

Blisters - Friction

Definition

- Raised pocket of clear fluid, covered by skin
- Friction blisters usually occur on the palms, fingers, heels or toes

Health Information

Symptoms

- Blisters cause mild to moderate pain.
- The amount of pain depends on where and how large they are.
- They can interfere with work or sports.

Cause

- A friction blister is the result of forces on the skin. Shear forces separate the top layer of the skin from the lower layer. This forms a cushion (blister) of fluid over the spot of friction or pressure.
- Hand blisters are often due to friction from using a tool too much. Examples are a shovel, pick, or rake. They can also be caused by sports equipment. Examples are a tennis racquet or boat oars. Gymnastics equipment (such as high bars) may also cause hand blisters.
- Foot blisters are likely due to friction from an activity. Examples are hiking or running. Often, a child has new shoes or poorly-fitting shoes. Children starting a new sport may develop blisters. Also, a risk factor to forming blisters is recently increasing the activity time.

Prevention of Foot Blisters

- **Shoes.** Buy shoes that fit. Do not wear shoes that are too tight or too loose. New hiking boots are often somewhat stiff. It is wise to first wear them around the house and on short walks.
- **Socks.** Do not use cotton socks. They tend to stay damp when wearing. Instead use synthetic (acrylic) or wool socks. Some people prefer to wear two socks at a time. You can wear a thin inner liner ('wicking') sock and a thicker outer sock.
- **Lubricants.** If your child often gets blisters at the same spot, use a lubricant. You can use petroleum jelly. Cover the area with a small amount of the lubricant before sports. This will help to reduce friction on the spot.
- **Taping Pressure Points.** If a lubricant doesn't stop blisters, taping is the next step. Taping is a very good way to treat hot spots for friction blisters. Many hikers and runners use taping. Use moleskin or duct tape. Cut a piece to a shape slightly larger than the pressure point. Put it on the pressure point. Smooth it from the center outward so that there are no wrinkles.

Prevention of Hand Blisters

- **Gloves.** Wear heavy-duty work gloves when working with the hands. Also, use gloves when working with tools. Examples are shovels, and rakes. Sports gloves can be used for rowing, paddling, weight lifting or cycling.
- **Lubricants.** Lower friction at pressure points by covering them with a lubricant. You can use petroleum jelly.

Care Advice

1. **Overview:**
 - Most friction blisters should not be opened. Reason: It increases the risk of infection.
 - However, large or severely painful blisters often need to be drained. This is done by poking a small hole in the blister with a needle. (See #4 below)
 - Here is some care advice that should help.
2. **Protect the Blister:**
 - Goal: Protect the blister from any more rubbing.
 - Surround it with a "donut" made from moleskin. Ask for this product at your drug store.
 - Using scissors, cut a moleskin piece to a shape larger than the blister.
 - Next cut a hole the size of the blister in the center. Do this by folding the moleskin in half and cut along the fold.
 - Remove the covering from the sticky side. Then, put the moleskin on with the blister in the center.
 - If the blister is taller than the moleskin, add one more layer of moleskin.
 - Hold the "donut" in place with a large strip of duct tape.
 - Other option: If you don't have moleskin, use a Band-Aid. Fold it and cut the center out to the size of the blister.
 - For foot blisters, also switch to shoes that don't rub the blister.
3. **Pain Medicine:**
 - To help with the pain, give acetaminophen (such as Tylenol) or ibuprofen. Use as needed.
4. **Severe Pain - Drain the Blister:**
 - Draining a large blister can help make the pain go away.
 - Wash the skin with rubbing alcohol.
 - Clean a needle or straight pin with rubbing alcohol.
 - Gently press the fluid to one side of the blister to create a bulge.
 - Pass the needle sideways through the fluid making 2 puncture holes. Gently wiggle the needle to make the holes larger.
 - Remove the needle.
 - Press the fluid out through the holes.
 - Leave the roof of the blister in place to protect the raw skin underneath.
 - Use an antibiotic ointment. No prescription is needed. Put it on twice per day after cleansing.
 - Cover the drained blister with a Band-Aid.
5. **Broken Blister Treatment:**
 - If the blister breaks open, let it drain.
 - Leave the roof of the blister in place to protect the raw skin underneath.
 - If there are any loose flaps of skin, trim them with a fine scissors.
 - Wash it with warm water and soap.
 - Use an antibiotic ointment. No prescription is needed. Put it on twice a day.
 - Cover it with a Band-Aid.
6. **What to Expect:**
 - Most often, they dry up and peel off without any treatment.
 - This may take 1 to 2 weeks.

Call Your Doctor If

- Blister looks infected
- Severe pain and you want your doctor to drain the blister
- You think your child needs to be seen
- Your child becomes worse

Pediatric Care Advice

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