

Diabetes and Foot Problems



How can diabetes affect my feet?

For people with diabetes, having too much glucose (sugar) in their blood for a long time can cause some serious complications, including foot problems. The two main concerns are diabetic neuropathy and peripheral vascular disease.

For people with diabetes, too much glucose in the blood can cause serious foot complications.



What is diabetic neuropathy?

Uncontrolled diabetes can damage your nerves. If you have damaged nerves in your legs and feet, you might not feel heat, cold, or pain. This lack of feeling is called "sensory diabetic neuropathy." If you do not feel a cut or sore on your foot because of neuropathy, the cut could get worse and become infected. The muscles of the foot may not function properly because the nerves that make the muscles work are damaged. This could cause the foot to not align properly and create too much pressure in one area of the foot. It is estimated that up to 10% of people with diabetes will develop foot ulcers. Foot ulcers occur because of nerve damage and peripheral vascular disease.

Diabetic neuropathy is a lack of feeling accompanied by tingling, burning, pain, or numbness in your legs and feet due to nerve damage.



What is peripheral vascular disease?

Diabetes also affects the blood vessels and alters the flow of blood. Without adequate blood flow, it takes longer for a sore or cut to heal. Poor blood flow in the arms and legs is called "peripheral vascular disease." Peripheral vascular disease is a circulatory disorder that affects blood vessels away from the heart. If you have an infection that will not heal because of poor blood flow, you are at risk for developing ulcers or gangrene (the death of tissue due to a lack of blood).

Peripheral vascular disease causes poor blood flow in the arms and legs that can affect the ability of a sore or cut to heal, leading to ulcers or gangrene.



What are common foot problems of people with diabetes?

Anyone can get the foot problems shown on the following slides. For people with diabetes, however, these common foot problems can possibly lead to infection and serious complications, such as amputation.

Common foot problems of people with diabetes can lead to serious complications.



Athlete's foot

Athlete's foot is a fungus that causes itching, redness, and cracking. Germs can enter through the cracks in your skin and cause an infection. Medicines that kill the fungus are used to treat athlete's foot. These medicines may be pills and/or creams applied directly to the problem area. Ask your doctor to recommend a medication for athlete's foot.

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Fungal nail infection

Nails that are infected with a fungus may become discolored (yellowish-brown or opaque), thick and brittle, and may separate from the rest of the nail. In some cases, the nail may crumble. The dark, moist, and warm environment of shoes can promote fungal growth. In addition, an injury to the nail can put you at risk for a fungal infection. Fungal nail infections are difficult to treat. Medications applied directly to the nail are available, but they only help a small number of fungal nail problems. Oral medications (pills) may need to be prescribed by your doctor. Treatment also may include periodic removal of the damaged nail tissue.

Nails that are infected with a fungus may become discolored, thick and brittle, and may separate from the rest of the nail.



Calluses

A callus is a build-up of hard skin, usually on the underside of the foot. Calluses are caused by an uneven distribution of weight, generally on the bottom of the forefoot or heel. Calluses also can be caused by improperly fitting shoes or by a skin abnormality. Keep in mind that some degree of callus formation on the sole of the foot is normal. Proper care is necessary if you have a callus.

- After your bath or shower, use a pumice stone to gently remove the build-up of tissue.
- Use cushioned pads and insoles in your shoes.
- Medication also may be prescribed to soften calluses.
- **DO NOT** try to cut the callus or remove it with a sharp object.

Calluses are a build-up of hard skin, usually on the underside of the foot caused by an uneven distribution of weight.



Corns

A corn is a build-up of hard skin near a bony area of a toe or between toes. Corns may be the result of pressure from shoes that rub against the toes or cause friction between the toes. Proper care is necessary if you have a corn.

- After your bath or shower, use a pumice stone to gently remove the build-up of tissue.
- Do not use over-the-counter remedies to dissolve corns.
- **DO NOT** try to cut the corns or remove it with a sharp object.

Corns are a build-up of hard skin near a bony area of a toe or between toes.



Blisters

Wearing shoes that do not fit properly or wearing shoes without socks can cause blisters, which can become infected. When treating blisters, it's important not to "pop" them. The skin covering the blister helps protect it from infection. Use an antibacterial cream and clean, soft bandages to help protect the skin and prevent infection.

Blisters can form when your shoes rub the same spot on your foot.



Bunions

A bunion forms when your big toe angles in toward the second toe. Often, the spot where your big toe joins the rest of the foot becomes red and callused. This area also may begin to stick out and become hard. Bunions can form on one or both feet. They may run in the family, but most often are caused by wearing high-heeled shoes with narrow toes. These shoes put pressure on the big toe, pushing it toward the second toe. The use of felt or foam padding on the foot may help protect the bunion from irritation. A device also may be used to separate the big and second toes. If the bunion causes severe pain and/or deformity, surgery to realign the toes may be necessary.

Bunions form when the big toe angles toward the second toe and becomes red and callused (where the big toe joins the rest of the foot).



Dry skin

Dry skin can crack, which can allow germs to enter. Use moisturizing soaps and lotions to help keep your skin moist and soft.

Dry skin can crack, allowing germs to enter.



Foot ulcers

A foot ulcer is a break in the skin or a deep sore, which can become infected. Foot ulcers can result from minor scrapes, cuts that heal slowly, or from the rubbing of shoes that do not fit well. Early intervention is important in treatment. Ask your doctor for advice on how to best care for your wound.

*a severe diabetes foot ulcer image:
A foot ulcer is a break in the skin or a deep sore which can become infected.*



Hammertoes

A hammertoe is a toe that is bent because of a weakened muscle. The weakened muscle makes the tendons (tissues that connect muscles to bone) shorter, causing the toes to curl under the feet. Hammertoes can run in families. They can also be caused by shoes that are too short. Hammertoes can cause problems with walking and can lead to other foot problems, such as blisters, calluses, and sores. Splinting and corrective footwear can help in treating hammertoes. In severe cases, surgery to straighten the toe may be necessary.

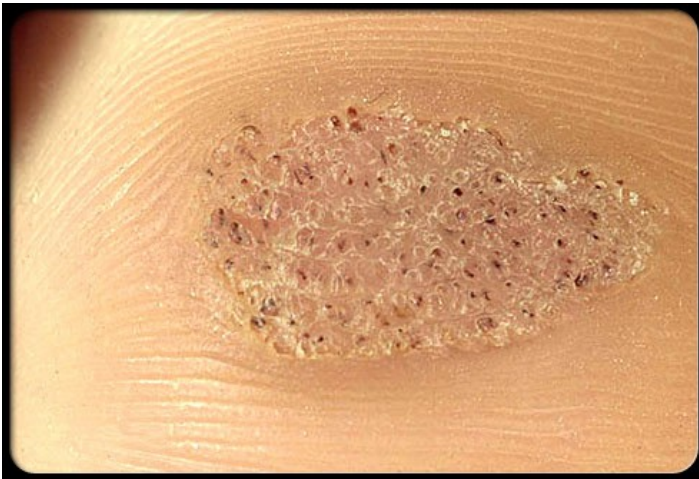
A hammertoe is a toe that is bent because of a weakened muscle that makes the tendons shorter, causing the toes to curl under the feet.



Ingrown toenail

Ingrown toenails occur when the edges of the nail grow into the skin. They cause pressure and pain along the nail edges. The edge of the nail may cut into the skin, causing redness, swelling, pain, drainage, and infection. The most common cause of ingrown toenails is pressure from shoes. Other causes include improperly trimmed nails, crowding of the toes, and repeated trauma to the feet from activities such as running, walking, or doing aerobics. Keeping your toenails properly trimmed is the best way to prevent ingrown toenails. If you have a persistent problem or if you have a nail infection, you may need a doctor's care. Severe problems with ingrown nails may be corrected with surgery to remove part of the toenail and growth plate.

Ingrown toenails occur when the edges of the nail grow into the skin causing redness, swelling, pain, drainage, and infection.



Plantar warts

Plantar warts look like calluses on the ball of the foot or on the heel. They may appear to have small pinholes or tiny black spots in the center. The warts are usually painful and may develop singly or in clusters. Plantar warts are caused by a virus that infects the outer layer of skin on the soles of the feet. **DO NOT** use over-the-counter medications to dissolve the wart. If you are not sure if you have a plantar wart or a callus, let your doctor decide.

Plantar warts look like calluses on the ball of the foot or on the heel and are caused by a virus that infects the outer layer of skin.



Can these foot problems be prevented?

Proper foot care can help prevent these common foot problems and/or treat them before they cause serious complications. The following slides provide tips for good foot care.

Learn how to prevent foot problems if you have diabetes.



Diabetes and Foot Problems Prevention Tip #1

Take care of yourself and your diabetes. Follow your healthcare practitioner's advice regarding nutrition, exercise, medication, and keep your blood glucose level within the range recommended by your doctor.

Take care of your diabetes by keeping your blood glucose level within the range recommended by your doctor.



Diabetes and Foot Problems Prevention Tip #2

Check your feet every day for sores, blisters, redness, calluses, or any of the other problems listed in this slideshow. If you have insufficient blood flow, it is especially important to check your feet daily.

Check and examine your feet every day.



Diabetes and Foot Problems Prevention Tip #3

- Wash your feet in warm water every day, using a mild soap.
- Do not soak your feet.
- Dry your feet well, especially between the toes.
- If the skin on your feet is dry, keep it moist by applying lotion after you wash and dry your feet.
- Do not put lotion between toes.

Your doctor can tell you which type of lotion is best to use.

Wash your feet every day and keep them nice and moisturized by applying lotion.



Diabetes and Foot Problems Prevention Tip #4

Gently smooth corns and calluses with an emery board or pumice stone. Do this after your bath or shower, when your skin is soft. Move the emery board in only one direction.

Smooth corns and calluses with an emery board or pumice stone.



Diabetes and Foot Problems Prevention Tip #5

- Check your toenails once a week.
- Trim your toenails with a nail clipper straight across.
- Do not round off the corners of toenails or cut down on the sides of the nails.
- After clipping, smooth the nails with an emery board.

Check and trim your toenails once a week.



Diabetes and Foot Problems Prevention Tip #6

- Always wear socks or stockings with soft elastic, and that fit your feet.
- Wear socks at night if your feet get cold.
- Always wear closed-toed shoes or slippers.
- Do not wear sandals and do not walk barefoot, even around the house.
- Wear shoes that fit well.
- Buy shoes made of canvas or leather and break them in slowly.
- Extra wide shoes are also available in specialty stores that will allow for more room for the foot for people with foot deformities.

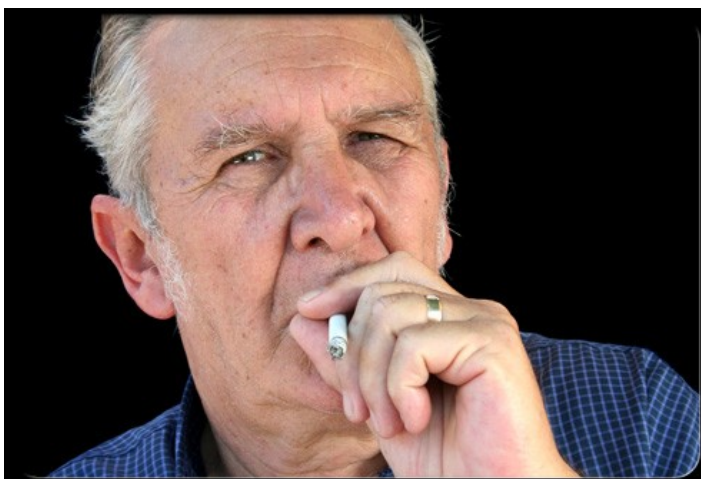
Wear socks or stockings and proper shoes at all times.



Diabetes and Foot Problems Prevention Tip #7

Maintain the blood flowing to your feet. Put your feet up when sitting, wiggle your toes and move your ankles several times a day, and don't cross your legs for long periods of time.

Put your feet up to maintain good blood flow.



Diabetes and Foot Problems Prevention Tip #8

If you smoke, stop. Smoking can make blood flow problems worse.

Smoking can make blood flow problems worse.



Diabetes and Foot Problems Prevention Tip #9

See your podiatrist (foot doctor) every two to three months for check-ups, even if you don't have any foot problems. Make sure your doctor examines your feet during each check-up. An annual foot exam should be performed that should include an inspection of the skin -- he or she may check for redness or warmth of the skin. The exam will also be to check for pulses and temperature of your feet and an assessment of sensation to the foot with a tool called a monofilament.

Visit your doctor or podiatrist for regular check-ups on your feet, even if you don't have any foot problems.



When should I contact my doctor?

Contact your doctor if you experience any of the following problems:

- Changes in skin color
- Changes in skin temperature
- Swelling in the foot or ankle
- Pain in the legs
- Open sores on the feet that are slow to heal or are draining
- Ingrown toenails or toenails infected with fungus
- Corns or calluses
- Dry cracks in the skin, especially around the heel
- Unusual and/or persistent foot odor

When should I contact my doctor?

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