



## **Guidance for Health Care Providers and Facilities Frequently Asked Questions May 2019**

Oregon began regulating cyanotoxins in drinking water in 2018. There are no federal standards for cyanotoxins in drinking water. Data on which to make definitive recommendations for clinicians are lacking. The following is guidance for health care providers and facilities to consider in protecting patient health. Health care providers and facilities should evaluate their practice setting and patient populations to make decisions about implementing this guidance.

### **What are cyanobacteria (harmful algae)?**

Cyanobacteria are not algae at all, but primitive photosynthetic, single-celled bacteria found naturally in fresh and salt water all over the world. In warm weather, when nutrients are plentiful, and water flow is low, they may grow quickly or “bloom,” sometimes producing toxins.

### **What toxins are involved in these algal blooms?**

The most common toxins in harmful algal blooms in Oregon are microcystin and cylindrospermopsin.

### **What are the health effects of these toxins?**

Microcystin can damage the liver; it also can cause self-limited nausea, vomiting and diarrhea.

Cylindrospermopsin can cause liver and kidney injury. It can also cause nausea, vomiting and diarrhea.

OHA has found no evidence in available literature that these toxins are carcinogenic or teratogenic (disturbs fetal development), or that they cause other long-term health effects.

Some cyanotoxins can injure the nervous system.

### **Who is most at risk?**

Vulnerable populations, as listed below, exposed to water containing cyanotoxin at levels exceeding the drinking water health advisory levels might be at risk of various adverse health effects:

- Infants, particularly those that are formula-fed.
- Children younger than 6.
- People with pre-existing liver conditions.
- People receiving dialysis treatment.
- Pregnant women and nursing mothers.
  - When cyanotoxins are present in tap water, pregnant and breast-feeding mothers should not drink it and should instead drink bottled or well water.
  - Mothers who breast-feed their infants should continue to do so if they are drinking bottled or well water.

As a precaution, the elderly and other sensitive populations should consider following these advisory instructions. Pets and livestock also may be at increased risk.

### **What are the key treatment considerations if you suspect toxin-induced illness?**

There are no available screening or diagnostic tests to determine whether a patient has been exposed to cyanotoxins. There are no cures for illnesses associated with cyanotoxin exposure, and treatment is supportive.

For most patients, it is important to avoid dehydration or electrolyte problems, as with any other cause of vomiting and diarrhea. For those with underlying liver or kidney disease, evaluation might be prudent, along with guidance to ensure people avoid any further exposure.

If you suspect cyanotoxin-related illness and would like further guidance, contact the Oregon Poison Center at 1-800-222-1222.

### **Ambulatory Surgical Facilities**

Above drinking water advisory levels, ambulatory surgical facilities should not use tap water for patient care that includes washing open wounds or exposed tissues unless the water has been treated at the facility to remove cyanotoxins. Ambulatory surgical facilities that pre-treat water from the local public water supply using reverse osmosis or treatment certified to remove microcystins (NSF P477) may continue to use the water for patient care. Ambulatory surgical facilities without appropriate water treatment should reschedule elective surgeries when possible.

To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

### **Birth Centers**

Above drinking water advisory levels, birthing centers should not use tap water for patient care that includes washing open wounds or exposed tissues unless the water has been treated at the facility to remove cyanotoxins. Birthing centers that pre-treat water from the local public water supply using reverse osmosis or a treatment device certified to remove microcystins under NSF P477 may continue to use the water for patient care.

To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

### **Dental Offices/Clinics**

Above drinking water advisory levels, dental offices and clinics should not administer water to patients through the dental unit, ultrasonic scaler, or other dental equipment that uses the local public water system. This restriction does not apply if the water source is isolated from the local public water system (e.g., a separate water reservoir or water has been treated with reverse osmosis or a treatment device certified to remove microcystins under NSF P477). To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

Patients should rinse with bottled or distilled water until the drinking water advisory has been lifted. Tap water may be safely used for cleaning surfaces in the dental office/clinic.

### **Dialysis Centers**

Above advisory levels, dialysis centers should not use tap water in dialysis units. Dialysis units that pre-treat water from the public water supply using reverse osmosis or a treatment device certified to remove microcystins under NSF P477 may continue to use the water for dialysis. To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

Dialysis centers may consider using pre-packaged dialysate throughout the drinking water advisory. All dialysate water, except for pre-packaged dialysate, should be frequently tested by an accredited laboratory after the cyanotoxin removal process to ensure effectiveness of the treatment unit prior to use.

### **In-Home Dialysis**

Above drinking water advisory levels, in-home dialysis units should not use tap water. Dialysis units that pre-treat water from the public water supply using reverse osmosis or a treatment device certified to remove microcystins under NSF P477 may continue to use the water for dialysis. To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

In-home dialysis users may consider using pre-packaged dialysate for the duration of a drinking water advisory. All dialysate water, except for pre-packaged dialysate, must be frequently tested by an accredited laboratory after the cyanotoxin removal process to ensure effectiveness of the treatment unit prior to use.

### **Home Health**

Above drinking water advisory levels tap water should not be used for washing or cleaning exposed tissue or wounds in the home health setting. Follow the drinking water advisory issued by the local community and/or public water system. Check the system's website for information.

### **Hospitals**

Above drinking water advisory levels, hospitals should not use tap water for patient care that includes washing open wounds or exposed tissues unless the water has been treated at the facility to remove cyanotoxins. Hospitals that pre-treat water from the local public water supply using reverse osmosis or a treatment device certified to remove microcystins under NSF P477 may continue to use the water for patient care.

To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

Hospitals without appropriate water treatment should evaluate the priority of surgical procedures and consider rescheduling elective surgeries if necessary.

- Sterilization – Steam autoclaves sterilize instruments using steam under pressure. Cyanotoxins are not incorporated into steam, so autoclaves can be used, as long as the sterilized instruments are not subsequently contaminated with tap water.
- Washing Surfaces – Continue to follow [CDC Guidelines for Sterilizing and Disinfecting Patient-Care Items and Environmental Surfaces](#). Do not dilute disinfectants with contaminated tap water.
- Wound Care – Tap water should not be used for washing or cleaning exposed tissue or wounds.
- Skin Conditions (e.g., eczema) – Skin irritation, such as a rash, may occur from exposure to cyanotoxins when bathing and washing hands. Providing a final rinse of skin with uncontaminated water is recommended.

### **Residential Care/Assisted Living Facilities**

Residential care and assisted living facilities should follow the drinking water advisory issued by the local community or public water system. Check the system's website for information.

### **Skilled Nursing/Long-Term Care Facilities**

Above drinking water advisory levels, skilled nursing facilities should not use tap water for patient care that includes washing open wounds or exposed tissues unless the water has been treated at the facility to remove toxins.

Facilities that pre-treat water from the local public water supply using reverse osmosis or a treatment device certified to remove microcystins under NSF P477 may continue to use the water for patient care. To be certain the water is free of cyanotoxins, have water samples analyzed by an accredited laboratory.

Facilities should follow the drinking water advisory issued by the local community or public water system. Check their website for information.

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