

# Physician Reference

## Cyanobacteria blooms. *When in doubt, it's best to stay out!*

### What are cyanobacteria?

- Cyanobacteria, sometimes called blue-green algae, are microscopic organisms that live in all types of water.

### What is a cyanobacteria bloom?

- Cyanobacteria grow quickly, or bloom, when the water is warm, slow-moving, and full of nutrients.

### What are some characteristics of cyanobacteria blooms?

- Cyanobacteria usually bloom during the summer and fall. However, they can bloom anytime during the year.
- When a bloom occurs, scum might form on the water's surface.
- Blooms can be many different colors, from green or blue to red or brown.
- As the bloom dies off, you might smell an odor that is similar to rotting plants.

### What is a toxic bloom?

- Sometimes, cyanobacteria produce toxins.
- The toxins can be present in the cyanobacteria cells or in the water.

### Other important things to know:

- Swallowing water that has cyanobacteria or cyanobacterial toxins in it can cause serious illness.
- Dogs might have more severe symptoms than people, including collapse and sudden death after swallowing the contaminated water while swimming or after licking cyanobacteria from their fur.
- There are no known antidotes to these toxins. Medical care is supportive.

**You cannot tell if a bloom is toxic by looking at it.**



### To report a cyanobacteria bloom or related health event:

- Call your local or state health department

### For more information:

- <https://www.cdc.gov/habs/general.html>

# What we know about exposure to cyanobacteria and cyanotoxins and possible health effects

Information about human health effects from exposure to cyanobacteria and toxins is primarily derived from a few epidemiology studies of recreational exposures; studies with laboratory animals; reports of extreme human exposure events, such as the use of toxin-contaminated dialysis water; and from animal (e.g., cattle and pet dog) exposures. References are available at: <https://www.cdc.gov/habs/publications.html>

POTENTIAL EXPOSURE ROUTE	INFORMATION SOURCE FOR POSSIBLE SYMPTOMS AND SIGNS	POSSIBLE SYMPTOMS AND SIGNS
Swallowing water contaminated with cyanobacteria or toxins	Data from laboratory animal studies, extreme human exposure events, and animal exposures	<p>Hepatotoxins and nephrotoxins</p> <ul style="list-style-type: none"> <li>• Nausea, vomiting, diarrhea</li> <li>• Bad taste in mouth</li> <li>• Acute hepatitis, jaundice</li> <li>• Blood in urine or dark urine</li> <li>• Malaise, lethargic</li> <li>• Headache, fever</li> <li>• Loss of appetite</li> </ul> <p>Neurotoxins</p> <ul style="list-style-type: none"> <li>• Progression of muscle twitches</li> <li>• For saxitoxin: high doses may lead to progressive muscle paralysis</li> </ul>
Skin contact with water that is contaminated with cyanobacteria or toxins	Data from human studies	<ul style="list-style-type: none"> <li>• Allergic dermatitis (including rash, itching and blisters)</li> <li>• Conjunctivitis</li> </ul>
Inhaling aerosols contaminated with cyanobacteria or toxins	Anecdotal evidence from human exposures and data from human studies	<ul style="list-style-type: none"> <li>• Upper respiratory irritation (wheezing, coughing, chest tightness, shortness of breath)</li> </ul>