

Blue-green algae in Victorian waterways: protecting your health

What are blue-green algae?

Blue-green algae (cyanobacteria) are bacterial organisms that can appear singularly or in colonies, and are present in almost all aquatic ecosystems, including creeks, rivers, lakes and wetlands. Under certain environmental conditions, numbers can increase rapidly and blooms (or scums) become easily visible across the water surface. The blooms range in colour from dark green to yellowish brown. Some blooms may not cause any visible changes to the water.

Blooms generally occur during summer and autumn, often when nutrient levels are high, temperatures are warm, and the water is relatively still or flows slowly with low turbulence. Weather conditions, nutrient levels and water flow will affect how long a bloom will last. These blooms are not a new phenomenon, and are known to have occurred around the world for centuries.

Some species of blue-green algae produce toxins that can be harmful to humans and animals.

How can I be exposed to blue-green algae toxins?

Exposure to blue-green algal toxins can be through:

- direct contact with exposed parts of the body, including sensitive areas such as the ears, eyes, mouth, nose and throat
- accidental swallowing of affected water
- breathing in water droplets and aerosols; and
- eating affected seafood.

Avoid exposure with algae-affected water, particularly in areas with visible scums or discoloured water. The greatest risk to recreational users is posed by algal surface scums. These are concentrated accumulations of blue-green algae which tend to settle along shorelines, where recreational water users, children and dogs are likely to come into contact as they enter the water.

Follow advice on any information signs in affected areas and avoid contact with the water until authorities advise there is no longer a risk. If you suspect that your local waterway could be affected by blue green algae, contact the local waterway manager for further advice. Managers may be located at local councils, water corporations, or the Department of Environment, Land, Water and Planning.

People who are concerned about any health effects following contact with water should seek medical advice.

What are the health impacts of blue-green algae?

Regular monitoring of waterways identifies any algal blooms and if levels are high, a public warning is issued. Water affected by high levels of blue-green algae may have health implications for humans and animals.

Some species of blue-green algae produce toxins that are harmful to humans and animals when they are swallowed, inhaled or come into direct contact with the skin. Skin contact may cause skin and eye irritations, mild respiratory effects and hay fever-like symptoms. Drinking affected water containing toxins may cause gastroenteritis symptoms such as vomiting, diarrhoea, fever and headache. The toxins produced by blue-green algae may also affect the liver or nervous system. If you are concerned about your health, seek medical advice.

Pets and livestock may become unwell after contact. If you suspect that your animals are unwell, seek veterinary advice.

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

Children are more susceptible to the effects of the toxins due to their lower body weight. They tend to have more sensitive skin than adults and are more likely to suffer from skin rash. Children are also more likely to engage in activities that allow water to be swallowed or inhaled. Children should always be supervised when swimming in any body of water.

What should I do if I come into contact with affected water?

If contact is made, remove any affected clothing and wash yourself thoroughly with clean water after coming ashore. Wetsuits should be thoroughly rinsed before being worn again to remove any traces of algae.

Can I swim and undertake other water sports?

Swimming and any water sport or activity, including skiing, inflatable tubes and 'donuts' that result in direct contact with affected water are not recommended.

Can my dog swim in water affected by blue-green algae?

Dogs can be poisoned or die from contact with some types of blue-green algae. Don't let your dog swim or drink in algae-affected areas. If they do come in contact with the water, wash them thoroughly with fresh water and dry them to prevent them grooming and ingesting algal residues. If you are concerned, seek veterinary advice.

Can I eat fish caught in waters affected by blue-green algae?

You should not eat any mussels, yabbies or crayfish from algae-affected areas. Any fish caught should be washed in clean water, gilled, gutted and any internal organs disposed of and not eaten. Care should be taken that animals are not fed or allowed to eat the entrails of these fish.

When blooms die and start to breakdown, they can consume the oxygen in the water. If the amount of oxygen in the water is too low, fish can suffocate. Fish that are dead, dying or swimming erratically should not be handled or eaten. You can report a fish death event to the EPA on 1300 EPA VIC (1300 372 842).

Can my drinking water supply be affected by blue-green algae?

Blue-green algae can cause taste and odour issues in water supplies.

If your local water corporation supplies your drinking water, risks from blue-green algae are managed through their risk management plan. You can contact your local water authority if you have any concerns about the quality of your mains drinking water supply.

Never drink untreated water. Boiling algae-affected water will not inactivate algal toxins. Affected water will also be unsuitable for domestic purposes such as preparing food, bathing, showering and brushing teeth.

To prevent algae from affecting your private drinking water supply, ensure that light does not penetrate any pipes or fittings to your water tank and that your water tank is sealed.

I receive or collect untreated water from a dam or stream affected by blue-green algae, what should I do?

Avoid using the water until the bloom subsides.

Do not drink untreated water, whether you can see a bloom on the surface or not. As well as presenting possible health risks from algal blooms, untreated water can cause other illness. Do not use untreated water for domestic

purposes such as preparing food, bathing, showering and brushing teeth. **Boiling algae-affected water will not make it safe.**

Information related to irrigation and livestock can be found on the Agriculture Victoria website on <http://agriculture.vic.gov.au/agriculture/farm-management/soil-and-water/irrigation/blue-green-algae-and-irrigation-water>

For further information on your private drinking water supply, refer to the Department of Health & Human Services website at <https://www2.health.vic.gov.au/public-health/water/private-drinking-water-supplies>

Can I put water affected by blue green algae on my garden?

Avoid using affected water to irrigate your lawn and garden beds. This may affect the growth of plants and may pose a risk to children, pets and animals who may then come into contact with the wet surface. Irrigation may also produce aerosol spray which can be inhaled. If there is no other water source, minimise aerosol spray by using appropriate equipment and water in the evening when the air is generally still.

How long will the bloom last?

There is no definite length of time that the bloom will remain. When favourable conditions remain such as warmer weather, sunlight, adequate nutrient levels and lower flow rates, blooms can last weeks to months. Cooler, windy weather or increased flow may reduce or stop them fairly quickly.

When blooms occur, tests are conducted on a regular basis to monitor the type, amount and extent of algae present. The results will be used to inform and modify warnings and notifications.

Further information related to health impacts from algae

Contact the Department of Health and Human Service's Water Program on 1300 761 874.

Authorised and published by the Victorian Government, 1 Treasury Place, Melbourne.

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Available at www2.health.vic.gov.au/public-health/water