



Waterborne illnesses are caused by bacteria (*Shigella*, *E.coli*, *Campylobacter*), viruses (norovirus) or parasites (*Cryptosporidium*, *Giardia*) in the water. Drinking or swallowing contaminated water can result in vomiting, diarrhea and abdominal pain. Swimming or soaking in contaminated water can cause these symptoms as well as skin rashes and ear infections. Children, pregnant women, and people with weak or compromised immune systems are most at risk from waterborne illness. There are two categories of waterborne illness, recreational and drinking.

## Recreational Water Illness

Recreational water is water that is used for swimming, boating, water skiing, and other recreational activities.

Swimming pools, hot tubs and water parks are regulated by [local health departments](http://www.dhhr.wv.gov/localhealth/pages/map.aspx) (<http://www.dhhr.wv.gov/localhealth/pages/map.aspx>) in West Virginia, and are treated with disinfectants and filtering to help control germs. However, if these protective measures break down, people can get sick. Outbreaks of illness have occurred due to contamination combined with inadequate disinfection.

Lakes, rivers, and streams can easily become contaminated by animal or human feces carried by surface run-off. These types of recreational water facilities are also regulated and camp staff/administration is responsible for ensuring that testing and disinfection standards are followed.

Regardless of the type of recreational water your camper will be using, it's important to educate them on safe swimming practices.

## Educate your camper about safe swimming:

- Don't swim when you have diarrhea. Bacteria, viruses, and parasites are shed in feces and can contaminate the water and make other people sick
- Don't swallow the water when you are swimming and avoid getting the water in your mouth.
- Shower with soap before swimming. Wash your hands after using the toilet. Germs on your body can end up in the water and make other people sick. Urine and sweat can inactivate chlorine and make the water less safe for everybody else.

## Drinking Water

Public drinking water is usually safe because it is properly treated with chlorination and filtration and carefully monitored by water operators. However, naturally occurring, or surface water (streams, ponds, lakes) must be treated before it is used for drinking or cleaning. Your camper may need to learn how to treat surface water to make it safe. Boiling, filtration, and disinfection are used for this purpose.

## Ways to Make Surface Water Safe to Drink

- Boiling is the safest way to sanitize drinking water. The water must come to a rolling boil for at least 1 minute.
- If boiling is not possible a combination of disinfection and filtration is the best option. The manufacturer's guidelines for the type of disinfectant and/or filtration device being used need to be followed.
- Camp staff should supervise campers as they carry out any of these processes.
- Additional information on disinfecting small amounts of water is available from the [WVBPH Office of Environmental Health Services](http://www.wvdhhr.org/phs/forms/SG-81_Disinfecting_Small_Quantities_of_Water.pdf) ([http://www.wvdhhr.org/phs/forms/SG-81\\_Disinfecting\\_Small\\_Quantities\\_of\\_Water.pdf](http://www.wvdhhr.org/phs/forms/SG-81_Disinfecting_Small_Quantities_of_Water.pdf))
- In addition to treating water, campers should pay attention to good sanitation practices: Wash hands before handling food or water, eating or drinking, and after using the toilet. Bury human waste eight (8) inches deep and at least two hundred (200) feet away from natural water.

## Please Use the Links Provided For Additional Information:

### 1. Center for Disease Control:

- <http://www.cdc.gov/healthywater/drinking/travel/index.html>
- [http://www.cdc.gov/healthywater/drinking/travel/backcountry\\_water\\_treatment.html](http://www.cdc.gov/healthywater/drinking/travel/backcountry_water_treatment.html)
- <http://www.cdc.gov/healthywater/swimming/>

### 2. National Institute of Health:

- <http://health.nih.gov/topic/FoodborneDiseases>

### 3. WVBPH-Food and Waterborne Diseases Page:

- <http://www.dhhr.wv.gov/oeps/disease/FnW/Pages/default.aspx>

### 4. WVBPH-Office of Environmental Health Services:

- **Recreational Water** - <http://www.wvdhhr.org/phs/pools/index.asp>
- **Drinking Water** - <http://www.wvdhhr.org/oehs/eed/c&e/regulations.asp>