

How to Help Prevent Skin/Soft Tissue Injuries to the Feet

by Robert P. (Bob) Thompson, CPed

Self-care of the foot is vital for everyone, especially for those who have had a lower-limb amputation or are at risk for one. Injuries to the skin of the foot and/or the fat pads can interfere with mobility; they also can lead to damage to underlying blood vessels, nerves, tendons, ligaments and other foot structures. That damage can lay the groundwork for limb loss.

At the Institute for Preventive Foot Health (IPFH), we stress the importance of skin/soft tissue management as a means of protecting feet from damage. Specifically, we advise taking proactive measures to protect:

- The outer layer of skin (epidermis) from chafing and abrasion
- The underlying layers of skin (dermis and hypodermis) from pressure (your body weight on your feet) and shear forces (movement of your foot inside your ordinary sock and shoe)
- The fat pads on the heel and ball of the foot and underside of the toes, which are especially vulnerable in seniors and those who have had a lower-limb amputation.

Until age 30, fat pads are thick, strong and supple, and the feet are mostly problem-free. But as we age, our foot muscles become weaker, tendons and ligaments become less resilient, and our foot or feet may ache by the end of the day.

By age 50 or so, many people have lost as much as 50 percent of fat pads, and the skin around the foot may have thinned considerably. The result: The foot is more vulnerable to damage from impact during walking and other activities, and to blisters, cuts, bruises and other forms of skin/tissue damage.



>> **For more information** on skin/soft tissue management and other preventive foot health topics, visit the Institute for Preventive Foot Health Web site at ipfh.org. All of the published research is available if your doctor needs it. If you have questions about foot problems and protection, browse the foot conditions section or use the “Ask the Expert” tool for a personal response.

Preventive Foot Health Tips

To help prevent injuries to the foot skin and fat pads, and to manage any problems you may already have, we suggest the following:

- Inspect your foot or feet daily – once in the morning when you wake up and once at bedtime. Check the top, bottom and sides of your feet and between your toes. Use a mirror if you can't turn your foot over to look at it. You can also ask a family member or friend to help you.
- If you see any lesions (cracks, cuts, blisters), tend to them immediately with antibiotic cream and a wound dressing (gauze bandage or a Band-Aid). See your doctor immediately if there is any sign of infection.
- Be aware of bruises, which are a sign that injury has occurred below the skin. A bruise often precedes tissue damage, so you should consider it a warning sign of potential problems to come, especially if it takes a long time to heal.
- Feel for lumps; temperature differences (one part warm, another part cool); pain, burning, tingling or numbness, which are signs of neuropathy; or loss of hair on your foot or leg, which can signal reduced blood flow. Any of these signs mean your foot is at risk. See your doctor or a foot health professional immediately.
- In addition to foot inspections, wash your foot or feet in lukewarm – not hot – water daily. If you have neuropathy, use your elbow to test the temperature of the water. Make sure you wash between your toes and then dry your foot thoroughly, including between the toes.
- Apply a thin film of skin-softening lotion to the top and the bottom of your foot. Don't apply lotion between your toes because it facilitates rubbing and irritation.
- Cut your toenails carefully. Trim straight across and soften the edges with an emery board to reduce the chance of developing ingrown toenails. Don't cut your toenails yourself if you have neuropathy or other foot problems related to diabetes.
- Never trim corns or calluses with a sharp implement such as a razor blade, knife or nail clipper; one slip of the hand can lead to a lesion or worse.
- Wear properly selected and fitted padded socks that provide terry fabric under the fat pads beneath your toes, the ball of the foot and the heel. Peer-reviewed, published studies have shown that wearing clinically tested padded socks can actually help prevent injuries to the skin/soft tissue of the foot, which is a major cause of diabetic ulcerations.
- Wear shoes with non-slip outsoles that fit properly, so that your foot can't move around in the shoe and become irritated. To get the best possible fit, IPFH suggests following its integrated approach: Wear the padded socks you intend to wear in the shoes, as well as any inserts or orthotics prescribed or recommended by a doctor or foot health professional, when you select and purchase shoes; that way, you are unlikely to have fitting problems afterward.
- Select shoes and padded socks made for the specific activity in which you will be involved. Make sure the shoes are shaped like the shape of your feet (no pointy tips) and correctly sized, as described above.
- Try not to wear the same pair of shoes every day. Rotating shoes every other day allows your shoes to dry out from the perspiration absorbed from your foot the day before.
- Change your padded socks daily or more often if you are very active.