

What is it?

Cyanobacteria are **aquatic micro-organisms** that have both the characteristics of bacteria and algae. The original cyanobacteria were blue-green in colour and were called **blue algae**. However, they may be of different colours: olive green, dark green, violet and even red. Cyanobacteria blooms are a **symptom** of poor water quality in a lake.

Are cyanobacteria dangerous?

They can **occur naturally in lakes** without causing any particular problems. However, they **become problematic** when they rapidly multiply and becoming **visible to the naked eye** (at the surface or deeper in the water column), referred to as an algae bloom. Problems begin when cells rupture or die, thus liberating **natural poisons** called **cyanotoxins**. **Contact or ingestion** of contaminated water having high levels of toxins can cause a **health risk**. It is *IMPORTANT to note that boiling the water does not reduce the risk, but accelerates the liberation of these toxins.*

What causes a proliferation of cyanobacteria?

In reality, we cannot predict the appearance of algae blooms, but there are several factors that contribute to its proliferation. Even if we don't fully understand the causes, there are **two main contributing factors** that can be identified:

- Water rich in nutrients (especially phosphorous)
- Stagnant water

Phosphorus sources

- ✗ Fertilizers (chemical or biological)
- ✗ Shoreline destruction
- ✗ Deforestation or land cleaning
- ✗ Industrial and wastewater discharges
- ✗ Defective septic systems
- ✗ Detergents containing phosphates

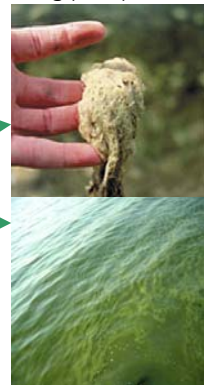
Want help to identify an algae bloom?

First, be sure to **wear rubber gloves**.

Next, spread you fingers and run your hand through the water.

Let the water run through your fingers and see what remains in your hand.

- Long fibrous masses hanging from your fingers is an indication of the presence of a bloom probably resulting from a **proliferation of algae filaments = cyanobacteria** →
- If nothing remains, or just a few pieces stick to your glove, it could be a **cyanobacteria bloom = cyanobacteria** →



A bloom often looks like a spill of blue-green paint or pea soup and may be accompanied by the smell of freshly cut grass or garbage.

How can we protect against the proliferation of cyanobacteria?

Knowing that cyanobacteria need phosphorous, the first step is to limit its input into our lakes and streams. To do this, each one of us must **reduce the use of manure, fertilizers and detergents rich in phosphates**; maintain an adequate vegetation **zone** (10 – 15 meters minimum) around lakes and along rivers in order to filter out the nutrients and pollutants from surface runoff; and insure that the septic system is properly installed and emptied regularly. Collectively we must **review** our fish farming, forestry and agriculture activities and make them "**greener**".



It's everyone responsibility!!