

VOMITING AND DIARRHEA ON A RIVER RAFTING TRIP? How bad could that be?

Depending on the cause, vomiting can be violent and occur many times a day; diarrhea can be explosive and continue for days to weeks, turning your adventure into a nightmare. Dehydration caused by vomiting and diarrhea can be made worse by hours of exertion in the hot sun. Dehydration can be especially dangerous in the backcountry, where medical evacuation may not be available or can only be done at great expense. Although diarrheal illness in most healthy adults generally resolves without medical intervention, symptoms can be more severe for young children, elderly persons, and those with compromised immune systems.

WHAT CAUSES DIARRHEA?

Vomiting and diarrhea on river trips can be caused by viruses (e.g., norovirus), bacteria (e.g., Salmonella), or parasites (e.g., Giardia or Cryptosporidium) that live in the gut and spread to people through feces.

You can get sick by:

- Consuming food or beverages that have been contaminated
- Touching contaminated surfaces or objects and then not washing your hands before eating
- Sharing personal items such as towels or water bottles that have been contaminated
- Coming into contact with a sick person, for example, by:
 - Being close by when the person vomits
 - Sharing food or eating from the same utensils
 - Caring for a sick person
 - Shaking hands with or touching surfaces touched by a person who did not wash hands after going to the bathroom.

Some of the organisms that cause vomiting and diarrhea are quite hardy in the environment (e.g., on equipment, on the ground, or in water) and can remain infectious for days. Some of these organisms are shed in feces even after a sick person has recovered, so even well people need to practice proper hygiene and handwashing.

Some bacteria that live in the environment e.g., Bacillus cereus, Clostridium perfringens, Clostridium botulinum, Staphylococcus) can grow in improperly handled food and produce toxins that make you sick if you eat the food. Proper food handling and preparation is essential to prevent illness from these germs.

PREVENT DIARRHEA BEFORE IT STARTS

- Wash your hands in clean, running water from a hand-washing station: (see www.cdc.gov/Features/HandWashing)
 - Before meal preparation or serving
 - Before drinking or eating
 - After going to the bathroom
 - After handling any waste
- Use alcohol-based hand sanitizer. Bring enough to last for the whole trip.
- Handle and prepare food safely: (see Food Safety While Hiking, Camping, and Boating and

Prevent Foodborne and Waterborne Illness: Recommendations for Idaho River Outfitters

- Store food at proper temperatures use a cooler and check temperatures with a thermometer
- Store raw meat so that it does not contaminate other food
- Sanitize food preparation equipment before use
- Cook food at recommended temperatures and use a food thermometer
- Dish out individual servings instead of passing containers back and forth between people, and pour snacks out of a bag into your clean hand or dish instead of reaching into the bag
- Sanitize dishes and utensils using the three container system (see A Quick Reference for River Rafters: Cleaning and Sanitizing Dishes Using the Three-Container Method).
- Treat river water before drinking it. To eliminate bacteria, parasites, and viruses, either boil the water or filter it and add chemical disinfectant. (see www.cdc.gov/healthywater/drinking/travel/backcountry_water_treatment.html)
- Maintain your distance from sick persons, if possible, for 24 hours after their symptoms stop.
- Separate sick people:
 - Select one only responsible adult to assist sick children and sick elderly persons until 24 hours after their symptoms stop.
 - Set up separate toilets away from others for those who are sick and take extra disposable toilet bags or cans in case of emergencies.
 - Serve food to sick people last and away from people who are not sick.
 - Keep sick people on the same boat if possible and have them stay in the same area of camp.
 - For the rest of the trip, keep the same equipment (e.g., sleeping pads, tents) with the people who were sick.

IF YOU GET SICK: TREATING DIARRHEA ON THE RIVER

- Preventing dehydration is the most important goal. Adults should drink small amounts (2–4 oz.) of water or other clear liquids every 30–60 minutes. For children, if pre-formulated oral rehydration products are not available, you can make your own solution by mixing ½ teaspoon salt, 6 level teaspoons sugar, and 1 liter of safe drinking water. Measure accurately to avoid harm. If the child is vomiting, try a spoonful every few minutes. Forcing large amounts of fluids at one time can cause vomiting. Bland food such as cooked cereals, bread, crackers, and applesauce is best.
- Over the counter bismuth subsalicylate anti-diarrheal medications such as Pepto-Bismol[®] can be used in people older than 12 years of age. Read the package insert carefully before using.
- Medications such as loperamide (for exapmle Imodium®), diphenoxylate, and paregoric that reduce diarrhea by slowing passage of digesting food through the gut, allow more time for absorption of fluid. These medications can help when traveling is imperative. They should not be used by people with fever or bloody diarrhea, because they can increase the severity of disease by keeping the disease-causing organisms in the gut longer.

If diarrhea persists once arriving home despite therapy, you should be evaluated by a doctor and parasitic infection considered.

GOING HOME

- If you rented gear, tell the owner that you
 had illness on the trip so that the owner can
 take extra care in cleaning your returned gear.
- If you used private gear, sanitize all equipment using bleach (5–25 tablespoons per gallon of water) or hot water > 140 °F. Launder sleeping bags and other soft goods in hot water and dry on hot or in sunlight. Don't forget to clean all items that have hard surfaces, such as the ammo can that holds your library.
- Contact your local public health department to report outbreaks of illness.

KEEP YOUR PARTNERS PADDLING: SPARING OTHERS IF SOMEONE GETS SICK

- Ill people should consider postponing going on a river trip for 72 hours to 2 weeks after symptoms go away, depending on the cause of diarrhea. *Norovirus, Salmonella, and Cryptosporidium* are examples of organisms that you can shed in your stool and expose others, even after diarrhea stops.
- Make a fresh bleach solution (5–25 tablespoons regular strength bleach, not "ultra-strength", per gallon of water) daily to clean contaminated non-food surfaces, such as toilet seats, sleeping pads, and rafts. Do not use this for food surfaces or hand-washing it is too strong for that.
- Make every effort to have only people who have not been sick in the previous 2 weeks prepare food or filter water.
- Make sure no one touches the nozzle of water dispensers. Wipe the nozzle with bleach solution twice a day.
- Put vomit and feces from accidents in a sealed plastic bag in the trash; if possible, sick people should vomit directly into plastic bags and seal them immediately.

OTHER RESOURCES

- Idaho Food Protection Program website
- Cooking for Groups
- Bad Bug Book

