

## **Harmful Algal Blooms (HABs) FAQs**

### **What are Harmful Algal Blooms?**

Cyanobacteria (cy·a·no·bac·te·ri·a), also known as blue-green algae, are a natural part of lakes, rivers, and ponds. Unfortunately, some species can produce toxins, called cyanotoxins (cy·a·no·tox·ins), that can make humans and animals sick. When conditions are right, these organisms can rapidly increase to form cyanobacteria blooms, or Harmful Algal Blooms (HABs). These blooms can last several weeks or longer and are considered harmful because they may contain toxins. A bloom can start out small and become very large in size and can give off a foul odor.

### **What does a harmful algal bloom look like?**

Not all algal blooms contain toxins, but it is difficult to tell by looking at a bloom if it is harmful. Also, the amount of toxins in a bloom can change over time. HABs can be a variety of colors such as green, blue-green, blue, brown, white, purple, or red. HABs can look like scums in the water that may have small flecks, foams, or globs and mats floating in it. The water can also look like it has spilled paint or a green sheen on the surface. When in doubt, keep yourself and pets out.

### **What causes a bloom?**

A bloom can occur when the water temperature is warm, conditions are calm, and the water has a high level of nutrients, like phosphorus and nitrogen. Excess nutrients can come from pollution such as lawn and farm fertilizers, animal manure, storm water runoff, sewage treatment plant discharges, and malfunctioning septic tanks.

### **When do algal blooms happen?**

Blooms typically occur in Michigan from July through September. A bloom can last several days to a few months. Blooms may disappear but then form again within the same season.

### **What are the health effects on people?**

Typically, symptoms of illness from cyanotoxins appear within a few hours in humans. If symptoms do appear, the severity will depend on how long the exposure was, the type of cyanotoxin, and how the person was exposed.

Skin contact with water containing cyanobacteria may cause irritation such as rashes, hives, or skin blisters. It may also cause runny eyes and noses or asthma-like symptoms. Thoroughly rinse off with fresh water if the skin comes into contact with an algal bloom.

Swallowing large amounts of water containing cyanotoxins while swimming, wading, or playing in the water may cause flu-like symptoms, gastrointestinal illness, or neurotoxic symptoms. These may include: abdominal pain, vomiting, diarrhea, weakness, numbness, headaches, dizziness, or difficulty breathing. Frequent swallowing or swallowing large amounts of cyanotoxins can harm the liver or kidneys.

Recreational water sports like boating and jet skiing may create water spray into the air that can produce aerosolized toxin (from tiny droplets in the air) if HABs are in the water. Breathing in this water may cause skin, eye, nose, or throat irritation.

If you suspect you have had contact with or swallowed water containing cyanotoxins, and experience any of the symptoms listed above, consult your health care provider and/or call Poison Control (800)-222-1222.

If symptoms are severe, seek emergency medical attention as soon as possible.

### **What are the health effects on pets or livestock?**

If you see a bloom, do not allow your pets or livestock to come into contact with it – especially dogs. Dogs are more likely than humans to drink scummy water and can swallow a lot of water for their size. When they groom or lick themselves, dogs can potentially swallow cyanotoxins collected in their fur.

Symptoms of illness from cyanotoxins often appear quicker in animals than in humans – sometimes in minutes to a few hours. Symptoms in animals can include: vomiting, diarrhea, fatigue, staggered walking, excessive salivation, and convulsions. Death have occurred in severe cases.

Dogs should be thoroughly rinsed off with fresh water after contact with water that may have an algal bloom.

Contact your veterinarian immediately if pets or livestock show signs of illness. If you know or suspect your pet or livestock had contact with a HAB, tell your veterinarian.

### **Can I swim or go boating if HABs are in the water?**

If a HAB has been **suspected**, it is best to not swim, wade, or touch the water where algae are present. Humans and pets should be rinsed thoroughly in fresh water if there has been any contact with the water, especially where algae may be present.

If a HAB has been **confirmed**, do not swim, wade or touch the water where algae are present. Humans and pets should be rinsed thoroughly in fresh water if there has been any contact with the water.

Humans and pets should avoid the water entirely if there is a large algal bloom spread out across the lake, river, or pond, including water sports like boating.

Algae can cover the surface of the water so densely that you cannot see underneath to tell how deep the water might be or see rocks in the water. Trying to wade or swim through the algae could be dangerous.

### **Can I eat fish if HABs are in the water?**

Cyanotoxins may build up in the meat of fish, such as the filet, and especially in the guts or organs (liver, kidney, etc.). The amount of toxin found in fish depends on a number of factors, including

how badly and for how long the cyanobacteria has been blooming in the area where the fish are caught.

If a “No Contact Advisory” is made on a lake, river, or pond or a large algal bloom is visible, fishing is not recommended and fish should not be eaten.

If the lake, river, or pond does not have a “No Contact Advisory” issued and there is not a large visible bloom, fish caught in lakes, rivers, or ponds affected by HABs should be okay to eat. However, the fish filets may have small amounts of cyanotoxins along with other chemicals that are regularly found in them.

Following the **Eat Safe Fish** waterbody-specific guidelines, or Statewide Safe Fish Guidelines, and eating only the filets (and not the guts) reduces the danger of eating fish from areas affected by HABs and from other chemicals that are regularly found in them.

The algal toxins can be irritating to people’s skin, so gloves should be worn, or hands washed with fresh water after handling the fish. The guts should be thrown away and filets should be rinsed with fresh water before cooking.

#### **What should I do if I think I’ve found a HAB?**

You cannot tell if a bloom is toxic just by looking at it. Stay out of the water and do not let children or pets play in the water or near the shoreline where algae are present.

If advisories, signs, or closings are posted about the possibility of a HAB or the confirmation of a HAB pay attention to the advisory or warning about the water.

You may also see advisories or closings issued for some beaches for coliform bacteria such as E. coli and should pay attention to those warnings. More information on this monitoring can be found at: <http://www.deq.state.mi.us/beach/>.

#### **Who should I contact if I think I’ve found a HAB?**

Always report suspicious-looking algae to the Michigan Department of Environmental Quality (MDEQ) by calling the Environmental Assistance Center at 1-800-662-9278 or e-mail [AlgaeBloom@michigan.gov](mailto:AlgaeBloom@michigan.gov).

Do not try to treat the water to kill the HABs because this may release toxins into the open water. Additionally, treatment of the water for aquatic nuisances requires a permit from the MDEQ.

#### **What is the State doing to protect the public?**

State agencies are doing some sampling for HABs in lakes, rivers, and ponds across Michigan; however, many areas affected by HABs will go undetected. Learn what HABs look like, be alert, and report suspicious algal blooms.

When possible, the MDEQ will collect water samples for testing to determine if a HAB is present. The MDEQ will notify the state and local health departments, and the health departments will work to determine the safety of the water for people and animals.

If it is possible for state and local agencies to detect and respond to a HAB, health departments may issue advisories through posting of signs and sending out notices to the public.

Public health advisories may indicate a need to avoid areas with algae, specific beaches, or the whole waterbody. Look for and follow advisory notifications.

### **What can people do to help prevent harmful algal blooms from occurring?**

Learning about nutrient pollution, such as excess nitrogen and phosphorus, can help to reduce or prevent algal blooms from happening in lakes, rivers, or ponds. Excess nutrients may come from agricultural fertilizer, lawn fertilizer, detergents, sewers, and malfunctioning septic systems. It is also important to learn what HABs look like, be alert, and report suspicious algal blooms.

People can help reduce HABs by taking simple actions that decrease nutrients getting into our water, like:

- Using phosphate-free detergents,
- Disposing of pet waste properly,
- Applying fertilizers only when necessary and at the recommended amount, and
- Volunteering in local watershed protection efforts.

In some areas, the public can participate in monitoring programs that sample and assess local waters for the presence of HABs. Contact MiCorps, nearby lake associations, the local watershed council, or the local water resources commissioner's office for opportunities in your area.

Information in this fact sheet is from the Ohio EPA site (<http://epa.ohio.gov.habalgae.aspx>), the CDC Harmful Algal Bloom (HAB)-Associated Illness (<https://www.cdc.gov/habs/index.html>), and Wisconsin HABs Toolkit (<https://www.dhs.wisconsin.gov/publications/p0/p00853.pdf>).

For more information on HABs in Michigan, visit: [https://www.michigan.gov/deg/0,4561,7-135-3313\\_3681\\_3686\\_3728-383630--,00.html](https://www.michigan.gov/deg/0,4561,7-135-3313_3681_3686_3728-383630--,00.html), or contact:

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