

Frequently Asked HAB Questions and Answers

What causes HABs?

Cyanobacteria, often called blue-green algae, are bacteria that are naturally found in Ohio lakes, ponds, and slow-moving streams. Although many species of algae do not produce toxins, some species of blue-green algae can cause HABs.

Under the right water conditions, which usually occur in the warmer months, the number of these blue-green algae can dramatically increase, or “bloom.” Scientists do not fully understand what causes the same species of algae to trigger toxin production during one bloom and not produce toxin during the next.

Some cyanobacterial blooms can look like foam, scum, or mats on the surface of fresh water lakes and ponds. The blooms can be blue, bright green, brown, or red and may look like paint floating on the water. Some blooms may not affect the appearance of the water.

You can view images of Ohio HABs by visiting: www.ohioalgeinfo.com and clicking on photo gallery of HABs (under the what should I know now? section).

What types of toxins can be produced by HABs?

HABs can produce neurotoxins, which affect the nervous system, hepatotoxins, which affect the liver. HAB cells also contain dermal (skin) toxins which can cause rash, hives or blistering.

All of these toxins can potentially impact the health of people and animals that come into contact with water where HAB toxins are present.

Can people get sick from HABs or toxins?

Humans and pets can get sick from exposure to cyanobacteria toxins. However, the development of illness will depend on the type of cyanobacteria, the levels in the water and the type of contact an individual has had with this “algae.”

Individuals can protect themselves from illness caused by HAB related toxins by avoiding contact with water where harmful algal blooms are present. The Hocking County Health Department advises people not to swim, water-ski, or boat at high speeds in areas where these blooms are occurring.

What types of health problems can people experience from exposure to high numbers of Blue-Green Algae and HABs?

If HAB toxins come in contact with the skin they may cause rashes, hives, or skin blisters (especially on the lips and under swimsuits).

Breathing aerosolized water (suspended water droplets and/or mist) from the lake related recreational activities or lawn irrigation can cause runny eyes and noses, a sore throat, asthma-like symptoms, or allergic reactions.

Swallowing HAB-contaminated water can cause:

- Acute (immediate), severe diarrhea and vomiting
- Liver toxicity (abnormal liver function, abdominal pain, diarrhea and vomiting)
- Kidney toxicity
- Neurotoxicity (weakness, salivation, tingly fingers, numbness, dizziness, difficulties breathing, death)

How can people protect themselves from these toxins?

The Hocking County Health Department advises residents to avoid direct contact with the water or aerosolizing the water, this means that residents should not swim, water-ski, tube or boat at high speeds in areas where the blooms are occurring.

It's also important to follow posted water body advisories posted by state agencies or local authorities. Signs will be posted at public lakes if a HAB has been identified and/or if there are unsafe levels of toxins in the water. Ohioans are encouraged to find out which lakes have advisories posted before visiting a body of water. All information on advisories will be posted at www.ohioalgaefinfo.com.

In addition, individuals should not water lawns, gardens, or golf course with water from HAB-impacted lakes or ponds. Residents whose homes are connected to a municipal water system are also encouraged to report unpleasant tastes or smells in drinking water to their local water utility.

If people or pets become exposed to these toxins what should they do?

If an individual does come into contact with HAB-contaminated water, they should rinse off with clean, fresh water as soon as possible.

Pets that have been swimming in an area with an algae bloom may ingest significant amounts of toxins by licking their fur after leaving the water. Thoroughly rinse of pets that have had contact with a bloom with clean, fresh water.

Individuals are advised to seek medical treatment ASAP if they think an individual, a pet, or livestock might have been poisoned by the toxins produced by the bloom.

If have had an exposure to lake water, how long will it take me to find out if I am going to become ill?

The onset of health symptoms from exposure to HAB toxins can take from minutes to hours. However, since these are an emerging public health issue there are uncertainties regarding the amount of time it takes from exposure to HAB-contaminated water to the developing health problems.

The available symptom onset times were primarily gathered from laboratory animal data and events.

Are the odors from HABs toxic?

Some of the blue-green algae produce an odor generating byproduct, named geosmin. The human nose is extremely sensitive to geosmin and is able to detect it at concentrations at very low levels. These odors are not chemically toxic but do have a very unpleasant smell which can cause sensitive individuals to become nauseous (upset stomach, vomiting) and have headaches.

The chemical toxins produced by these blue-green algae do not change from a liquid to a gas and they are not released as vapors to the outside air. However, recreational activities like boating at high speeds, water-skiing, jet-skiing and tubing can whip up the surface of the water and create aerosols – toxin-containing water droplets – that can be inhaled or ingested, potentially resulting in negative health effects. Other activities that have the potential to aerosolize the lake water include using the lake water to irrigate lawns/gardens and golf courses.

Is it safe to eat vegetables that were watered with lake water this year?

Available research recommends that people do not eat leafy vegetables/greens (lettuce, spinach, cabbage, brussel sprouts, chard, or other leafy vegetables/greens) irrigated with HAB-contaminated water. There is less evidence with regard to cyanobacteria impacting root vegetables and no information concerning fruits.

Until more research on cyanotoxins in vegetables and fruits is conducted, consumption of vegetables from gardens irrigated with HAB-contaminated water should be avoided or kept to a minimum.

Where can I find out more information about HABs?

State of Ohio Algal Blooms Web site:

<http://www.ohioalgaefinfo.com>

Ohio Department of Health Harmful Algal Bloom Web site:

http://www.odh.ohio.gov/odhprograms/eh/bbeach/Beach_HABs.aspx

Centers for Disease Control and Prevention, Environmental Hazards & Health Effects, Harmful Algal Blooms Web site:

www.cdc.gov/hab/cyanobacteria/facts.htm#treat