

Domestic Wells: Harmful Algae Blooms

Background: Harmful Algae Blooms & Cyanotoxins

Harmful algae blooms (HABs) occur in water when naturally occurring cyanobacteria (also called blue-green algae) grow out of control and produce toxins. Cyanobacteria can reproduce very rapidly in still or slow-moving warm water with high levels of nutrients. This rapid growth creates “blooms” that look like scum on the water’s surface and can be pea green, blue-green or brownish red in color. Blooms can be foamy, scummy or thick. Toxins produced by cyanobacteria are called “cyanotoxins”. The four cyanotoxins seen in Oregon are microcystin, anatoxin-a, cylindrospermopsin and saxitoxin. Microcystin is the most common cyanotoxin.



Cyanotoxins and Your Health

Drinking water with cyanotoxins at or above levels higher than the drinking water guidelines (see table) can put your health at risk. Cyanotoxins produce a variety of symptoms including stomach cramping, diarrhea, vomiting, numbness, tingling and dizziness. Long term exposure can compromise liver and/or kidney function. There are no antidotes for cyanotoxins. **If you or a family member experience these symptoms, seek medical attention. If your pet experiences symptoms, seek veterinary care immediately.** Cyanotoxins may not change the taste or smell of water. Find an alternate source of drinking water if your well has levels of cyanotoxins above the guidelines.



Cyanotoxins Drinking Water Guidelines

	Microcystins	Anatoxin-a	Cylindrospermopsin	Saxitoxins
Healthy people 6 and over	1.6	3	3	1.6
Children under 6, and vulnerable populations*	0.3	0.7	0.7	0.3
Pets**	0.2	0.4	0.4	0.02

Cyanotoxins are measured in micrograms per liter (ug/L)

***Vulnerable populations** are more sensitive to cyanotoxins. Vulnerable populations include people with pre-existing health conditions, pregnant and nursing women.

****Pets** are more sensitive to HABs and even small levels of exposure can cause extreme illness and death.

Cyanotoxins & Well Water: What You Should Know

Testing your water for cyanotoxins is the only way to know for sure if your water is safe to drink.

- **DO NOT BOIL THE WATER.** Boiling the water will not destroy the toxins and may increase the level of toxins.
- Water may be used for bathing, washing hands, dishes and laundry. Supervise children while bathing and brushing teeth to prevent them from accidentally swallowing water.
- Avoid using affected water for food preparations for children and vulnerable populations.
- In-home water treatment filters and purifiers will not remove most cyanotoxins from drinking water. See Resources for treatment options.
- Wells within 100 feet of an affected water body may be vulnerable to surface water intrusion, potentially causing cyanotoxins to enter the well.

Should I Test My Well Water for Cyanotoxins?

Testing well water for cyanotoxins is recommended if the well is **located within 100 feet** of a water body with visible scum or where a HAB has been reported **AND** one or more of the following applies.

Shallow wells or shallow well casing:

- Well is less than 60 ft. deep
- Well casing or screen is less than 60 ft. deep (a liner is not a casing)
- Well casing seals that are 18 ft. deep or less

Questions about, your well construction:

- Wells constructed before 1979 (older wells may start to weaken and fail, allowing contaminants into water)
- Construction of the well is unknown and no well log available
- The ground around the well is permeable (allows water to run through). For example: sand/gravel = high permeability silt/clay = low permeability.

Issues with your well water quality:

- Discolored water (slight bluish or greenish tint) or cloudy water
- E. coli has been detected in your well

Resources

- [Find a Well Report](#) — includes information on well construction history and soil
- [Labs](#) that perform cyanotoxin testing
- NSF: [Water Treatment Options](#)
- OHA's [Harmful Algae Blooms Program](#) and [Drinking Water Services Program](#)
- Ohio Department of Health's [Water Treatment for HAB Cyanotoxins](#) factsheet
- [Sign up for email notifications](#) about Oregon HAB advisories
- Oregon Domestic Well Safety Program — www.healthoregon.org/wells

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You can get this document in other languages, large print, braille or a format you prefer. Contact Domestic Well Safety Program at 971-673-0977. We accept all relay calls or you can dial 711.