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# **FAQS ABOUT BLUE-GREEN** ALGAE

#### What is blue-green algae?

Blue-green algae (BGA) consists of tiny bacterial organisms that can live in all types of water including lakes, streams and ponds. BGA is usually found in low numbers, but can become abundant in certain conditions like warm, stagnant water, heavy sunlight and areas that have recently had a change in chemicals, such as nitrogen from fertilizer. BGA is also known as cyanobacteria.

#### Where does BGA come from?

RGA has been around forever. The bacteria have been found among the oldest fossils on Farth and are one of the largest groups of bacteria. Algae are vitally important to water ecosystems, and most species of algae are not harmful.

#### What is a BGA bloom?

When BGA grows very thick and dense, it is called a bloom. Most BGA blooms are completely harmless; however, the blooms can turn toxic in a short amount of time, so all BGA are considered potentially harmful. Not all BGA blooms can be seen by the naked eye.

#### What are some characteristics of BGA blooms?

Though BGA can bloom at any time of the year, it is most active during the summer and fall. Most of the time, when algae blooms, it produces a thick mat of scum on the water's surface and shoreline. The scum can range in color from blue and green to red and brown. The scum from BGA can sometimes look like a paint spill. When the bloom dies, it can smell similar to rotting plants.

#### What is a toxic bloom?

Some BGA produce nerve toxins (neurotoxins) or liver toxins (hepatotoxins), as well as toxins that affect the skin and gastrointestinal tract. The toxins can be present in the algae or in the water. You cannot tell if a bloom is toxic by looking at it.

#### How can I tell if BGA is present at my lake?

Use our lake conditions search function to find the latest BGA reports for the lake you are planning to visit. Additionally, BGA can sometimes be identified by the naked eye. BGA may look like green, blue, red or brown paint floating in the water. When BGA builds up, it can float to the shore and look like a thick mat. Keep in mind that not all BGA are visible, as it can bloom 1-3 feet below the surface and can only be identified using a

#### Why should I be concerned about BGA?

The toxins produced by BGA may cause a variety of reactions, including upper respiratory problems, eye irritation, vomiting and diarrhea. Any contact with BGA can be harmful, so you should avoid all body contact where BGA is present.

If you, your family or your pets have come in contact with water where BGA is present, seek immediate medical assistance. Children are particularly vulnerable to BGA as they tend to weigh less than adults and smaller quantities of the toxins may trigger a more severe effect.

#### Can my pets be harmed by BGA?

Yes. Pets are particularly susceptible to the harmful effects of BGA. If pets eat, drink or swim in BGA affected waters, it can lead to severe illness and even death. If your pet has been exposed to BGA, contact your veterinarian or an emergency animal clinic.

#### What are some BGA exposure symptoms?

BGA produce two kinds of toxins that affect humans and animals. In humans, exposure to nerve toxins may produce tingling in fingers and toes, numbness in the lips and dizziness. In animals, neurotoxin poisoning can cause weakness, staggering, difficulty in breathing, convulsions and death.

The second kind of toxin, liver toxins, can take hours or days to appear. Liver toxins can cause abdominal pain, diarrhea and vomiting in humans, and can cause death in animals

### What if I, my family or my pets get sick from BGA?

Seek medical treatment immediately and notify your doctor/veterinarian about the exposure.

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#### Am I safe from the BGA if I do not swim near it?

When possible, it is best to swim in a regulated beach area where safety and health notices will be posted. Contact with water not visibly affected by BGA is not expected to cause health effects. After visiting a lake, humans and animals should shower with clean water and wash thoroughly. Remember, not all BGA is visible to the human eye. Please use good judgment in deciding whether or not to swim in the lake.

#### How often are the lakes tested for blue-green algae?

The testing varies by lake. For the most up-to-date information on water testing, select your lake from the drop-down menu on the <u>lake conditions page</u> to see the most recently reported information

The Grand River Dam Authority (GRDA) monitors Grand Lake, Lake Hudson and W.R. Holway sites once each month from October through April and twice a month from May through September. If any of the sites show an elevated risk of BGA, they will be tested noce a week until the advisory is gone.

The City of Oklahoma City tests Lakes Hefner, Overholser and Draper on a weekly basis.

The City of Tulsa monitors Oologah Lake, Lake Eucha, Spavinaw Lake and Lake Hudson on either a weekly or monthly basis.

Other Oklahoma lakes are monitored by various sources and reports are funneled into our database.

#### How do I know if a lake is safe?

Use our lake conditions search function to find the latest BGA reports for the lake you are planning to visit. You can also search TravelOK.com for the page about the lake you wish to visit and contact lake personnel directly at the phone number listed. Ultimately, it is your responsibility to decide if visiting the lake is safe.

#### What should I do if I see a BGA bloom?

If you see a BGA bloom, avoid all contact with the water. Keep children, pets and livestock away from the water

To report BGA, contact the Oklahoma Department of Environmental Quality at

1-800-522-0206.



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# **RESEARCH** BLUE-GREEN ALGAE

It's important to educate yourself about blue-green algae so that you'll be prepared to make smart decisions about where to enjoy water recreation and how to avoid contact with blue-green algae. In this section we've gathered informative articles, scientific white papers and other resources to arm you with the information you need to safely enjoy Oklahoma's lakes.

## Blue-Green Algae & Oklahoma Lakes: What You Need to Know

If it's green on top, stop! That's the first thing you need to know about blue-green algae; other guidelines on this checklist give details on how to spot them, why they are a concern, and how to protect yourself and your pets. read more

## Legislation Addresses Blue-Green Algae by State Rep. Doug Cox. M.D.

In an effort to protect the health of residents and visitors, Oklahoma legislators recently established a policy for handling blue-green algae outbreaks in the state's lakes and rivers.

## Fact Sheet on Toxic Blue-Green Algae

Learn what blue-green algae are, where they live and the chances of them being toxic. read more

## Algal Bloom-Associated Disease Outbreaks Among Users of Freshwater Lakes - United States, 2009–2010

This report summarizes human health data and water sampling results voluntarily reported to CDC's Waterborne Disease and Outbreak Surveillance System for the years 2009-2010.

## USGS Blue-green algae toxin testing presentation

Describes how the toxicity of blue-green algae can be tested in lakes to garner the most accurate results. This presentation was presented by the U.S. Geological Survey at the National Water Quality Monitoring Conference 4-25-2010, read more

## USGS Harmful Algal Blooms Fact Sheet

Overview information on blue-green algae and harmful algal blooms from the U.S. Geological Survey, read more

### World Health Organization Guidelines for Recreational Water

Read the World Health Organization's guidelines for recreational water safety including a full chapter on algae and cyanobacteria in fresh water. read more

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## LEARN TO RECOGNIZE BLUE-GREEN ALGAE

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