



Chapter K

Future Health

K: Future Health

Introduction:

Lots of young people and their families ask for information on the possible long term impact of diabetes. Working with the diabetes team to aim for blood glucose levels between 4 and 10 mol/L will **considerably** reduce the risk of these complications occurring.

At diagnosis, parents may search the internet and read all about these problems and be worried. The Diabetes team is here to help to minimise this risk. Please discuss it with the team - it is really important to understand how you can reduce this risk to very low levels by keeping blood glucose in the target range where possible from the beginning.

Background:

The body is designed to keep glucose levels in the blood within 4-7mmol/L. If glucose levels are running high for a long time or there are large swings in blood glucose, it can irritate and damage the blood vessels, particularly small vessels as seen in the eye and kidney. They can bleed and small clots can form.

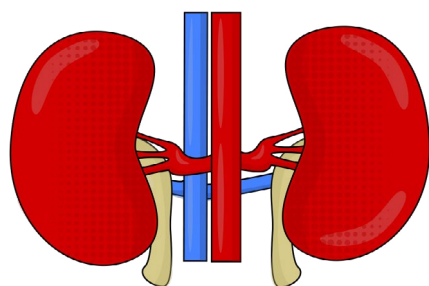
A study in the United States (DCCT) showed very clearly that maintaining blood glucose levels in target range for most of the time really reduced the risk of all complications and this effect lasted for many years.

The HbA1c test is a marker of glucose levels; the nearer that is to 48mmol/mol or 6.5% without lots of hypoglycaemia the more benefit for health, whether you have had diabetes for 2 years, 20 years or beyond. Even if you have a period of higher HbA1c, it is worth improving to reduce your risks of longer-term problems.

Nephropathy (kidneys)

One of the first signs of problems occurring in the kidney is the leakage protein into the urine. Urine will be checked for this once per year.

Another important sign of a kidney problem is a rise in blood pressure. This should be checked at clinic and if it is significantly high, then medication will be required.



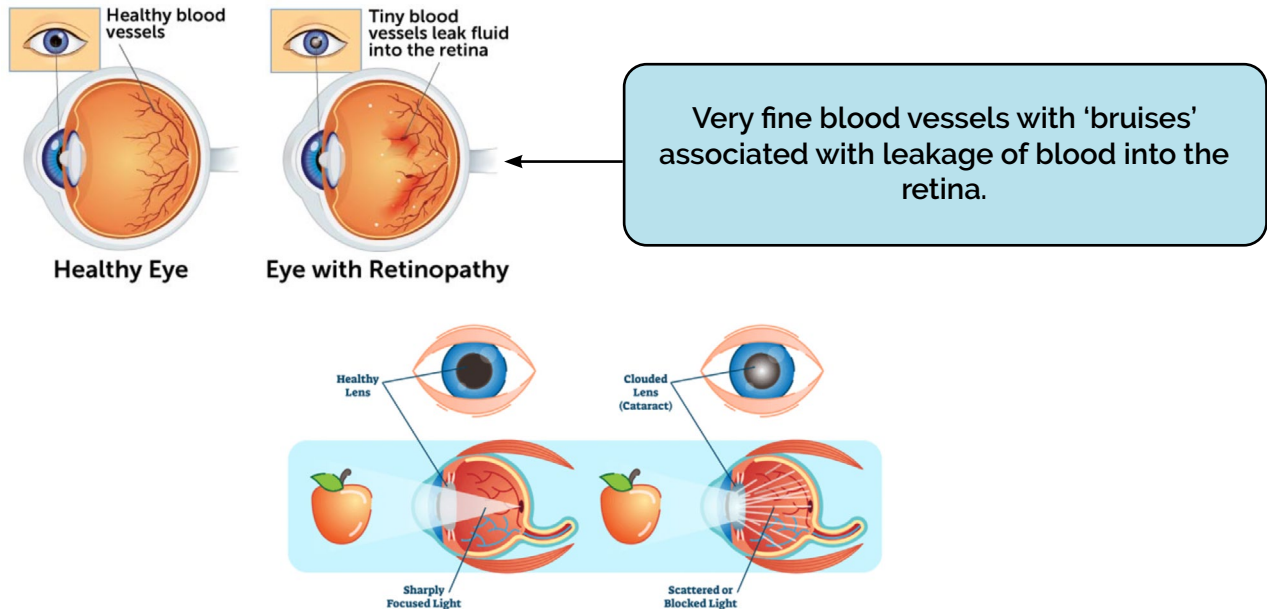
The kidney filters your blood to get rid of waste; if it stops doing this, you may need dialysis or a transplant.

To minimise the risk of these problems occurring it is important to:

- Keep blood glucose control in the target range as much as possible
- Avoid smoking. Smoking increases the risk considerably.
- Maintain a healthy weight for your height.

Retinopathy (eyes)

The small blood vessels at the back of the eye are at risk of damage from high blood glucose levels and large swings in blood glucose. Over time, this can lead to leakage of blood into the back of the eye (retina) and damage your ability to see.



To minimise the risk and to stop further problems if any are detected, it is important to:

- Maintain blood glucose in target range as much as possible, reducing it slowly if it has been high for a while. Please discuss this with your diabetes team.
- Avoid smoking.
- If recognised, it can be treated by using a laser but it is better to try and avoid the complication if at all possible.

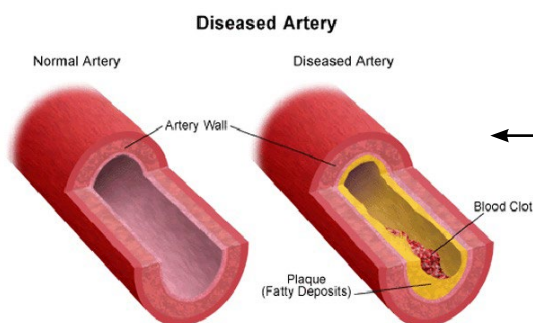
Neuropathy (nerves)

Problems associated with the nerve supply to your body are rarely seen in childhood but can start to appear very slowly:

- The long nerves to your legs and arms can lose the ability to feel 'touch and sensation'. This can make it difficult to feel and pick up small objects and you could tread on a sharp object such as a stone or piece of glass without noticing.
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- The nerves to your stomach can be affected, making it unable to empty properly leading to a feeling of sickness, pain and at its worst, frequent vomiting.

Blood vessels

The large blood vessels in your body can collect fat this narrows blood vessels and increases risk of heart damage. This is important to everyone whether they have diabetes or not and blood is checked every year for cholesterol (fat) levels



Human artery: picture shows how damage can occur with thickening of the wall and clots of blood forming. This can prevent the blood from being able to travel around the body easily.

- Avoid smoking and make every effort to stop if you have started or are exposed to a smoky environment.
- Make healthy food choices including your 5 fruit and vegetables each day.
- Aim to keep blood glucose levels in the target range.
- Try and be active for 60 minutes per day. See sections G1 and G2 about physical activity and exercise.

Sexual Health

As you reach adult life the ability for normal sexual relationships becomes increasingly important.

In females, high glucose levels can be damaging in pregnancy. If you are planning to have children it is very important to discuss this with your diabetes team before you are pregnant. There is a specialist pre-conception clinic for women with diabetes to help with keeping glucose levels in target. By doing this, you can have a healthy pregnancy and have a healthy baby. If you think you are pregnant, please let us know immediately so that you can have a test, be given appropriate advice and be referred to the specialist antenatal clinic if appropriate.

High blood glucose levels can be associated with difficulty achieving an erection for men and can affect the sex life of both males and females with diabetes. Treatments are available if problems do occur. Please discuss this with your diabetes team if you have any questions.

K2: Research

There may be opportunity to take part in diabetes research

If we think you or a family member might be suitable for one of our studies, we will contact you with more information.

Taking part in a study is entirely voluntary and you will be given age appropriate information and have the opportunity to discuss the study with a member of our research team before agreeing to participate.

If you decide you don't want to take part your clinical care will continue and will not be negatively affected. You will never be pressured to take part in a study.

Taking part in studies can offer you the opportunity to try new ways of managing diabetes, help us learn more about different types of diabetes and help new treatments become available in the future.

K3: Useful web addresses

General

DigiBete

www.digibete.org

Diabetes UK

www.diabetes.org.uk/

Juvenile Diabetes Research Foundation

www.jdrf.org.uk/

Lenny the lion teaching site:

www.lenny-diabetes.com/

Change for life-health advice.

www.nhs.uk/Change4Life

Medical alert wearables

Medi tag alert bracelets

www.medi-tag.co.uk

Universal medical ID

www.identifyYourself.com

Medical tags

www.medicaltags.co.uk

The ID band company

www.theidbandco.com

Insulin pump accessories

www.funkypumpers.com

www.diabete-ezy.com