

Animal Safety Alert

BLUE-GREEN ALGAE BLOOMS

When in doubt, it's best to keep out!



What is a blue-green algae bloom?

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

- Blue-green algae grow quickly, or bloom, when the water is warm, stagnant, and full of nutrients. Algae blooms usually occur during the summer and fall. However, they can occur anytime during the year.

When a bloom occurs, scum might float on the water's surface.

Blooms come in different colors, from green or blue to red or brown.

As the bloom dies off, you may smell an odor like 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.
Swallowing water with algae that are producing toxins can cause serious illness.

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



Centers for Disease
Control and Prevention
National Center for
Environmental Health

Animal Safety Alert

Health and safety tips for pets and livestock

Do not let your pets or livestock graze near, drink, or swim in water where you see blue-green algae blooms, foam, or scum on the surface.

If your animal gets in water with a bloom, immediately wash it off with clean water. Do not let the animal lick algae off of its fur.

Call a veterinarian if your animal shows any of these symptoms of blue-green algae poisoning: loss of energy, loss of appetite, vomiting, stumbling and falling, foaming at the mouth, diarrhea, convulsions, excessive drooling, tremors and seizures, or any unexplained sickness that occurs within a day or so after being in contact with water.

You can help protect your pets and livestock from blue-green algae blooms by taking the following actions:

- Visit <http://www.cdc.gov/hab> to learn more about blue-green algae.

Know what a bloom looks like and avoid contact.

Keep pets and livestock away from the water if you see signs of blue-green algae.

Call your veterinarian if your animals are sick.

Call your state or local health department to report pets or livestock made sick by blue-green algae.

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

- Call the Centers for Disease Control and Prevention, National Center for Environmental Health Harmful Algal Blooms program (HABISS) at: 866-556-0544.

Call your local or state health department:
Call the Oklahoma Department of Environmental Quality Hotline number: **1-800-522-0206**.



Veterinarian Reference

Toxic Blue-Green Algae Blooms

What are blue-green algae?

- Cyanobacteria, sometimes called blue-green algae, are microscopic organisms that live in all types of water. These bacteria have photosynthetic capabilities. Fertilizer, especially phosphorus and nitrogen, or manure runoff leads to eutrophication and accelerated algae growth.

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. The most common species identified at the Oklahoma Animal Disease Diagnostic Laboratory (OADDL) have been *Microcystis*, *Anabaena*, *Oscillatoria* and *Nodularia*.

What are some characteristics of blue-green algae blooms?

- Algae usually bloom during the summer and fall. However, they can bloom any time during the year. Most of the problems in Oklahoma do occur in the summer months, but some varieties actually prefer cold water and have occurred in the winter.
- 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, such as microcystins.
- The toxins can be present in the algae or in the water.
- There are hepatotoxins and neurotoxins associated with these species, both of which can cause sudden death. The term "Fast Death Factor" comes from finding the animals dead in the water or near it.
- The wind can actually blow the algae to one side, concentrating it, often looking like blue paint. When the algae bloom, the toxin is released.

Other important things to know:

- Ingestion of water that has algae or algal toxins in it can cause serious illness all animals, especially dogs and ruminants, including sudden death. Lesser amounts of toxin exposure may damage the liver and cause photosensitivity.
- Dogs generally 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 and should include fluids, corticosteroids, calcium and activated charcoal.

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

- All animals should be kept away from these water sources until the bloom dissipates or the water has been treated with copper sulfate (as per label instructions). This may take several weeks since the copper sulfate also causes death of the algae and release of toxins.
- Analysis of actual toxins is very expensive. Identification of toxic blue green algae can be done at the Oklahoma Animal Disease Diagnostic Laboratory, submit a pint container of suspect water with cold pack overnight. The blooms will deteriorate, so fresh samples are best.

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

Call the Oklahoma Department of Environmental Quality Hotline number: 1-800- 522-0206.

For more information:

- <http://www.cdc.gov/hab/links.htm>; <http://www.kdheks.gov/algae-illness>
- Call the National Center for Environmental Health Harmful Algal Blooms Program (HABISS)
Centers for Disease Control and Prevention: 866-556-0544
- Identification blue green algae: Oklahoma Animal Disease Diagnostic Laboratory (405) 744-6623

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National Center for Environmental Health Division of Environmental Hazards and Health Effects
CS223677-B

Veterinarian Reference

Toxic Blue-Green Algae Blooms

The Oklahoma Department of Environmental Quality (DEQ) and the Grand River Dam Authority (GRDA) confirmed the presence of Blue Green Algae (BGA) in Grand Lake. GRDA and ODEQ want the public and lake users to remain careful, vigilant and aware where BGA has been confirmed and they continue to test and monitor lake waters. People, pets, and livestock should not be swimming in or drinking the water in affected water sources.

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Other important things to know:

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Blue Green Algae (BGA) is a cyanobacterium. BGA are microscopic organisms that live in all types of water. These bacteria have photosynthetic capabilities. Nutrients, especially phosphorus and nitrogen, or manure (and sewage) runoff leads to eutrophication and accelerated algae growth. Blue-green algae grow quickly, or bloom, when the water is warm, slow-moving, and full of nutrients. Algae usually bloom during the summer and fall. However, they can bloom any time during the year. Most of the problems in Oklahoma do occur in the summer months, but some varieties actually prefer cold water and have occurred in the winter. 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.

Sometimes, blue-green algae produce toxins, such as microcystins. The toxins can be present in the algae or in the water. Topical (skin) exposure can cause dermatitis. Low oral doses can cause vomiting and diarrhea. Consumption of higher amounts of the toxins associated with this algae can affect the liver and neurological tissue and can cause sudden death. The term "Fast Death Factor" comes from finding the animals dead in the water or near it. The wind can actually blow the algae to one side, concentrating it, often looking like blue paint. The toxin is released when the algae blooms.

Dogs generally have more severe symptoms than people, 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 treatment is basically supportive care.

If you suspect a water source contains toxic blue green algae, pets, livestock and people should stay away until the bloom dissipates or the water has been treated with copper sulfate (as per label instructions and only in private ponds). This may take several weeks since the copper sulfate also causes death of the algae and release of toxins. The algae can be identified at the Oklahoma Animal Disease Diagnostic Laboratory by sending a pint container of suspect water. The blooms will deteriorate, so fresh samples are best.

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