Running the River (without getting the runs):

**HOW TO PREVENT AND CONTROL VOMITING AND DIARRHEAL ILLNESS ON RIVER RAFTING TRIPS**

**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 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, some pathogens 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*, *Shigella*), 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:
  - Sitting close by when the person vomits
  - Sharing food or eating from the same utensils
  - Caring for a sick person
  - Sticking 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., *Salmonella*, *Shigella*, *Giardia*, *Cryptosporidium*) 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., *Salmonella*, *Shigella*; *Staphylococcus*, *Bacillus*; *Clostridium*; *Giardia*; *Cryptosporidium*) can grow in improperly refrigerated food or improperly washed food. Certain bacteria can generate gases that build pressure in the gut, causing pain and cramping.

**PREVENT DIARRHEA BEFORE IT STARTS**

- Wash your hands in clean, running water from a hand-washing station: (see [www.cdc.gov/Features/HanWashing](http://www.cdc.gov/Features/HanWashing))
  - 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 [FoodSafety.WaterSafety.Camping.Boating](http://www.cdc.gov/Features/HanWashing))
  - 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](http://www.cdc.gov/Features/HanWashing))
- 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](http://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.
- Follow these food safety guidelines:
  - Store food at proper temperatures – use a thermometer
  - Store food at proper temperatures – use a refrigerator
  - Serve food at recommended temperatures
  - Sanitize food preparation equipment before use
  - Cook food at recommended temperatures
  - 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](http://www.cdc.gov/Features/HanWashing))
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  - 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 preformulated 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 small amount 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 antidiarrheal 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 example 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.
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**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 aluminum can that holds your library.
- Contact your local public health department to report outbreaks of illness.

**OTHER RESOURCES**

- [Idaho Food Protection Program website](http://www.idaho.gov/foodprotection)
- [Cooking for Groups](http://www.cdc.gov/Features/HanWashing)
- [Bad Bug Book](http://www.cdc.gov/Features/HanWashing)
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**KEEP YOUR PARTNERS PADDLING: SPARING OTHERS IF SOMEONE GETS SICK**

- If people should consider postponing going on a river trip for 72 hours to 2 weeks after symptoms go away, that is 2 weeks after diarrhea and vomiting have ended.
- For the rest of the trip, keep the same equipment (e.g., sleeping pads, tents) with the people who were sick.
- 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 aluminum can that holds your library.
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