



Education

Diabetes: Foot Ulcers and Infections

What are diabetic foot complications?

Foot ulcers (sores) and infections are a problem that can be caused by diabetes. The severity of the problem can range from minor sores to serious damage of tissues in the foot.

How do they occur?

When you have diabetes, you may have poor blood flow to your feet. This makes it harder for your feet to fight infections and heal from injuries. As a result, any infections and sores on your feet can become serious. Without treatment, severe infections can cause the flesh of your foot to die (gangrene). Diabetics are 20 times more likely to have gangrene in the foot than people who do not have diabetes.

Because diabetes damages nerve endings, you may not feel pain if you hurt your foot or get an infection. This can make it hard for you to know when you need medical treatment.

What are the symptoms?

The initial symptoms of an injury or infection may be swelling, redness, or pain. Sores may appear on the skin of your foot. They may heal but later return in the same place. If the sores are not treated, the flesh may die and turn black.

How are they diagnosed?

Your health care provider will suspect that you are developing a sore if there is an area of redness or a blister forming on your foot. Most often sores are on the bottom of the foot or on the toes. However, they can be anywhere there has been unusual pressure (such as from a wrinkle in your sock) or an injury (such as from a sharp corner of a toenail).

Your provider may swab the ulcer to test for bacteria.

Sometimes sores are much larger than they appear. Your provider will need to determine how deep the ulcer is. You may need an x-ray to make sure there is no bone infection.

How are they treated?

Your provider may prescribe antibiotics or other medicines to put on the sore or infected part of your foot. The medicine will help fight infection, rid the wound of dead flesh, and help new, healthy flesh to grow. Your provider may also prescribe an oral antibiotic.

You may have to stay off your feet for a while to prevent further irritation of the sores or infections. You may also need to keep your foot raised on a stool or pillow to help the blood circulate better. Your provider may recommend physical therapy treatments to help your foot heal. The therapist may also evaluate how you are walking and how well your shoes fit. Sometimes a foot specialist (podiatrist) may help with your foot care.

In some cases, you may be hospitalized for treatment. If antibiotics do not heal the infected or ulcerated area, your provider may have to remove the infected flesh surgically. In an extreme case, if you have gangrene, the affected part of your foot may need to be removed.

How long will the effects last?

As long as you have diabetes, you will be at risk for foot infections. It is important for you to take good care of your feet to lessen the risk of infection and complications, such as the loss of your foot or leg. Diabetes is the leading

cause of leg amputations in the US.

How can I help prevent diabetic foot complications?

Look at your feet at the end of each day to check for reddened areas, cuts, or scrapes that could become infected. If you cannot see the bottom of your feet, use a mirror or ask someone for help. See your health care provider at the first sign of any foot problems. Also follow the foot care guidelines given below.

Bathing and drying:

- Wash your feet every day with soap and warm (not hot) water. Then dry your feet carefully, especially between the toes. After your feet are dry, put lanolin or a lotion recommended by your provider on your feet to keep the skin soft and free of scales. Do not put lotion between your toes because it may keep the skin in that area too moist.
- If your feet sweat a lot, keep them dry by dusting them with talcum powder.

Treating corns and calluses:

- Don't treat corns or calluses yourself. Do not use nonprescription products for these problems unless your health care provider says it is OK.
- Tell your health care provider right away if you develop a corn or callus.

Toenail care:

- Cut your toenails carefully. Cut them straight across. Do not cut the sides or the cuticles.
- Clean your nails carefully.
- If your nails are hard to trim, ask your health care provider's office for help.

Foot warmth:

- Wear cotton socks to bed if you need extra warmth for your feet.
- Avoid using hot water bottles or electric heaters to warm your feet. Because you may not feel hot and cold with your feet, you may burn your feet accidentally and develop an infection.
- Avoid putting your feet where they could accidentally be burned; for example, on hot sand at the beach, in hot bath water or whirlpools, or near a fireplace.

Footwear:

- Wear soft leather shoes that fit properly.
- Ask your health care provider about specially made shoes, especially if you have foot problems.
- Avoid wearing new shoes for more than an hour a day until they are thoroughly broken in.
- Avoid sitting with your legs crossed.
- Wear clean socks and change them at least once a day.
- Never walk barefoot. Keep slippers by your bed to use when you get up at night.

In addition to these foot care guidelines, good control of your blood sugar and your blood pressure help prevent foot problems. You should also not smoke because it causes poor blood flow and slows the healing of wounds.

See your health care provider at least every 3 months. You should have a foot check at each of these visits. Be sure to see your provider sooner if you have a red area or sore. Once a year your provider should check your feet for nerve damage. If you lose the ability to feel things on the skin of your feet, then you will need to take extra precautions to prevent injury.

For more information contact:

- American Diabetes Association, Inc. Phone: 800-DIABETES, or 800-342-2383 Web site: <http://www.diabetes.org>
- American Podiatry Association Phone: 800-FOO-TCARE, or 800-366-8227 Web site: <http://www.apma.org>

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