

Preventing foot Blisters



As your feet move inside your boots, friction on the outer layer of skin can shear it from the underlying layer, and as fluid accumulates between the separated layers, you grow blisters. Prevent blisters by:

- Proper boot fitting.
- Padding boots to fill gaps and cover rough edges.
- The 2-sock system (plus a cushioned insole).
- Covering hot spots before they grow into blisters.
- Tightening boots before walking downhill so your toes don't slide forward.

Leather boots mold themselves to your feet slightly during the break-in period. But they should be comfortable from the start – otherwise don't buy them. Plastic boots must fit very well from the outset, because they are rigid. Cases of frostbite have been reported from rented plastic mountaineering boots that didn't fit properly and impaired circulation to the feet.

If you can't find a pair of boots that fit and are comfortable to walk, climb or ski in, you may need to consult a podiatrist (foot specialist) or a podarthist (gait specialist). If one of your legs is a bit shorter than the other, for example, or your feet roll excessively when you come down on them, you'll never walk comfortably without customized boots. Also, the imbalance can cause stress injuries in the legs, especially the knees.

When fitting boots, wear the socks that you would normally wear: thin synthetic inner socks that cling to your feet like an extra layer of skin (and reduce friction on your skin); and one or more thick socks of wool or synthetic. With the boots unlaced, you should be able to slide your foot forward enough to fit two or three fingers in the space behind your heel. After lacing up the boots:

- Walk. Do leg stretches. Any pressure? Excessive heel lift or movement of toes?
- Stand on the inclined surface of one or two fitting stools, toes angled down. Do your toes slide forward

and touch the fronts of the boots? If so, the boots are too loose.

- Plant one foot on the incline with the toes up and step up (balancing with the other foot in the air). Does your heel lift more than a fraction of an inch? If so, you have too much heel slop.

If your boots have heel slop or rough edges inside where two pieces of leather are joined, you can pad them with Mole Foam - adhesive cloth with foam padding. When your boots are clean and dry, cut pieces of Mole Foam to fit, and press the adhesive firmly onto the leather. Going uphill, heel lift may cause blisters, so cover your heels and Achilles tendons with large pieces of Moleskin or tape to protect them from friction. Before going downhill, tighten laces so your toes don't slide forward, and wrap vulnerable toes with tape or moleskin.

Treating blisters

Once blisters have formed, they can be treated in two ways. You can try to prevent them from popping or puncture them. If a blister on the heel or side of the foot is still small, you may be able to protect it:

- Cut a donut of mole foam to fit around the blister and take the pressure off it.
- Lay a piece of Spenco 2nd Skin® on the blister, fitting inside the hole.
- Cover the donut with Moleskin or tape, sealing in the 2nd Skin.

If a blister has started to form on the bottom of the foot, any thick covering would make walking uncomfortable. So the best way to protect the incipient blister from friction is with a large piece of duct tape or K tape. Put a small piece of tape in the center of the sticky side, so the tape will not stick to the blister.

To puncture a blister, sterilize a needle in a flame and pierce the blister at the base. You may need to enlarge the hole to prevent it from re-sealing and the blister from filling up again. Let the blister drain, irrigate, and disinfect it as you would any open wound. Afterwards, use the technique described above to protect it against further abrasion.

Copyright 2019 by National Association for Search and Rescue and Steve Donelan. From *Wilderness Emergency Care, Third Edition* by Steve Donelan. The book is available from NASAR (www.wildernessemergencycare.org) and Amazon. (CAP permission to use this material expires 13 May 2021)