

How does the diabetes team check for Neuropathy?

Once a year at your Annual Review appointment, once you are over the age of twelve, we will examine your feet carefully to see that there is no damage. We also check the nerve and muscle reflexes in your ankles and knees and we will check you can feel vibration normally. These painless checks are usually conducted during annual review/clinic visit.

How can I help reduce healthcare associated infections?

Infection control is important to the well-being of our patients and for that reason we have infection control procedures in place. Keeping your hands clean is an effective way of preventing the spread of infections. We ask that you, and anyone visiting you, use the hand sanitiser available at the entrance to every ward before coming in to or after leaving the ward. In some situations hands may need to be washed at the sink using soap and water rather than using the hand sanitiser. Staff will let you know if this is the case.

www.buckshealthcare.nhs.uk

Follow us on Twitter @buckshealthcare

Author: DR S Watts
Issue date: Sept 2020
Review date: Sept 2023

Leaflet code: PDT-016
Version: 1.1

Complications of Diabetes explained

Patient information leaflet

For Parents & Carers of a child with Diabetes

Safe & compassionate care,

every time

Diabetes Complications Explained

All of these complications can sound very frightening. However, it is important that you know about them, because the risk of getting any or all of these complications can be reduced by keeping good/tight blood glucose control and having a healthy lifestyle.

An HbA1c less than 58 mmol/mol (7.5%) over the years reduces the risks almost to zero. An HbA1c over 75 mmol/mol (9%) dramatically increase's the risks, but every 11 mmol/mol (1%) you can bring your HbA1c down will cut the risks by about 10%.

1. Kidney Disease (Nephropathy)

The kidneys are the organs that filter and clean the blood and remove any waste products by making urine. They also regulate the amount of fluid and various salts in the body, helping to control blood pressure. Kidney disease (or Nephropathy to give it its proper name) is when the kidneys start to fail.

As with other diabetes complications, kidney disease is caused by damage to small blood vessels. This damage can cause the vessels to become leaky or, in some cases, to stop working, making the kidneys work less efficiently.

The longer you have diabetes, the greater the risk of kidney disease, and the risk increases as HbA1c increases. People with HbA1c levels less than 58 mmol/mol (7.5%) are unlikely to get kidney disease, but those with HbA1c levels above 75 mmol/mol (9%) have about a 1 in 3 risk.

.

The symptoms of neuropathy are:

- ♥ tingling in your toes and feet and sometimes in your lower leg
- ♥ numbness, or loss of feeling, in your feet
- ♥ pain, which can be quite severe, in both feet and/or up one or both legs
- ♥ a burning sensation, 'pins and needles' and shooting pains
- ♥ any contact with the skin, even bedclothes, can be uncomfortable

If you experience any of these symptoms, speak to your diabetes nurse or doctor.

The main problem is that Neuropathy leads to loss of feeling in feet and legs, which means you may not notice minor injuries, such as cuts, blisters and burns. These can lead to ulcers, which cause more hospital admissions in adults than any other diabetes related complication. If you get severe pain in your feet, this tends to improve with time, but is very difficult to treat.

Looking after your feet is absolutely vital:

- ♥ keeping blood glucose levels as near normal as possible
- ♥ wear shoes that fit well
- ♥ cut toenails straight across
- ♥ dry in between toes after swimming , bathing etc
- ♥ if your feet get wet change into dry socks as soon as possible
- ♥if you get athletes foot or verrucas go to your GP or ask to see a Podiatrist
- ♥Never go barefoot

Atherosclerosis is caused by:

- ♥ smoking
- ♥ high blood pressure
- ♥ being overweight
- ♥ not taking exercise
- ♥ raised cholesterol
- ♥ having diabetes

How does the diabetes team check for CVD?

We will check the lipid (fat) levels in your blood, and we will check your blood pressure once a year at your Annual Review. We will also check the circulation in your feet once a year once you reach the age of twelve. If needed, you can be prescribed tablets to lower your blood pressure and to lower your lipid levels. There are a few symptoms of CVD so the key is to have regular checks.

Nerve Damage (Neuropathy)

There are several types of Neuropathy but the commonest one that affects people with diabetes is known as 'Sensory neuropathy' which affects your legs and feet. This means that the nerves in your feet may not feel (sense) pain and discomfort as well as previously.

The risk of getting Kidney Disease can be reduced by:

- ♥ keeping blood glucose levels as near normal as possible (between 4 and 7 mmol/l before meals, and less than 10 mmol/l two hours after food)
- ♥ keeping blood pressure controlled.
- ♥ not smoking

How does the diabetes team check for kidney disease?

Kidney disease can be a very serious condition, which is why it is very important to detect it at its earliest stage. Everyone with diabetes will have an annual review. Once you reach eleven years of age, or you have had your diabetes for longer than five years your urine will be tested for protein. This test looks for tiny particles of protein in the urine, called 'microalbuminuria'. These appear during the first stages of kidney disease, as the kidneys become 'leaky' and lose protein. At this stage kidney disease can often be treated successfully, so this test is very important. Sometimes, during puberty the test may become positive, and then the microalbuminuria may settle down. We don't know whether these people are likely to go on to develop kidney disease in later life.

2. Eye Disease (Diabetic Retinopathy)

Diabetic Retinopathy is a diabetes complication affecting the retina. The retina is the layer at the back of the eye, which is sensitive to light. To be able to see, light must be able to pass to the retina. It passes through the cornea (clear covering in front of the eye), lens and vitreous (a clear, jelly-like substance that gives support to the back of the eye). The focused light or images are then carried to the brain by the optic nerve.

The longer a person has diabetes the greater the likelihood of developing Diabetic Retinopathy.

Long term Diabetes causes the capillaries (tiny blood vessels) in the retina to become blocked. This may then lead to leakage in the central retina or result in the growth of new vessels, which may bleed and fill the eye with blood (a vitreous haemorrhage). The risk increases as HbA1c increases. People with HbA1c levels less than 58 mmol/mol (7.5%) are unlikely to get Retinopathy, but those with HbA1c levels above 75 mmol/mol (9%) have about a 1 in 3 risk.

The risk of getting Eye Disease can be reduced by:

- ♥ keeping blood glucose levels as near normal as possible (between 4 and 7 mmol/l before meals, and less than 10 mmol/l two hours after food)
- ♥ keeping blood pressure controlled.
- ♥ not smoking

How does the diabetes team check for eye disease?

If eye disease is caught early it can be treated, so it is very important to look for it regularly once you reach the age of twelve. Children are now included in the County Diabetes Eye Screening Programme. Once a year you will have an appointment, if you are over 12, and have a photograph taken of the back of your eye. This is done by putting some drops into the eye to enlarge the pupils, so the ophthalmologist has a clear view of the back of the eyes. You will then have your head and chin supported (as in other eye examinations) and the camera is then brought close to the eye and a picture is taken. There is normally a flash with this, which will be very bright and can sometimes cause some temporary discomfort.

3. Cardiovascular Disease (CVD)

People with diabetes are 2 to 4 times more likely to develop CVD than those without Diabetes, making it the most common diabetes related complication. Higher lipid(fat) levels in the blood can be related to higher HbA1c's and further increases the risk

The term CVD applies to all diseases of the heart or blood vessels, including:

- ♥ high blood pressure
- ♥ heart attack
- ♥ stroke
- ♥ narrowing or blocking of the arteries (major blood vessels)

CVD is caused by atherosclerosis, which is where blood vessels become blocked with fatty deposits. In the brain this can cause a stroke ;and in the blood vessels supplying the heart it can cause a heart attack. It can also cause narrowing of the arteries to the legs, resulting in poor blood supply to the feet.