

Diabetes and the Foot

A Brief Guide to Podiatric Care in the Patient with Diabetes

There are several changes that occur in a patient with diabetes. Many of these changes can have a dramatic effect on the feet. Some of these changes can even lead to severe infection and even amputation of the feet and legs, Statistics show that the majority of hospitalization in diabetic patients is related to foot complications such as ulcerations and infection.

Peripheral Neuropathy

A gradual loss of feeling and sensation to the feet is a major change the diabetic patient may find. This may happen very slowly over a period of months and the patient may not even notice the change. This loss of sensation is a major reason that diabetics have more problems with infection and sores on the feet, It is much easier to ignore a rock in your shoe, a point of shoe irritation that can make a blister or even getting burned from shower or tub water that is too hot.

Peripheral Vascular Disease

A loss of circulation to the feet often accompanies the sensation loss. This means that the blood flow to the foot is diminished to a point where it is harder to heal cuts, blisters and open wounds. The skin will also get more fragile and breakdown more easily. This process is made much worse in a smoker.

Foot Ulcerations (wounds/sores/deep blistering)

One of the major foot problems to be aware of is the diabetic ulceration. This problem can lead to severe **infection** and even **amputation** of the foot or leg. If it sounds like we are trying to scare you it is only because with awareness and proper foot care, ulcerations can be prevented and treated effectively. **It is your awareness that counts!**

Because of the loss of sensation and circulation a blister or callus can develop into loss of skin and an opening that will not heal. This is ulceration. This should be treated aggressively before it gets infected. An ulcer is inviting infection because it is an open door for the bacteria on the outside of the skin to get inside the body.

Once an ulceration or loss of skin occurs it is a race to get the wound to heal up before an infection occurs. Treatment of the ulcer may involve dressing changes, debridement (scraping) of the wound and various types of padding, shoe modification or even casting. Wound healing can be helped on your part by proper diet and blood sugar control, proper rest, and smoking cessation. Some ulcerations may take weeks and even months to heal.

Foot Infections

If an ulceration or blister becomes infected, quick action must be taken to prevent its spread or progression. As explained earlier, the diabetic cannot fight infection as well and is vulnerable to serious, even life threatening illness stemming from a small of the foot. Signs of infection include: drainage, redness, warmth, swelling, red streaking up the leg and pain. These are reasons to see your doctor immediately! Occasionally surgery to clean up the infection may be needed. In severe cases antibiotics in the hospital may be indicated. Some severe infections do result in amputation of part or all of the foot, so prevention of any infection is very important.

Charcot Foot

There is a certain type of arthritis related to diabetes known as 'Charcot Foot'. This is related to excessive destructive forces on the foot joints in a patient that has the loss of proper nerve function mentioned earlier.

What the patient will notice is a sudden and unexplained redness, swelling and pain in the foot. If neglected, this can lead to a severe collapse of the entire foot with destruction of the joints and bones in the foot.

Tips for care of the diabetic foot

1. Be Aware of Your Feet

With diabetes you must always be aware of any little aches or pain in the foot. Even little corns or blisters can lead to more severe problems. Inspect your feet (with a mirror or **iphone video** to see the bottom side) every day and look for cracks, open sores or foreign objects in the foot.

2. Avoid Hot Water or Heating Pads

Water from a shower, bath, or foot soak can burn and should never be more than luke warm, if you are a diabetic. Always test the water temperature with your elbow since your fingers may have lost some sensation as well.

3. Use Moisturizing Lotion

Diabetic skin can be excessively dry, causing cracking and possible infection. The daily use of any moisturizing lotion before bed or after a bath or shower can help prevent this.

4. Proper Shoes

Please do not let vanity go before function and fit when it comes to shoes. Fit your shoes with plenty of room and stay mostly with conservative walking shoes with good support. If we had our way, Podiatrists would have everyone wearing an athletic shoe. Consider an over the counter insole for added cushion such as Spenco or Polysorb. Shoes or hard soled slippers should be worn at all times, including at home.

5. Avoid Bathroom Surgery

Avoid the temptation to just do it yourself when it comes time to cut calluses or trim back ingrown nails. Avoid medicated pads or liquid callus removers, doing so can lead to severe infection or other problems much more easily than if you didn't have diabetes.

Your Podiatrist

If you have any question or problems, you should consult your podiatrist. If you don't know one, your GP can refer you to one. It is important for most diabetics to have at least a yearly foot check to evaluate the status of the nails, skin, sensation and circulation.

Things your podiatrist may recommend:

- Regular visits and foot checks
- An exercise program
- Periodic nail trimming
- Improvement of your diet and blood sugar control
- Special shoes
- Customized insoles
- Preventative or emergent surgery
- Oral antibiotics for mild infection
- Hospitalization for severe infections

Bellevue Podiatric Physicians

Bone and Joint Center at the University of Washington