



## **FRICION BLISTERS**

One of the most common painful conditions experienced by student-athletes beginning a new sport season is the occurrence of friction blisters on the feet. While blisters may not seem serious, they can certainly result in lost practice time or poor quality practice due to pain. Friction blisters are caused by friction between the foot and/or toes and one's shoe. Most friction blisters occur on the ball of the foot, the big toe, the heel, between the toes, and at the tips of the toes. Many athletes believe blisters are an unavoidable part of participation in athletics, but most blisters are preventable. The blisters that cannot be prevented should be treated in the early stages to minimize discomfort and the possibility of infection.

### **PREVENTION OF BLISTERS**

The prevention of blisters, in most cases, can be accomplished with careful attention to shoes and foot care.

#### **I. Shoes**

Athletes must wear shoes that properly fit their feet and are designed for their sport and the activities they will be performing. For example, wrestlers should never run in wrestling shoes and basketball players should not practice in running shoes. Properly fitting and designed shoes are a must in order to prevent blisters.

##### **Shoe Selection Suggestions**

1. As a general rule, there should be a thumb's breadth (thickness) of space between the end of the longest toe and the end of the shoe. This space should be measured while standing, as the feet are about two sizes larger when standing versus sitting.
2. Because feet swell during the day, shoes should be tried on in the late afternoon or evening. Be sure to try on both shoes as foot size and shoe cuts can vary.
3. Shoes should be tried on while wearing the socks that will be worn with the shoes during activity. Walking around the store will help reveal any obvious discomfort that will rule out certain shoes.
4. Shoes need to be broke in by wearing them during normal activities for several days before wearing them for athletics. Before wearing the shoes for athletics, be sure you can wear them all day without any discomfort.
5. Shoes should be allowed to air out after every workout

#### **II. Socks**

Socks should be selected based on one's foot size and the type of exercise in which one will participate.

##### **Sock Selection Suggestions**

1. Tube socks are not the best choice as they tend to slide down, wrinkle, and fold over at the toes more than fitted socks
2. While many people find cotton socks comfortable, those who sweat heavily may find socks made from synthetic fabric, such as acrylic, more comfortable. Synthetic socks allow more air to penetrate the sock which draws away moisture and cools the foot.
3. Many people find that wearing two pairs of socks, or wearing "double-layered" socks provides more cushioning and reduces friction.

### **III. Reducing Friction**

Even if one is wearing proper foot wear, there are several additional things that can be done to help reduce friction, especially if one is susceptible to blisters.

#### **Friction Reduction Suggestions**

1. Excessive callus buildup can be prevented by filing large calluses so they are smooth and do not have a ridge.
2. Applying skin lubricant on any areas of the foot or toes susceptible to blisters can greatly reduce friction.
3. If excessive sweating is a problem, the athlete may choose to use foot powder to help reduce moisture. This can be done with or without the use of lubricants.
4. Be sure to lace shoes snugly, but not tightly, from the bottom to the top.

## **TREATMENT OF BLISTERS**

Once a blister has developed, the goals must be to minimize discomfort, speed healing, limit the development of new blisters, and avoid infection. Treatment of blisters should begin immediately upon the development of a “hot spot” on the foot.

#### **Blister Treatment Suggestions**

1. When the athlete first notices the “hot spot” they should have the area properly covered for protection. A skin lubricant may be used to reduce friction. In most cases the athlete will be able to return to participation with little, or no, discomfort.
2. When the activity is over, the tape and gauze should be removed and the area should be iced for 10-15 minutes. Icing blisters 2-3 times a day will help promote healing and reduce the amount of fluid that accumulates.
3. When a large amount of fluid is present in the blister, or the blister is quite large, a health professional such as a certified athletic trainer, a nurse, a physician, etc. should be contacted to drain the blister.
4. Once a blister has been drained, antibiotic ointment should be applied and the blister should be covered with a bandage or gauze.

### **IF THE FLAP OF SKIN COVERING A BLISTER IS INTACT, DO NOT REMOVE IT!!**

That skin remains the best protection for the blister. If the flap of skin has been torn off over the course of activity, antibiotic ointment should be applied to the blister and then covered with a bandage or gauze pad. It can then be covered with felt or other soft padding to help protect the area. A “donut pad” made from felt or foam rubber can be secured to the area with the hole of the pad directly over the blister. This may help the athlete feel more comfortable while walking or exercising. Skin lubricant can be applied to the outside of the tape to further decrease friction. During non-activity periods, antibiotic ointment should be applied and the blister should be covered. This reduces the risk of infection and allows the blister to heal properly.