

# Physician Reference

## Blue-green Algae Blooms. *When in doubt, it's best to stay out!*

### What are blue-green algae?

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

### What is a blue-green algae bloom?

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

### What are some characteristics of blue-green algae blooms?

- Algae 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, blue-green algae produce toxins.
- The toxins can be present in the algae or in the water.

### Other important things to know:

- Swallowing water that has algae or algal toxins in it can cause serious illness.
- Dogs might have more severe symptoms than persons, including collapse and sudden death after swallowing the contaminated water while swimming or after licking algae 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.**



*Grand Lake Saint Mary's, Summer 2010*

### To report a blue-green algae bloom or related health event:

- Call your local or state health department

### For more information:

- <http://www.cdc.gov/hab/links.htm> or
- Call the National Center for Environmental Health Harmful Algal Blooms Program (HABISS) Centers for Disease Control and Prevention: 866-556-0544

# What we know about exposure to blue-green algae and cyanotoxins and possible health effects

Information about human health effects from exposure to blue-green algae 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: <http://www.cdc.gov/hab/links.htm>

POTENTIAL EXPOSURE ROUTE	INFORMATION SOURCE FOR POSSIBLE SYMPTOMS AND SIGNS	POSSIBLE SYMPTOMS AND SIGNS
Swallowing water contaminated with blue-green algae (cyanobacteria) or toxins	Data from laboratory animal studies, extreme human exposure events, and animal exposures	<p><b>Hepatotoxins and nephrotoxins</b></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><b>Neurotoxins</b></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 blue-green algae 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 blue-green algae 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>