



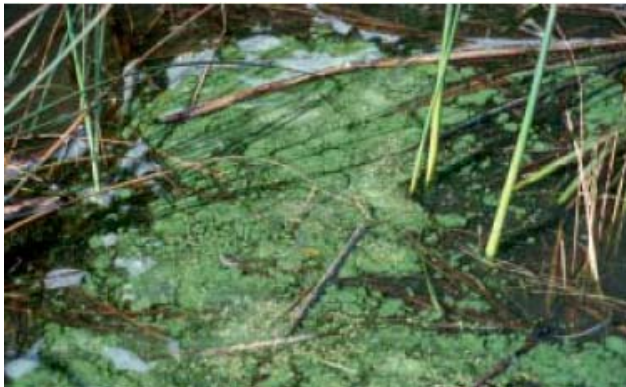
Blue-Green Algae

What is it?

When you see what looks like pea soup floating on the surface of a lake or pond, that's blue-green algae.

It's a thick, floating scum that smells bad, and can be blue-green, bright blue, grey or a tan colour. Normally the algae are few and far

between, and so small you'd never know they were there, but sometimes they multiply rapidly and clump together to form blooms (the pea soup-like floating scum) and we can't help but notice them.



Fresh blooms may smell like newly mown grass, while older blooms can smell like rotting garbage.



Technically speaking, blue-green algae are cyanobacteria, meaning that they aren't truly algae (which are microscopic plants), but are actually photosynthesizing bacteria. They have chlorophyll like plants do, which they use to convert sunlight into energy, and that's what gives them their greenish colour.

The problem with blue-green algae is that some types are toxic, and some are not, and there is no way to tell just by looking at it. Samples need to be analyzed in a lab.

Where did it come from?

Blooms occur when the water becomes enriched with nutrients, especially phosphorous. All plants need nutrients, but when there are more nutrients than needed, the algae multiply quickly to use up the extra. These nutrients may come from municipal wastewater treatment plant effluents, agricultural runoff containing fertilizers, cottage septic systems, or from natural sources.

Blue-green algae have areas inside of them that fill with gas, acting like balloons, which allows them to float on the surface.

Normally they float at different depths in the water, but at night when it gets dark, they may float to the surface, which is why they can suddenly appear in areas where they weren't yesterday.

It's always been there, but never enough to notice since the algae are so small.

There are many types of blue-green algae that live in many different parts of the world, including ice covered lakes, hot springs, a metre down in the soil, or on the undersides of desert rocks. In North America, blue-green algae are most commonly found in lakes and ponds.

Will it go away?

To get blue-green algae blooms to go away you first need to find and stop the cause of the problem.

Once excess nutrients stop flowing into the lake, there won't be any more food for the algae and they will stop multiplying and die. The blooms may disappear as rapidly as they appeared, especially in windy or rainy weather, or it may take a few days to a week or two.

What about my cottage water line? Can I still go swimming?

Blooms of blue-green algae can blow into shoreline areas and up onto beaches. As well as looking and smelling bad, there are health risks associated with blue-green algae. When the algae breaks down and dies, it releases toxins.

If there is a blue-green algae bloom on a lake or pond, do not drink the water or go swimming.

Some kinds of the algae are more toxic than others. Even if you have a home water treatment system, these toxins can stay in the water for a long time and are very difficult to filter out. Boiling the water will not get rid of the toxins.

Swimming in water with blue-green algae blooms can also be harmful, not only to your skin but also if you accidentally drink the water. Any activities on the water or on the shoreline where the algae may have blown onto beaches should be avoided. Also, do not allow pets or livestock to drink or bathe in water contaminated with blue-green algae, since they can also develop health problems.

Have your water tested if a bloom occurs, or after one has been on your lake, to make sure that your water is safe.

What happens if you drink or swim in water with blue-green algae blooms?

Symptoms from drinking water contaminated with blue-green algae include headaches, fever, dizziness, diarrhea, abdominal pain or stomach cramps, sore throat, nausea and/or vomiting. Bathing in contaminated water may result in symptoms such as irritation of the skin or eyes much like an allergic reaction, or symptoms like having hay fever. Symptoms may last for several days. Generally these types of contact with blue-green algae are not fatal, although symptoms can be more serious with young children.

If a person were to repeatedly drink water contaminated with toxic blue-green algae, or if the toxicity of the particular type of blue-green

algae was very high, liver problems or respiratory/nervous system problems could develop which in turn could lead to death. This is unlikely to happen since municipal drinking water systems are managed to control taste, odour, and contaminants, and if you get your water from a lake you'd notice that it tasted bad, or you would see the pea soup scum and know not to drink it.

What other problems are associated with blue-green algae?

Livestock generally become poisoned from blue-green algae because if they have no other source of drinking water they end up drinking contaminated water repeatedly. Livestock may also die from respiratory or nervous system problems, or liver problems.

The decomposition of blue-green algal blooms also takes up a lot of oxygen from the water which can result in the death of fish.



Is the type of algae on my lake the same kind that is sold in health food stores or being tested for medical treatment?

Probably not. That type of algae usually comes from parts of Europe and Africa. Since there are so many types of blue-green algae it is impossible to tell without scientific testing. There are warnings out from Health Canada that even the blue-green algae tablets that can be bought may still contain toxins that are just as harmful as drinking water originally contaminated with the algae. People are advised to stay away from blue-green algae, whether found on your lake, or in a pill bottle.

Where can I get more information?

More information on algae is available in the separate fact sheet on algae. The photo and other information in this fact sheet were taken from a publication by Agriculture and Agri-food Canada, which can be found on the internet at www.agr.gc.ca/pfra/water/algcyano_e.htm. More health-related information is also available from Health Canada and the Muskoka-Parry Sound Health Unit. See their fact sheets on the internet at www.hc-sc.gc.ca/hecs-sesc/water/factsheets/blue_green_algae.htm and www.mpshu.on.ca/WaterQuality/algal%20blooms.htm