

## What's the problem?

When using the term ulcer, we are generally referring to breaks in the skin. Ulcers are skin wounds that are slow to heal. They are classified in four stages, according to which layers of skin are broken through.

**Stage 1** ulcers are characterized by a reddening over bony areas. The redness on the skin does not go away when pressure is relieved.

**Stage 2** ulcers are characterized by blisters, peeling or cracked skin. There is a partial thickness skin loss involving the top two layers of the skin.

**Stage 3** ulcers are characterized by broken skin and sometimes bloody drainage. There is a full thickness skin loss involving subcutaneous tissue (the tissue between the skin and the muscle.)

**Stage 4** ulcers are characterized by breaks in the skin involving skin, muscle, tendon and bone and are often associated with a bone infection called osteomyelitis.

## How does it feel?

How an ulcer feels depends on the underlying cause of the ulcer. For example, one of the more common types of ulcers is seen in patients with diabetes, who have loss of sensation in their feet. In this type of ulcer, there is little if any pain, due to a condition called diabetic neuropathy. In fact, patients with diabetes typically get this type of ulcer because they've lost their protective pain sensation. Ischemic ulcers are another common ulcer that occur when there is loss of arterial blood flow to the leg. Ischemic ulcers can be very painful.

Lack of pain is not always a good initiator as to the severity of the problem. For this reason **it is very important to properly evaluate and treat any break in the skin.**

### **How did this happen?**

There are several causes for ulcers, and it is very important to determine the specific medical problem that caused the ulcer. There are essentially four main reasons people get ulcers on the foot.

1. **Neuropathic:** This is when a patient has loss of sensation in the feet. It is commonly seen in people with diabetes but it can be caused by other reasons such as chronic alcohol abuse. These ulcers occur mostly under weight bearing areas and often will begin as a callus or a corn.
2. **Arterial:** This type of ulcer is the result of poor blood flow to the lower extremity. This type of ulcer can be very painful and is usually found on the tips of toes, lower legs, ankle, heel and top of the foot. Arterial ulcers can become infected very easily.
3. **Venous:** This type of ulcer is caused by compromised veins. Veins are the vessels that take fluid out of the legs and back up to the heart. Veins have small valves that allow blood to flow only one way, back up to the heart. The valves normally block the tendency for gravity to pull the blood back down to the legs. Sometimes the valves leak or cease to work at all. If the valves do not work, then the fluid pools down in the legs, causing swelling. This swelling leads to increase pressure in the venous system, producing discoloration of the leg which eventually leads to ulceration. Venous ulcers are occur mostly around the inside of the ankle and are slow to heal.

4. **Decubitus (Pressure):** This type of ulcer is caused by excessive prolonged pressure on one area of the foot. The most common place to see this type of ulcer is on the backs of the heels of a person confined to bed.

### **How are ulcers diagnosed?**

During the course of treating an ulcer you may need several diagnostic tests. If the ulcer appears to be infected (if there is redness and drainage) then the doctor will culture the wound. This means that the doctor will take a sample of the drainage and send it to the lab. The reason for the culture is to identify the type of infection, so that you will receive the appropriate antibiotic. If the doctor suspects that the bone under the ulcer is infected, the doctor will do x-rays and/or a bone scan. If the doctor suspects that the underlying reason for the ulcer is poor circulation, then he will do a non-invasive vascular study. This test is to see if enough oxygen is getting down to the area to heal the ulcer.

### **How can I take care of myself?**

The best thing you can do for an ulcer is to have it looked at by your doctor, as soon as you can. The earlier the ulcer is treated, the better chance you have at healing it.

### **How will my doctor care for me?**

The first thing your doctor will do is inspect the wound. The doctor is looking for signs of infection, location of the wound and the color of the tissue in the wound. The doctor uses this information to determine the best treatment for that wound. Often the doctor will refer you to another specialist, such as a vascular doctor, to check your circulation. If you have diabetes, she will want to consult with your diabetes doctor to make sure that your blood sugar is under control. Once the doctor determined the cause of the ulcer and made the necessary referrals, treatment of the ulcer can begin. The treatment will be tailored to the individual ulcer and it is often difficult to predict how long it

will take for an ulcer to heal. A team approach, that includes a few different types of doctors, is the best way to treat and heal ulcers.

### **Can I prevent it from happening again?**

You can take steps to prevent ulcers from recurring. The best prevention is to treat the underlying cause of the ulcer. If you have diabetes check your blood sugar daily and inspect your feet every day. If the reason for your ulcer is swelling in the legs, then you must wear support stockings and keep your feet elevated as much as possible.

Ulcers can be a very debilitating problem, causing pain and disability. The best treatment is preventing the ulcer from ever occurring. If it does occur, have it checked immediately by your doctor.

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