a health concern from arsenic in shellfish, even for people who eat a lot of it. Based on the levels we've seen, people could eat about a half pound of geoduck a week throughout their life (based on a 70 year lifespan) and it would not pose a health problem.

What precautions can I take?

We recommend that you don't eat the skin of geoducks. Although this is not typically eaten, the skin may have a higher concentration of any contaminants that might be in the area where they were harvested.

What levels of arsenic were seen in the new study?

Here's a summary of the recent lab results, measured in parts per million (ppm)

| Summary of Poverty Bay Geoduck Samples | | |
|---|---------------|--------------------------------|
| Lab | Tissue | Inorganic Arsenic (ppm) |
| Public Health Lab | Skin | 1.175 |
| | Gut | 0.102 |
| | Meat | 0.063 |
| | Whole | 0.327 |
| Private Lab | Whole | 0.108 |