

# Harmful Algal Blooms

## Background and Reporting Information

### Harmful Algal Blooms (HABs)

Cyanobacteria are a kind of photosynthetic bacteria commonly found in Ohio’s lakes, ponds, and slow-moving rivers. Waters with excess nutrients (phosphorus and nitrogen) caused by pollutants may experience rapid growth in the cyanobacteria populations, leading to visible changes in the water known as “blooms”. Due to the green appearance blooms often give effected waters, cyanobacteria are commonly referred to as “blue-green algae”. Some species of cyanobacteria form Harmful Algal Blooms (HABs), releasing potentially dangerous cyanotoxins in the water.

### Recognizing a HAB

There is no sure way to tell the difference between HABs and harmless blooms. Though commonly green or blue-green, the appearance of HABs vary greatly. Look for unusual colors (green to white to black), textures (film, crusts, puffballs) and patterns (clippings, dots, streaks). Some HABs look like spilled paint, pea soup, foam, wool, streaks or green cottage cheese curds.



### HABs Can Produce Harmful Toxins, Including Microcystin

Cyanobacteria can release many kinds of toxins that cause damage to the liver, nervous system, or skin. Drinking, touching, or accidentally breathing in droplets of dirty water can all lead to HAB-related illnesses. Symptoms of HAB-related illness includes diarrhea, vomiting, irritated skin, dizziness,



Toxin	Type of Toxin
Anatoxin-a	Neurotoxin
Anatoxin-a(s)	Neurotoxin
Cylindrospermopsin	Hepatotoxin
Lyngbyatoxin	Dermatotoxin
Microcystin	Hepatotoxin
Saxitoxin	Neurotoxin

light-headedness and allergic reactions. HABs can produce toxic chemicals in the form of neurotoxins (which affect the nervous system), hepatotoxins (which affect the liver), and dermatotoxins (which affect the skin).

## Routes of Exposure

People are exposed to HABs in different ways depending on the type(s) of cyanotoxins involved. The three most common methods of exposure are:

- Ingestion – Drinking HABs contaminated tap water from a public water system during a drinking water advisory or the incidental/accidental swallowing of contaminated water such as during water-related recreational activities.
- Skin Contact – Swimming, skiing, tubing and other recreational activities in HABs contaminated waters. Skin contact can also occur during hand washing, food preparation, and bathing.
- Inhalation – Breathing aerosolized water droplets (misting) of HABs-contaminated water from recreational activities such as jet-skiing or power boating. Outside of recreational waters, inhalation may occur from sinks and showers.



## Symptoms of HAB-Related Illness

See a healthcare provider if you experience any of the following symptoms after being exposed to a HAB:

- Severe diarrhea and vomiting
- Abdominal pain
- Kidney toxicity
- Weakness
- Numbness
- Dizzy/light-headed
- Difficulty breathing
- Rashes
- Hives
- Runny nose
- Sore throat
- Allergies

## References and Additional Information

CDC Environmental Hazards & Health Effects, Harmful Algal Blooms, [www.cdc.gov/habs](http://www.cdc.gov/habs)  
Ohio Department of Health Harmful Algal Blooms webpages, [www.odh.ohio.gov/habs](http://www.odh.ohio.gov/habs)  
State of Ohio resource on HABs information, [www.ohioalgaefinfo.com](http://www.ohioalgaefinfo.com)

See other factsheets on Ohio Department of Health webpage for more information on HABs in drinking water, recreational water, and effects on animal health.

## Actions to Take

Be informed when planning to visit a water body. See the resources and information below.

- Use BeachGuard to view current Ohio HAB and *E. coli* advisories: [www.publicapps.odh.ohio.gov/beachguardpublic](http://www.publicapps.odh.ohio.gov/beachguardpublic)
- [https://epa.ohio.gov/static/Portals/35/hab/HAB\\_Report\\_Form.pdf](https://epa.ohio.gov/static/Portals/35/hab/HAB_Report_Form.pdf)
  - Send completed reports to [HABMailbox@epa.ohio.gov](mailto:HABMailbox@epa.ohio.gov)
  - Alternatively, a web report form may be completed at: <https://survey123.arcgis.com/share/ac459f1f0b344bfa93c0486b028fba6>
- Illness reports and questions should be discussed with your local health district (LHD). Find your LHD using the webtool: [www.odh.ohio.gov/GetMyLHD](http://www.odh.ohio.gov/GetMyLHD)
- For drinking water HAB illnesses, use the appropriate form: [www.odh.ohio.gov/HABDrinkingForm](http://www.odh.ohio.gov/HABDrinkingForm)
- For recreational water HAB illnesses, use the form: [www.odh.ohio.gov/HABRecreationForm](http://www.odh.ohio.gov/HABRecreationForm)
- For HAB illnesses in pets, complete the form: [www.odh.ohio.gov/HABAnimalForm](http://www.odh.ohio.gov/HABAnimalForm)

## Contact Us

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