

# Cruisin' Down the River

**No doubt** you have read about one of the outbreaks of intestinal illness that seem to strike cruise lines occasionally. I cannot imagine too many things worse than paying in the five figures for a luxury vacation, and spending much of it confined to a small room, vomiting. In fact, this is one of the excuses I use with my wife to avoid these sorts of vacations!

These unfortunate events have been pretty well explained. Actually, the cruise industry has been putting a lot of procedures in place to minimize them, and they may not be occurring as often as once was the case. Most are caused by a viral infection called norovirus. Like most such illnesses, norovirus infection is spread when someone's personal hygiene is less than optimal and after leaving the bathroom he or she leaves traces of the virus on surfaces such as door-knobs, faucets, railings, etc. Someone else touches the surface, then picks up a piece of cheese for a snack, and *voila!* Another infection strikes.

The virus is widespread, and occurs in many settings. Having hundreds of people confined on a ship, sharing many spaces for several days, is a prime setting for the virus to take hold and spread. That is why hand-sanitizer stations have become ubiquitous on cruise ships, and why gloved crew members, not the guests themselves, serve the items in the buffet line. If any passenger has but a hint of a gastrointestinal problem,

type of cruise which has been spoiled by norovirus: A group of physicians from Colorado have published a study of several outbreaks of this infection in rafts on the Colorado River. These are guided expeditions, in which participants travel in multi-passenger rafts, camping along the river. Groups share equipment, and chemical toilets are provided. Meals are usually prepared by staff and taken as a group.

In 2012, norovirus was reported in ten rafting groups. The number of participants affected in these groups ranged from 6 to 88 percent. The investigators were able to isolate the virus itself from some of the equipment in the boats.

Those who like to blame wilderness water for intestinal infection may jump to blaming the Colorado River for the infections, but they would be wrong. Although many individuals in these groups were affected, it is very important to note that these groups comprised only a tiny fraction of the hundreds of parties using the river during the rafting

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he or she is generally "confined to quarters." Let's hope the TVs work.

What does this have to do with the backcountry? A recent report in a medical journal describes another

season. There is no reasonable explanation for these infections beyond infected persons spreading them to others by the hand-to-mouth route.

Many of us have, for years, point-



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ed to poor personal sanitation as the most likely cause of intestinal distress in the backcountry. In an earlier column, I discussed another study that I published in which we identified fecal contamination on the hands of Adirondack hikers. This new report, however, is the first that definitively demonstrates transmission of actual intestinal infection within a wilderness group.

The evidence is incontrovertible. Intestinal infections occur within groups of backcountry campers. There is no good evidence that these are caused by drinking water. There is excellent evidence that they are spread among individuals within the group. Hand-washing or the use of sanitizing gels is one of the most important health measures for backcountry campers.

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