

## **TREATMENT OF A DIABETIC FOOT ULCER**

The treatment of a diabetic ulcer is a **MEDICAL EMERGENCY**.

1. If an ulcer is small and the foot is not deformed, the wound can be managed with appropriate wound care techniques, proper fitting shoes and a non-shearing insole,
2. If the ulcer is a significant size or recurrent, a complete radiological and doppler blood flow investigation is required. Surgery must be considered for the removal of devitalized tissue, correction of bony deformities and the re-establishment of adequate blood supply to assure a successful outcome.
3. Next, depending on the ulcer location, size and depth, a total contact cast, rocker bottom walking brace with custom foot bed or extra-depth shoes with orthotics are used to optimize ulcer pressure relief.
4. A total contact cast is extremely helpful in the treatment of plantar ulcers, chronic osteomyelitis and neuropathic bone degenerative changes.

NEVER ignore the spontaneous onset of acute inflammation or persistent pain in a diabetic's foot or ankle. This may represent Charcot (neuropathic) bone changes which required immediate treatment.

5. If the patient has an infection with extensive skin and bone destruction or loss of blood supply, amputation of the affected area may be necessary.

## **DIABETIC PERIPHERAL NEURITIC PAIN**

Diabetic neurotrophic pain can be debilitating because of its negative impact on the patient's sleeping patterns and degree of ambulation.

The following are a few suggestions which have proven helpful.

1. Tight blood glucose control has been shown to delay the development of this problem and also decrease its intensity. (When switching from oral hypoglycemics to insulin some patients will report transient neuritic complaints.)
2. Stop Smoking! This is imperative to decrease the speed of onset of all diabetic complications.
3. Increase peripheral blood flow by:
  - a) 4-5 short (15-20 minutes) brisk walks each day
  - b) the use of 4-6 inch head blocks for the patients bed to assist nocturnal peripheral run off.
4. Contrasting stimuli are helpful:
  - a) wearing socks to bed
  - b) the application of Zostrix ointment or Opsite dressings or Opsite spray to the areas most affected as required throughout the day but especially before going to bed.
5. Look for the coexistence of "restless leg syndrome", rest pain or other metabolic factors which may be exasperating this pain, and treat them accordingly.
6. Amitriptyline, carbamezepine and pentoxifylline have also produced positive results.

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## **THE DIABETIC FOOT AND THE NEUROTROPHIC ULCER**

## **PREVENTION AND TREATMENT**

## **THE CALGARY FOOT & ULCER CARE CLINIC**

## THE CALGARY FOOT & ULCER CARE CLINIC

*A person with diabetes mellitus will often develop nerve damage, pressure sores and infection in their feet. This pamphlet is designed to help you understand what causes these problems and how to treat them most effectively.*

### **PREVENTION OF DIABETIC LOWER EXTREMITY COMPLICATIONS:**

Prevention is the most important aspect of treatment of the diabetic foot. Foot ulcers in diabetics frequently require hospitalization and amputation. Fifteen percent of diabetics will develop foot ulcers. Amputations can occur in 6 of every 100 diabetics.

1. The foot should be **INSPECTED** either by the patient or a member of the family on a daily basis. Any early evidence of impending damage such as increased areas of temperature, redness, blistering or skin cracking should be reported to your physician immediately.
2. Proper **INSULIN** use, **DIET** control, and the elimination of **SMOKING** will reduce nerve damage and the blockage of arteries.

#### **3. The Shoe Check List:**

- Shoes must fit well in length, depth and width and be made of **soft supple uppers**. The interior of the shoe must be free of nails, glue, creases or tears.
- The interior of the shoe should be thoroughly checked and **shook out** to clear any foreign objects before putting them on.
- **Socks** should be of cotton or polyester blend, with little elastic or thick knitted ribbing. Avoid darned socks as they produce pressure points.
- Never walk **barefoot** or in **slippers** as these do not provide any protection.
- Patients should not wear **NEW SHOES**, which may be too tight, for more than 30 minutes without making sure that the borders of their feet are not becoming inflamed.

In the long term, **CUSTOM SHOES** being of extra depth with molded insoles and adequate toe room are imperative. The recurrence rate of problems with patients in special shoes is **26%** versus **86%** if the patient continues to use their **own shoes**.

4. Avoid activities which **OVERUSE** the feet if your sensation is diminished, i.e. long walks, squash, cross country skiing.

5. Extreme hot and cold **TEMPERATURES** should be avoided as well as strong chemicals, such as corn or callus removers. Test your bath water with a thermometer or ask a family member to test it.
6. **OPTIMIZE SKIN AND NAIL CARE.** Skin and nail care are essential parts of both treatment and prevention in patients with decreased peripheral sensation.
  - Extensive calluses often promotes high pressure regions and can lead to skin breakdown. In the patient with an ulcer the removal of the callus surrounding the ulcer bed is essential for healing to occur. After the ulcer has resolved this callusing will continue and must be removed by a trained professional every four to six weeks to prevent its re-accumulation.
  - Prevention involves keeping the skin dry and lubricated. **Moist supple skin is less susceptible to injury, cracking and infection.**
  - Obtain or learn proper nail care. Once the skin has been broken by careless trimming or an ingrown nail, infection can intervene and cause direct tissue damage.