

## Ulcers - Diabetic Foot Ulceration

Patients with diabetes do not have normal feeling in their feet. The nerves stop conducting electrical impulses correctly as a result of the abnormal sugar metabolism. Sensations in the foot begin to change and decrease over time. This condition is called neuropathy.

Due to the neuropathy, light touch, deep pressure and most skin sensations cannot be adequately perceived. Any friction, rubbing, or pressure from a shoe will lead to an increased concentration of pressure on the foot. This causes skin breakdown and an ulcer develops. The pressure and friction are normal but the inability to feel these sensations is abnormal. The patient cannot make the fine-tuning and adjustments necessary to prevent an ulcer from forming.

An ulcer is not caused by lack of circulation or by infection. The ulcers are usually associated with bone pressure and a bone prominence under the arch of the foot. These ulcers can become very large and must be treated.

If left untreated, the ulcer will lead to eventual bone infection and possibly amputation of the foot or leg. The most effective way to treat an ulcer is to change the pressure on the bottom of the foot. The majority of ulcers can therefore be treated with a walking boot, walking cast or a total contact cast. The total contact cast treatment for diabetic ulceration was popularized by Dr Myerson in the 1980's and this treatment principle is now used worldwide. The cast distributes the pressure on the bottom of the foot allowing even pressure for walking and eventual healing of the ulcer. Complete healing takes anywhere from two to six months. If healing does not occur or if infection develops, surgery will become necessary.