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Blue-green Algae Blooms

What are blue-green algae?

Blue-green algae are bacteria that grow in shallow, warm, slow moving or still water such as fresh water lakes, ponds and wetlands. Their scientific name is *cyanobacteria* but they are more commonly known as pond scum. They are photosynthetic bacteria, which means they need light to survive. The first known species were blue-green in colour, which is how the algae got their name. The bacteria can range in colour from olive-green to red.

What are blooms?

When the conditions are favourable (hot, calm weather), most often in July and August, the numbers of algae can increase dramatically. This can create large numbers of blue-green algae called blooms. When the blooms rise to the surface of the water, they cover the surface of the water and can look like thick pea soup, often blue-green in colour.

Although these blooms occur naturally, water bodies enriched with plant nutrients from municipal, industrial or agricultural sources are more likely to have these growths.

How are these blooms toxic?

Some blue-green algal blooms can be toxic or poisonous if swallowed by wildlife, livestock or people.

There are two types of toxins or poisons in some blue-green algae:

- **Neurotoxins** affect the nervous and respiratory systems. These toxins can cause muscle tremors, stupor, staggering, rapid paralysis, problems with breathing and, often within 30 minutes, death. Animals that die from this toxin are usually found close to the lake or pond where they drank water with blue-green algal blooms.
- **Hepato-toxins** affect the liver and can cause a slow death, up to 36 hours or longer after drinking water with toxic strains of blue-green algae. Animals who get sick after drinking enough of this toxin may show jaundice (yellowing of the white of the eye) and sensitivity to sunlight.

How are people exposed to blue-green algae?

People are at risk from the toxic effects of some blue-green algae in untreated drinking water.

During a blue-green algal bloom, water looks and smells bad. Adults or older children will not likely drink this water. However, younger children may be less careful, or unaware of the dangers of drinking water with blue-green algal blooms.

If you drink water with toxic blue-green algae, you may have symptoms such as fever, sore throat, dizziness, stomach cramps, diarrhea or vomiting. These symptoms may last for several days. If you swim in contaminated water you may get itchy and irritated eyes and skin.

If you might have come in contact with blue-green algae toxins and have any of these symptoms, rinse any scum off your body and see your doctor right away.

How are animals exposed to blue-green algae?

If livestock or other domestic animals have no other source of drinking water, they may be poisoned by drinking water from open water bodies, such as lakes or ponds, contaminated with toxic strains of blue-green algae.

The most common poisonings occur among cattle. In some cases, wind may blow the algae floating on the surface towards the shoreline. Some livestock may wade out into the lake beyond the bloom before they drink, and they may not be affected. Young livestock usually drink closer to the shore and are more likely to be poisoned.

How long does a bloom last?

Most blooms are short-lived. An affected area will be safe again likely in a few days or a week or two. If you are uncertain about the quality of the water, contact your local Ministry of Environment regional office.

How can illness be prevented from blue-green algae?

- Do ***not*** drink untreated water from water bodies, whether you can see a bloom on the surface or not. In addition to possible health risks from algal blooms, you can get sick from other illnesses spread by drinking untreated water, including Giardiasis or "Beaver Fever".
- Do not wade, swim or bathe in water with visible blooms.
- Do not cook, wash dishes, or do laundry using water with blue-green algae in it. Boiling water does ***not*** remove toxins from the water.
- If blue-green algal blooms are present, do not let livestock or pets get into the water. Provide other sources of drinking water for livestock and pets.
- Blooms grow more quickly in non-moving or stagnant water. If possible, remove natural blockages in creeks flowing into or out of lakes or ponds to assist the free flow of water.
- Divert surface runoff, such as rainwater, from livestock feedlots away from streams and lakes. Blooms flourish from runoff flowing through animal waste.

Who should you contact to report blue-green algal blooms?

Some blue-green algal blooms are more toxic than others so all blooms should be treated with caution.

One of the first signs of toxic blue-green algae in a body of water is the presence of stressed, sick or dead wildlife, waterfowl or livestock along the shoreline. If you see any dead or distressed animals along a shoreline, especially with an algal bloom, contact the nearest public health unit and the nearest Ministry of Environment regional office.

For more HealthLink BC File topics, visit www.HealthLinkBC.ca/healthfiles/index.stm or your local public health unit.

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