

Blue-green Algae (Cyanobacteria)

 petpoisonhelpline.com/poison/blue-green-algae/

Cyanobacteria (also known as blue-green algae) are microscopic bacteria found in freshwater lakes, streams, ponds and brackish water ecosystems. They can produce toxins (such as microcystins and anatoxins) that affect people, livestock and pets that swim in and drink from the algae-contaminated water. Blue-green algae grow and colonize to form “blooms” that give the water a blue-green appearance or a “pea soup” like color. It also looks like blue or green paint on the surface of the water. Because the algae float, they may be blown by the wind into thick, concentrated mats near the shore, thus making them easily accessible to livestock, pets and people. Algal concentrations vary throughout the year, but are most abundant during periods of hot weather in mid- to late-summer months and are most likely to be found in nutrient-rich water. While most blue-green algae blooms do not produce toxins, it is not possible to determine the presence of toxins without testing. Thus, all blooms should be considered potentially toxic. Very small exposures, such a few mouthfuls of algae-contaminated water, may result in fatal poisoning.

Dogs that enjoy swimming and playing in lakes and ponds may be exposed to blue-green algae. Hunting dogs are especially predisposed due to increased exposure outdoors. Clinical signs of poisoning are dependent on the toxin involved. *Microcystins* can result in liver damage or failure. Signs of liver injury include vomiting, diarrhea, blood in stool or black, tarry stool, weakness, pale mucous membranes, jaundice, seizures, disorientation, coma, and shock. Death generally follows within days as a result of liver failure. Blood work changes include elevated liver enzymes, a low blood sugar, a low protein, and even abnormal clotting. Aggressive, immediate treatment is necessary to help treat this quick-acting, potentially fatal poison!

Anatoxins result in neurotoxicity evidenced by excessive secretions (e.g., salivation, lacrimation, etc.), neurologic signs (including muscle tremors, muscle rigidity, paralysis, etc.), blue discoloration of the skin and mucous membranes, and difficulty breathing. Death follows within minutes to hours of exposure as a result of respiratory paralysis. Livestock that graze around affected ponds or lakes and are able to drink from them are often found dead near the water source. Treatment includes anti-seizure medication, oxygen, and aggressive care by your veterinarian.

Unfortunately, there is no antidote for the toxins produced by blue-green algae. Immediate veterinary care is imperative. If you suspect your dog was exposed to blue-green algae, contact Pet Poison Helpline immediately for guidance.