

# Diabetic Foot Intervention



ALASKA NATIVE  
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## Why does diabetes cause foot problems?

Diabetes can affect the health of the feet in more than one way:

### Diabetes can damage nerves

Nerves allow us to feel pain. While pain doesn't sound like a good thing, pain protects us from harm. When something is too hot or sharp, we feel pain, and we pull our foot away. If we don't know to pull our foot away, we can continue to harm our foot.

### Diabetes can damage blood vessels

Our blood vessels carry our blood. Our blood carries oxygen and nutrients to and from our tissues, joints, muscles and nerves and carries the wastes away. Diabetes can damage blood vessels. With a damaged transport system and a poor blood supply the tissues, joints, muscles and nerves can suffer.

## What kinds of foot problems can diabetes cause?

### Neuropathy

Neuropathy means nerve damage. Diabetes can cause damage to the nerves of the feet and legs. Nerve damage can be painful for some people. Other people with nerve damage may feel cramping or tingling. Over time, people with severe nerve damage may not be able to feel any sensation at all. A person who has lost sensation cannot feel hot, cold, pain or even light touch.

Treatments for nerve damage depend on the type of nerve problems a person is having. There are medications, creams and stretches for some nerve pains and cramps. Also, controlling blood sugars can help decrease symptoms of pain and cramping.

If a person cannot feel pain, they will need to use their hands to feel and their eyes to look for problems that they cannot see. A person can learn new skills for protecting their feet when they have lost feeling in their feet due to nerve damage.

### Changes in foot shape

The muscles and the joints give your feet their shape. Nerves help keep the muscles and the joints in the feet working together. When these nerves get damaged, the foot can change shape. An abnormally shaped foot can make



finding shoes difficult. Poorly fitting shoes can cause calluses and sores. Both calluses and sores put a person with diabetes at risk for amputation.

A person who has had changes in the shape of their feet will need special shoes that fit them without causing sores. Good diabetes control is also important to help prevent further problems.

### Skin changes

Our body's nerves have many functions. Many of these we don't think about, because they function "automatically". Nerves that function automatically are called autonomic nerves. Autonomic nerves operate our sweat glands. Our sweat glands do more than just sweat when we work hard; they also produce enough moisture to keep our skin from drying out and cracking. Our skin is an important barrier from bacteria and disease. Cracks in our skin give an opportunity for bacteria to get into the body. Cracks can also turn into sores.

When a person's sweat glands don't produce enough moisture to keep the skin soft, a person can apply lotion to himself or herself.



### Here are the steps to keeping your skin healthy:

1. Wash your feet every day with a mild soap.
2. Dry your feet off, including between your toes.
3. Apply a good lotion all over your feet, but not between your toes. Ask your provider or educator about a good lotion to use.

### Problems with toenails

People with diabetes are more likely to have problems with fungal and ingrown toenails. When a fungus grows within a toenail, toenails may become thickened, making them difficult to trim or fit into a shoe.

Keep toenails trimmed straight across and not too short to avoid ingrown nails. Ask your provider for help caring for your nails and checking the fit of your shoes.



### Calluses

Calluses are usually a normal and protective response to stress on the skin, but they may build up faster on people with diabetes. When calluses are too thick they can cause foot ulcers. Some calluses can be managed regularly with a pumice stone after you shower or bathe. Others may need to be trimmed by your provider. Sometimes shoe inserts or different shoes can provide cushioning or prevent callus problems. Ask your provider about the best way to care for your calluses.

### Lack of circulation

Diabetes can damage the blood vessels that carry blood to and from the feet and legs; this causes poor circulation. Poor circulation makes it difficult for cuts and sores to heal; it can also damage nerves and tissues in the areas that do not get enough blood. Talk to your provider about the shoes and socks you wear. They should fit well and not be too tight. Winter boots should be warm enough for cold weather and protect your feet from frostbite.

### Cuts that heal slowly

High blood sugar and poor circulation make it difficult for cuts and sores to heal. Open cuts and sores can lead to infection and put a person at high risk for amputation. Even small wounds, cuts or sores are important and need to be reported to your provider.



### Foot ulcers

A foot ulcer is very serious, even if it is not painful. Some of the causes have been mentioned above, such as heavy callus buildup, poor circulation and poorly fitting shoes. A foot ulcer requires immediate attention. An untreated ulcer could result in an amputation.

Different ulcers require different treatments. The ulcer may need to be cleaned out, require surgery and a stay in the hospital, or need a special cast or healing boot.

### Amputations

Amputations can be a complication of diabetes but can also be prevented. A person is at higher risk for amputation if blood sugar, blood pressure and blood cholesterol are not controlled. A person can greatly reduce the risk of amputation by practicing good diabetes management and good foot care.

### What can I do if I'm having foot problems?

See your provider right away. The treatment for your specific foot problem can depend on many factors. However, there are some things every person with a foot problem will need to do to help prevent further damage:

1. **Keep blood sugar, blood pressure and blood cholesterol at your target.** Managing diabetes takes your commitment. What you will need to do to manage diabetes will also change over time. Your diabetes provider and educator are available to support you. Talk to them about the skills and tools you need to meet your diabetes goals.



2. **Check your feet** with your eyes and your hands every morning and every night for any cuts, sores, blisters, color or shape changes. Report everything to your provider. If you cannot see the bottom of your feet, you can use a mirror. Your educator can show you how to do this.

3. **Have your provider inspect your feet** at each clinic visit. Your provider should also do a full foot exam regularly. This exam checks for circulation, sensation and monitors for changes.

4. **Avoid tobacco!** Many of the people who end up getting amputations are tobacco users.



## More Information

For more information or if you have questions, contact:

**Diabetes Educator:** \_\_\_\_\_

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**Diabetes Program**

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