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Beat the Blister

Blisters are a common problem for runners and walkers and can seriously affect training when they occur. They are caused by excessive shear forces, or friction, across the skin and often form in areas of thick skin, such as the heels, toes and balls of the feet. The forces cause the skin cell layers to separate and the gap fills with fluid, forming a bulla, which is more commonly known as a blister.

You may notice redness and a sense of pain or burning before the blister forms. The blister will then likely develop within hours. Most blisters are filled with clear fluid (serum), but can be filled with blood with more severe tissue injury.

Moisture, heat and increased friction on the skin all boost your risk of forming a blister. And once a blister forms, it can affect the way you walk or run, making you less efficient in your training and putting you at risk for strain in other areas.

There are several strategies to help prevent blisters.

- **Wear properly fitting shoes:** Shoes that are too tight or too loose can be problematic. A well-fitted shoe will leave a half inch of space between your longest toe and the tip of the shoe. A square or rounded toe box will also provide the most natural fit for your foot. Breaking in a new shoe by wearing it for a few hours is also helpful because it allows the shoe to gradually conform to your individual foot shape and anatomy.
- **Find the right socks:** Socks made of a breathable, moisture-wicking fabric are best. In general, cotton tends to absorb moisture and should be avoided. Synthetic fibers, such as polyester and nylon, or natural materials, such as merino wool, are excellent at wicking moisture and keeping your feet dry and comfortable. Socks that are seamless and that fit snugly also help improve fit and reduce friction.
- **Reduce moisture:** If your shoes or socks become wet, remove them as soon as possible and let them dry before wearing them again. Drying agents like aluminum chloride or talcum powder can also be used to keep your feet dry.
- **Use lubricants or tape:** To protect sensitive areas, coat the skin with a lubricant such as petroleum jelly or an anti-chafing ointment such as Bodyglide. You also can apply a small amount of adhesive material, such as moleskin, a hydrocolloid pad or paper tape, sized just larger than the susceptible area.

If you do develop a blister, here are ways to treat it.

- **Protect and use padding:** Padding can be useful to reduce pressure and friction over the area. Cut a piece of moleskin into a doughnut shape and place it so that it encircles and protects the blister. Then cover the blister and first layer of moleskin with a non-stick bandage or a second layer of moleskin. You also can use a soft hydrocolloid pad, such as 2nd Skin.
- **Drain if needed:** If blisters are small and not causing pain, leave them be. The skin overlying them acts as a natural barrier and helps prevent bacteria from seeping in, which can cause infection. If blisters are large or causing functional limitations, drainage is a good idea. To do so, wash the area with soap and water or cleanse it with alcohol. Then, use a sterilized needle to puncture the blister. Light pressure can be applied to help remove the fluid. Do not peel away the remaining skin because it acts as a protective barrier. Then apply a loose, sterile bandage or gauze. .

- **Keep the area clean:** Examine the area daily to look for signs of infection and wash the area with soap and water. Signs of infection include pus, red and warm skin around the blister and red streaks leading away from the blister. If you develop these, contact your physician.

Overall, most blisters will naturally heal within 7-14 days. To be prepared, make a “blister kit” and have it at the ready, with items such as petroleum jelly, moleskin, a small pair of scissors and hydrocolloid pads.

If you have any questions or concerns regarding an injury or pain, please reach out to one of our experienced sports medicine physicians at Spectrum Health Medical Group Orthopedics at (616)267-8860. You can also find more information about our orthopedic programs and providers on our website.