



## AdironDoc Backcountry Health and Hygiene

### In Praise of Soap

For several weeks last summer, I was part of a 12-person expedition into Alaska's Northern Talkeetna Mountains. Befitting a trek into such remote country, which was to include technical climbing and glacier travel, we were prepared for nearly any medical emergency. In addition to qualified personnel (a physician and three wilderness first responders), we brought along an array of sophisticated rescue, medical and emergency communication gear.

Thanks to good preparation and common sense, we never needed any of this stuff. We did, however, have a medical problem which affected nearly half of the group. While not life-threatening, it seriously impacted group morale and could have compromised the success of the expedition.

Ironically, control of the problem did not require any of our expensive, high-tech medical gear. It required soap.

The problem was a skin infection, bullous impetigo. Impetigo is caused by one of a couple common bacteria, which usually spread within a group by hand-to-hand contact. If the integrity of the skin is broken (as it was by the wind, rain and cold of late summer Alaska), the bacteria set up housekeeping and nasty, fluid-filled sores develop. One of the bacteria that cause impetigo can also cause food poisoning, a particularly unpleasant affliction when one is deep in the woods.

Once established, impetigo is generally treated with antibiotics, either directly on the skin or by mouth. Prevention, as is usually

the case, is a whole lot easier: interrupt the spread of the bacteria by careful hand-washing. With liberal use of local antibiotics, and a shift in "expedition behavior" toward better personal hygiene, the miniepidemic ceased.

I am inaugurating this column with this story because it teaches an important lesson. There is a lot more to wilderness medicine than improvising litters and hypothermia wraps. Whether it be a month in the Alaskan interior or a long weekend in the Seward, backcountry travel puts folks into very close contact without such usual amenities as soap and running hot water. These conditions can set the stage for rapid spread of disease. Granted, impetigo and food poisoning are not usually fatal, but either could be the first step in a chain of events leading to catastrophe.

Hand-washing in the backcountry, as at home, is most important in two situations: after defecation and before food preparation. The purpose of hand-washing is not to "kill" bacteria or other organisms; that's actually very hard to do. Rather, it is intended to loosen the particles in which they are embedded and allow them to be flushed off of the skin. Keeping this in mind, the important steps in hand-washing are developing copious suds, allowing plenty of time to rub these suds around the hands, and then a long rinse with a liter bottle of water. As for drying, I have a simple rule. If you walked the requisite 200 feet from trail or water before washing, your hands will have air dried by the time you get back!

Soap has received an unjustified environmental "bad rap" in the wilderness. While I agree that it should never be needed to clean utensils, and should always be used far from any water source, there is simply no acceptable substitute for its use in personal hygiene. I occasionally see folks carrying disposable towelettes or "antibacterial" skin lotions. Setting aside the environmental impact of all the packaging these gimmicks entail, neither has ever been shown to interrupt the spread of disease as efficiently as simple hand-washing. Neither is considered acceptable in the health care industry.

Environmentally sensitive campers may fret over their soap selection. Don't bother. Essentially all soaps are "biodegradable" today. While I avoid scented and deodorant products, this is more for aesthetic than environmental reasons. After all, who wants to smell like an "Autumn Breeze" in the summer? Commercial products such as Mountain Suds® are simple and work well. They are no better, however, than a plain chunk of Ivory® in a plastic bag.

Hand-washing may be one of the most important, and most frequently overlooked, safety measures on a wilderness trek. Its importance increases exponentially as the size of the group and the length of the trip increase. Since failure to practice it actually endangers others, it must become a shared expectation of the group.

—Thomas R. Welch, M.D.

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