

New Science about an old problem

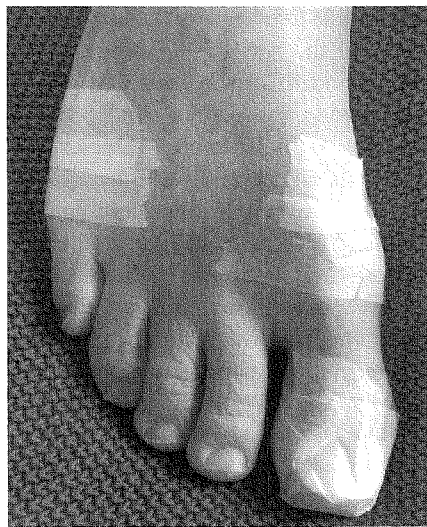
ONE OF MY GOALS in this column is to keep readers up to date on new developments that affect backcountry health and hygiene. In truth, however, truly “new” developments in this field are few and far between. Let’s face it: Medical research is complicated and expensive, and support for it is limited.

Plus, afflictions like cancer, heart disease, and emerging antibiotic-resistant infections are probably more attractive targets for research than are the mishaps that confront those of us fortunate enough to spend time in the wilderness.

The other factor playing into this is that the topics that seem to get wilderness first aid students and instructors the most excited—say, hemorrhagic shock, unstable spinal fractures, and anaphylaxis—are so rare in the wilderness as to be nearly impossible to study. The problems that actually happen and impact treks seriously—like blisters or sprained ankles—hardly seem to deserve real scientific analysis.

UNTIL NOW.

A recent report in the *Clinical Journal of Sports Medicine* (2016;26[5]:362–368), a peer-reviewed biomedical journal, presents the results of a beautiful study involving the prevention of blisters. This is really the first major development in this important area in a couple of decades. Unlike an article in which someone describes his or her “special technique” to prevent blisters, this study has all the hallmarks of “gold standard” medical research. It is a “multisite prospective randomized trial”: That is, it was performed at more than one location, to exclude the potential impact of a single site; the subjects were identified in advance and studied to completion (“prospective”), rather than being examined or questioned at the end of an event (“retrospective”); a formal “randomization” process was used to select what part of



Paper taped foot. Photo reprinted with permission from Lipman G., Sharp L., Christensen M., et al, Paper Tape Prevents Foot Blisters: A Randomized Prevention Trial Assessing Paper Tape in Endurance Distances II, Clinical Journal of Sports Medicine 26(5):362-68, September 2016, journals.lww.com/cjsportsmed.

the body would have the prevention applied, rather than having the participant or the investigator make the decision; and predetermined outcomes were being studied, which made it a true “trial.” Actually, the only feature of top-quality medical research that was not employed was “double blinding,” since it would be hard for a subject not to realize that he or she had a foot taped!

The lead investigator, Dr. Lipman from Stanford, chose to do the study with a group of ultramarathoners, since they are folks in whom blisters are generated frequently and very

reproducibly. The preventive intervention he applied was simpler and cheaper than one could imagine: He applied paper tape smoothly over areas of the foot on which the athletes had developed blisters in the past. If the tape loosened or came off, it was just reapplied.

The result: 98 of the 128 runners had no blisters in the areas treated by tape,

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while 81 of the 128 had blisters on the untreated feet. Note that the study was done during the course of a 155-mile ultramarathon in places like the Gobi Desert—likely more of a challenge to the feet than a walk up Algonquin!

“Paper tape” is a special form of surgical tape that is thinner and less adhesive than most medical tapes. It is widely available in drug stores. Nexcare® by 3M is one brand; a roll costs less than a buck. Note that the advantage of this “less adhesive” tape is that it comes off painlessly in the event that a blister forms under it. Thus, one should *not* pretreat the skin with something to make it more adhesive, something which I have previously recommended.

Cheap and effective prevention: Give it a try and let me hear about your experiences! ▲

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