

# DIABETES

## What is Diabetes?

Diabetes is a chronic and complex condition, which can affect the entire body. For our bodies to work properly we need to convert glucose (sugar) from food into energy. A hormone called insulin is essential for the conversion of glucose into energy. In people with diabetes, insulin is no longer produced or not produced in sufficient amounts.

## Type 1 Diabetes

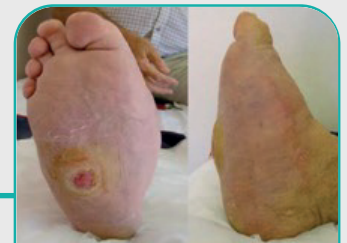
**Type 1 diabetes is an autoimmune condition in which the immune system is activated to destroy the cells in the pancreas that produce insulin. Without insulin, the body's cells cannot turn glucose (sugar), into energy.**

This can be managed through daily insulin injections, a healthy lifestyle and regular blood glucose testing. These actions can minimise the complications associated with diabetes.

## Type 2 Diabetes

This is the most common form, affecting 85-90% of all people with diabetes. In type 2 diabetes, the body is unable to properly regulate the amount of glucose in the blood. This type is caused from a variety of genetic and environmental factors including poor diet, obesity, insufficient physical exercise, and high blood pressure.

Initially type 2 diabetes can be managed with a lifestyle modification - healthy eating and regular exercise and BGL monitoring). However, as the disease progresses people are often prescribed medication to take in conjunction with lifestyle modifications.



## Complications of Diabetes

Poorly controlled diabetes overtime can lead to damage to the body. The most common complications that occur in people with diabetes include:

- Eyes
- Feet and Hands
- Kidneys
- Impotence
- Heart and blood vessels
- Gum Disease

## Foot Complications associated with Diabetes

Foot complications account for more hospital admissions than any other diabetic problem. The two major outcomes of foot complications are foot ulcers and amputations.

### Ulcers

It is usually a combination of problems rather than a single risk factor that causes ulceration. These include peripheral neuropathy (nerve damage), peripheral vascular disease, foot deformities (clawing toes), external trauma and peripheral oedema. The most common trauma in Western countries is inappropriate footwear. Patients with diabetes are at risk of developing multiple complications including damage to nerves and poor circulation. These complications make your feet at risk for harm or injury and is more likely to occur if:

- You have had diabetes for a long time
- Your blood glucose levels have been too high for an extended period
- You smoke
- You are inactive

#### Minimally Invasive Surgery:

Severe deformities will often need corrective fusion in particularly when Charcot joints are established.



**Low risk feet:** Have normal sensation and good blood flow. However, it is important to know that low risk feet can become high risk feet without symptoms, so regular checks are still important.

**High risk feet:** Are those people who have had a foot ulcer or amputation in the past. Feet with calluses or deformities like claw toes also have increased risk if poor feeling and/or decreased blood flow are also present.

Nerve damage (neuropathy) is a complication of diabetes that leads to a loss of sensation in the feet. When the nerve is damaged it no longer perceives pain due to numbness and therefore does not warn of injury. This is particularly true in the foot.

Diabetes can also cause damaged blood vessels, decreasing the blood flow to the feet. Poor circulation weakens bone causing disintegration of the bones and joints in the foot and ankle. As a result, people with diabetes are at a high risk for bones fractures in the foot.

When a diabetic fractures a bone in the foot, they may not be aware due to nerve damage. Continuing to walk on the injured foot results in more severe fractures and joint dislocations.

**Charcot's Foot:** Charcot foot is one of the more critical foot problems that can develop due to poor circulation and nerve damage. It is a condition which can deform the shape of the foot and lead to disability.

### Surgical Treatment

To minimize the chance of amputation there are several surgical options available.

It is best to see us earlier rather than later when you have this deformity particularly if you have an open ulcer/wound on your foot.

There are several minimally invasive techniques that are available to correct deformity and relieve open ulceration on the feet.