

**Dog Tips** 

# This Deadly Outdoor 'Green' Menace Can Be Fatal for Your Pet

It can occur anywhere, and if it attracts your pet, simply breathing in the contaminated air can cause illness. If it gets on your pet's fur, and they lick it off, or if they ingest it, vomiting, seizures, shock, difficulty breathing, paralysis and even death could occur.

#### Reviewed by Dr. Becker

#### **STORY AT-A-GLANCE**

- Toxic blue-green algae in ponds may produce harmful compounds that cause liver failure, neurotoxicity and death in dogs within hours of exposure
- Toxic algae may produce harmful compounds including microcystins and anatoxins
- Microcystins may lead to liver damage or liver failure while anatoxins cause neurotoxicity. This may lead to death due to respiratory paralysis
- Toxic blue-green algae blooms happen most often in warm ponds and lakes that receive runoff from fertilized agricultural fields
- It's impossible to tell if blue-green algae is toxic just by looking at it; always err on the side of caution and keep pets out of ponds where algae is present

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Earlier this year, part of Florida made headlines for the miles of toxic blue-green algae covering its shorelines. The blue-green algae, also known as cyanobacteria, can produce toxins that are harmful to people and pets.

In Florida's case, the algae overgrowth, typically called a "bloom," is thought to be the result of fertilizer runoff from farms. The runoff leads to an excess of nutrients like nitrogen and phosphorus in the water, which then leads to the overgrowth of algae blooms.

Indeed, while blue-green algae overgrowth can happen in any body of water, it happens most often in warm ponds and lakes that receive runoff from fertilized agricultural fields. One thing's for certain, if you spot blue-green algae in a pond, be sure your dog stays OUT.

## **Dogs May Die from Contact with Blue-Green Algae**

Algae may seem rather innocuous, and it can be (some types, like spirulina, are even good for you). Not all blue-green algae is toxic, but it's difficult, virtually impossible, to determine if the algae is toxic or not just by looking at it.

That being said, toxic algae may give the water a pea-soup appearance or it may accumulate in large "mats" near shore. It may also have a bad smell.

Toxic algae may produce harmful compounds including microcystins and anatoxins. The former, microcystins, may lead to liver damage or liver failure while anatoxins cause neurotoxicity. This may lead to death due to respiratory paralysis. Signs and symptoms of exposure to these toxins include:<sup>2</sup>

- Vomiting
- Diarrhea
- Blood in the stool or tarry stool
- Weakness
- Pale mucous membranes
- Jaundice
- Seizures
- Disorientation
- Coma
- Shock
- Excessive salivation
- Neurologic signs (muscle tremors, muscle rigidity and paralysis)
- Blue discoloration of the skin and mucous membranes
- Difficulty breathing

## **Exposure Can Occur via Water or Air**

Dogs are especially at risk from blue-green algae because they may wade or swim in affected waterways. While swimming, dogs often consume a lot of water (especially if they're retrieving a toy or stick). They may also ingest the algae by licking their fur after they get out of the pond.

Even breathing in droplets of air contaminated with the algae can cause illness, so if you notice it, don't let your pets anywhere near the area.

Other animals may also be affected, including horses, cattle, sheep, goats and llamas. Although cats may also be harmed by the algae, they're not typically exposed because they rarely swim in ponds and lakes.<sup>3</sup>

If your pet has come into contact with blue-green algae, rinse him with fresh water and immediately seek emergency veterinary care.

Use care when touching and transporting your pet, as skin contact with the algae may lead to rash and irritation. You can also contact the Pet Poison Helpline at 855-764-7661 for guidance.

Unfortunately, death may occur within hours of exposure, even with aggressive treatment, which is why preventing exposure is so important. The Food Poisoning Bulletin reported:<sup>4</sup>

"There is no way to tell if a blue-green algal bloom is toxic by looking at it. The harmful blooms look like pea soup, green paint, or floating mats of scum. They sometimes have a bad smell. But these blooms aren't always large and dense and can be present in a lake with little visible algae.

Before you, your children, or your pets go into the water, look at the lake closely to see if there is algae on the water or on the shore.

Pam Anderson, MPCA [Minnesota Pollution Control Agency] Water Quality Monitoring Supervisor said, 'If it looks and smells bad, don't take a chance. We usually tell people: if in doubt, stay out. If you're not sure, it's best for people and pets to stay out of the water."

### Keep Your Pets Away from Ponds with Visible Blue-Green Algae Blooms

The most important point to remember is that it's not worth the risk of entering if you see any blue-green algae in a pond. Let your friends and family know of the risk to their pets, too, as what may seem like a harmless romp in the water can quickly turn deadly for dogs.

If you have a pond in your backyard, take care to remove algae and discard it. If a pond being used as a water source for horses is found to contain algae, you will need to fence off the pond (or restrict the horses' access to it) and provide an alternative water source.<sup>5</sup>

Again, if your pet is exposed, get to an emergency veterinary facility immediately and let the veterinarians know that your dog was exposed to toxic blue-green algae. If possible, administer high-potency homeopathic Nux Vomica as soon as possible after exposure.

Although no specific "algae antidote" is available, early and aggressive supportive treatment, including intravenous fluids, electrolytes and seizure control, may help.

#### **Sources and References**

- <sup>1,5</sup> dvm360, July 22, 2011
- <sup>2,3</sup> Pet Poison Helpline, Blue-Green Algae (Cyanobacteria)
- <sup>4</sup> Food Poisoning Bulletin, May 29, 2016