

## **Managing Hygiene in the Field**

Be proactive, professional, and sensitive when teaching participants about hygiene in the field. Both gastrointestinal (nausea, vomiting, diarrhea) and flu-like communicable diseases can easily spread among participants living in close quarters in the field. While most of these illnesses don't present long-term health risks, they can significantly impact the purpose and enjoyment of field experiences. They are best confronted with effective water disinfection and proactive group and individual hygiene habits.

### **Water Disinfection**

While many wilderness water sources may appear pristine, it is impossible to determine whether any water source is free of waterborne pathogens. For this reason, it is wise to have a conservative water disinfection policy. Waterborne pathogens include viruses, protozoa, parasites, and bacteria (probably the biggest concern). Bacteria may be the biggest concern. Two common protozoa are:

- Giardia (*Giardia duodenalis*). This causes gastro-intestinal distress (usually 1 to 2 weeks after exposure). Giardia is introduced to water supplies through the infected feces of various birds, mammals, and reptiles.
- Cryptosporidium. This can cause diarrhea. It can be a serious health risk for immunocompromised patients.

### **Disinfection techniques**

1. Boiling kills bacteria, viruses, and protozoa. Bring water to a rolling boil. It doesn't matter what altitude you're at and it doesn't need to be boiled for any period of time.
2. Chemical disinfection using iodine or chlorine kills most viruses, bacteria, and protozoa. It is not 100% effective against cryptosporidium. Chlorine dioxide (different than chlorine) is effective against all waterborne pathogens but requires a minimum of 4-hrs of contact time. Cold, cloudy, or silty water requires a larger chemical dosage or increased contact time. Wait to add drink mixes to water that is being disinfected.
3. Physical filters are reliable for protozoa but less so for bacteria and viruses. They also can clog up easily in turbid waters.
4. UV purifiers claim to eliminate bacteria, viruses, and protozoa. They require batteries to operate.

### **Personal and Group Hygiene**

Teach good hygiene on day 1 to get everyone in good habits. Hold participants accountable. The challenges of living outside shouldn't be an excuse.

### **Handwashing**

Most diarrheal illness is caused by fecal-oral contamination. Usually, someone's hands are the transport vehicle. Hands should be washed thoroughly after defecating and prior to any food preparation or handling. Encourage your participants to keep their fingernails trimmed and any open wounds covered.

Handwashing with hand sanitizer is effective at preventing contamination, but it does not actually remove dirt, grease, or fecal matter. Consider requiring each participant to carry their own personal hand-sanitizer bottle as well as vigorously washing with soap at least once a day. Have hand sanitizer and soap available both in camp and in the field.

#### Kitchen and “Trail” (in the field away from camp) hygiene

- Wash hands before handling any communal food.
- Avoid using personal utensils when serving food.
- Make sure clean communal utensils are available to serve food. Avoid using hands to take portions of food from communal pots.
- Dishes should be washed with soap and rinsed in dilute bleach water after every meal. If you don't have soap and bleach, dipping dishes in boiling water is a reasonable substitute.
- Don't scoop food out of common bags with your hands. Instead, encourage everyone to make up personal food bags or containers or roll down the sides of the bag and pour food into each person's hands.
- Avoid sharing water bottles

#### Female-specific

Females (or those with female genitalia) are especially prone to urinary tract, yeast, or skin infections. Following are several hygiene guidelines that should be communicated to new or inexperienced female participants:

1. For extended field stays, consider bringing comfortable synthetic underwear that is easy to wash and quick to dry. In warm environments, bring shorts and underwear that allow for adequate ventilation.
2. Bring an extra bandana to clean and dry pubic area after urinating (when no toilet paper is available, such as on a long day hike)
3. Wash genitalia regularly with soap and water. This can be accomplished by taking a dip in a lake, stream, or just using pots of water and soap. Be sure to follow Leave No Trace (LNT) principles if bathing in undeveloped wilderness areas. This mainly involves using biodegradable soap and rinsing off at least 200 feet from a natural water source.
4. Bring extra menstrual supplies, even if you don't expect to have your period during a field trip. If using new methods, practice before going into the field. You may need to bag and carry out your used tampons and pads. A small stuff sack with a couple of extra plastic bags can be used. A real aspirin or two placed in the bag will help keep odors down.
5. Be attentive to changes or abnormal symptoms, such as itching and/or soreness in the vaginal area, excessive or smelly discharge, increased frequency or pain on urination, or blood in the urine. Alert your instructors immediately should any of these symptoms arise.