

TOXIC Blue-Green Algae



Algal poisoning is often an acute, fatal condition. This reference provides clinical information to help veterinarians identify poisoning signs in animals exposed to toxins produced by blue-green algae (cyanobacteria)

Fatalities and severe illness of livestock, pets, and wildlife can occur among animals after drinking contaminated water, swallowing contaminated water while swimming or licking blue-green algae (cyanobacteria) from their fur. Animals may exhibit severe signs such as collapse, seizures and even death within minutes to hours after swallowing contaminated water. Poisoning usually occurs during warm seasons but can occur year-round.

There are no antidotes to these toxins.

Medical care is supportive. The animal's coat should be washed and, depending on the type of toxin, other medications can help with recovery. For questions about animal health call the ASPCA Animal Poison Control Center at 1-888-426-4435 or the Pet Poison Helpline at 1-855-764-7661 (Note: There is a fee for these calls).

What are blue-green algae (cyanobacteria)?

Blue-green algae are actually bacteria (cyanobacteria) that contain specific photosynthetic pigments and are naturally present in bodies of water worldwide.

What is a toxic algal bloom?

When blue-green algae (cyanobacteria) grow quickly, they may rise to the surface of lakes, rivers and streams and form blooms that may look like scum, foam, mats or paint on the surface of the water. As cyanobacteria die, they sometimes release toxins (cyanotoxins)

into the water that affect the liver or central nervous system. Not all algal blooms produce cyanotoxins and only laboratory tests can confirm whether cyanotoxin is present in the water or not. Since cyanotoxins can be lethal to humans and animals in relatively small amounts, caution should always be taken when a bloom occurs. Advise your clients, "When in doubt, stay out."

What are toxic algal mats?

While surface algal blooms are the most common sources of cyanotoxin in freshwater, some species of blue-green algae (cyanobacteria) form mats that attach to rocks, sand or plants at the bottom (benthic zone) of ponds, lake and rivers. These "benthic" algal mats sometimes produce cyanotoxins while the water above remains clear. Animals showing signs of algal poisoning after drinking or swimming in fresh water where there is no obvious bloom, or after eating algal mats, should be evaluated as potentially exposed to cyanotoxins.

Scan the QR code or [click here](#) for a mobile-friendly version of this information. Please report suspected cyanotoxin poisoning to your local health department. These can be found at doh.wa.gov/localhealth



For more information:

- Call: 206.418.5500
- Visit: doh.wa.gov/algae

Clinical Information

Exposure Route	Likely Signs	Onset to Signs	Differential Diagnosis	Possible Laboratory or Other Findings
Drinking contaminated water or swallowing contaminated water while swimming Licking blue-green algae (cyanobacteria) from fur or hair	Hepatotoxins <ul style="list-style-type: none"> • Acute depression • Weakness & incoordination • Loss of appetite • Excess drooling • Vomiting and diarrhea • Abdominal tenderness • Jaundice • Dark urine 	One or two hours, or more	Ingestion of acetaminophen, nonsteroidal anti-inflammatories, rodenticide, aflatoxin, mushrooms, copper, zinc, iron, xylitol	<ul style="list-style-type: none"> • Elevated bile acids & liver enzymes • Hyperkalemia • Hypoglycemia • Prolonged clotting times • Proteinuria • Presence of toxin in clinical specimens (liver, stomach contents) collected from ill animals
	Neurotoxins <ul style="list-style-type: none"> • Excess drooling • Apprehension & anxiousness • Vomiting • Muscle twitching • Seizures • Respiratory failure 	Minutes to hours	Ingestion of organophosphate, carbamate or chlorinated hydrocarbon pesticides, strychnine, metaldehyde, pyrethrins, moldy foods, bromethalin, mushrooms Mysthenia gravis	Presence of toxin in clinical specimens (stomach contents) collected from ill animals
Skin contact with toxic blue-green algae (cyanobacteria)	Dermal Toxins <ul style="list-style-type: none"> • Rash, hives, allergic reaction 	Minutes to hours	Other dermal allergens	Blue-green staining of fur or hair

Monogastric animals appear less sensitive than ruminants or birds; however, the dose-response curve is very steep in dogs – up to 90% of a lethal dose may elicit no clinical signs. Surviving animals have a good chance for recovery. Health effects from exposure are derived from reports of animal poisonings. For more information see Department of Health (www.doh.wa.gov/algae), the Merck Veterinary Manual (www.vetmanual.com), or call ASPCA Animal Poison Control Center at 1-888-426-4435 or the Pet Poison Helpline at 1-855-764-7661.

