



# Iowa Department of Public Health

## Division of Environmental Health

### Blue-Green Algae

**Highlights:** The Iowa Department of Public Health (IDPH), Division of Environmental Health, Health Assessment Program gives people information about harmful chemicals and organisms in their environment. **Blue-green algae** are microscopic organisms that are naturally present in lakes and streams. Some blue-green algae produce toxins that could pose a health risk to people and animals when they are exposed to them in large enough quantities. This fact sheet answers questions about **blue-green algae**.

#### What are blue-green algae?

Blue-green algae, also known as **cyanobacteria**, are microscopic organisms that are naturally present in lakes and streams. They are usually present in low numbers. Blue-green algae can grow quickly and become very abundant in warm, shallow, undisturbed surface water that receives a lot of sunlight. When this occurs, they can form **blooms** that discolor the water or produce floating rafts or scums on the surface of the water. These blooms usually only occur during the summer months in Iowa.

#### Are blue-green algae harmful to my health?

Some blue-green algae produce toxins, (e.g. microcystins) that could pose a health risk to people and animals when they are exposed to them in large enough quantities. Health effects could occur when surface scums or water containing high levels of blue-green algae toxins are swallowed, come in contact with skin or when airborne droplets containing toxins are inhaled while swimming, bathing, or showering.

Recreational contact, such as swimming, and household contact, such as bathing or showering with water not visibly affected by a blue-green algae bloom is not expected to cause health effects.

#### How do I know if I am being exposed to blue-green algae?

People should suspect that blue-green algae are present in water that is visibly discolored or that has surface scums. Colors can include shades of green, blue-green, yellow, brown or red. Water affected by blue-green algae blooms often is so strongly colored that it can develop a paint-like appearance (see photo below).

The presence of toxins from algae can only be verified through laboratory analysis. Unpleasant tastes or odors are not reliable indicators of blue-green algae toxins or other toxic substances, because the algae may or may not also produce chemicals that affect the taste or odor of drinking water. Similarly, the absence of unpleasant tastes and odors does not guarantee the absence of blue-green algae toxins.



Surface water affected by blue-green algae often is so strongly colored that it can develop a paint-like appearance.

### Are children more vulnerable than adults to blue-green algae toxins?

Yes. Because of their comparatively low body weight, it takes fewer toxins to make children sick from exposure to blue-green algae. In addition, children tend to have more sensitive skin than adults, so a skin rash or reaction is also more likely. Children should always be supervised when swimming in any body of water.



### How can I stop or reduce exposures to blue-green algae?

- Never drink untreated surface water, whether or not algae blooms are present. Water from lakes, rivers, or streams may contain other bacteria, parasites or viruses, as well as algae toxins, that all could cause illness if consumed.
- People, pets and livestock should avoid contact with water that is discolored or has scums on the surface. This includes swimming, water skiing, tubing, boating, etc.
- If contact does occur, wash with soap and water or rinse thoroughly with clean water to remove algae. This is especially important for pets (dogs) because they may lick the algae off their fur to clean themselves.
- Seek medical attention if symptoms such as skin, eye or throat irritation, allergic reactions or breathing difficulties occur while in contact with untreated surface water. These symptoms are unusual, but may occur in sensitive individuals due to exposure to low levels of blue-green algae.

### Can I eat fish caught in water contaminated with blue-green algae?

Toxins from algae can accumulate in the entrails (guts) of fish, and in shellfish. Levels in fish depend upon the severity of the bloom in the area where the fish or shellfish are caught or collected. In general, fish that are caught in areas of a water body where major blue-green algae blooms occur are safe to eat, as long as the entrails of the fish are discarded. Care should be taken that animals are not fed/eat the entrails of these fish.

### Environmental Health Staff

The following staff is available to answer your questions or provide more information.

**Stuart Schmitz, M.S., P.E.**

**Environmental Toxicologist**

**Phone: (515) 281-8707**

**Email: [stuart.schmitz@idph.iowa.gov](mailto:stuart.schmitz@idph.iowa.gov)**

**Randy Lane**

**Program Planner**

**Phone: (515) 281-5894**

**Email: [randy.lane@idph.iowa.gov](mailto:randy.lane@idph.iowa.gov)**

### Where can I get more information?

Updated information on Blue-Green Algae can be found at the following web sites:



<http://www.iowadnr.com/>



<http://www.idph.state.ia.us/>