

A quick guide to diabetes for people changing from tablets to insulin (type 2 diabetes)

Diabetes and Endocrinology Patient Information Leaflet

Introduction

This leaflet is for people with type 2 diabetes who are changing from taking tablets for diabetes, to using insulin. It gives information on:

- what diabetes is
- why you need to change to insulin
- how insulin works
- how you take the insulin
- how you store insulin
- caring for yourself when you are taking insulin

What is diabetes?

Diabetes is a condition where the amount of glucose in your blood is too high because the body cannot use it properly. There are two main types of diabetes:

Type 1 diabetes

This is when little or no insulin is produced because most of the insulin-producing cells in the pancreas have been destroyed. It is the most common type of diabetes found in children.

Type 2 diabetes

This is when the pancreas can still produce some insulin but not enough for proper control of blood glucose (sugar) levels, or when the insulin produced does not work properly (insulin resistance). It usually occurs later in adult life.

You have been diagnosed with Type 2 diabetes.

Why do I now need insulin?

Diabetes affects everyone in a slightly different way. Some people with Type 2 diabetes can control their blood glucose by diet. Others need to take tablets as well as controlling their diet. However, one in five people need to take insulin as well as, or instead of, tablets to achieve good blood glucose control and to feel better.

It is important to remember that starting insulin does not mean that your diabetes is getting worse. It is just changing and, therefore, it requires different treatment.

How will insulin help me?

Insulin is a hormone that helps your body use the glucose in your blood to give you energy. Taking insulin should improve your control of blood glucose levels and you may soon feel better. If you have been feeling tired, drinking more than usual or urinating frequently, you may notice an improvement in these symptoms with insulin.

Most people treated with insulin want to continue having the injections because they feel so much better. It is known that people with diabetes can reduce the risk of developing problems with their eyes, kidneys and heart by keeping their blood glucose levels well controlled.

Insulin can help you achieve good control of your diabetes by lowering your blood glucose levels.

What types of insulin are there?

- Insulin is a liquid which is either clear or cloudy.
- Clear insulin starts working quickly (in about 10 minutes) and lasts about four to eight hours. There is also long-acting clear insulin that lasts 24 hours.
- Cloudy insulin starts to work slowly and lasts longer – about twelve to sixteen hours.
- Insulin mixtures look cloudy and contain both types of insulin.
- We will tell you which insulin you are having.
- Insulin is available in vials, cartridges or preloaded pens. Your doctor or nurse will show you what is available and you can have a discussion about which system will suit you best.

Where do I inject my insulin?

You may be worried about having insulin injections every day. However, very short ultra-fine needles are now available and these make injections virtually pain free. The needles can be used with cartridges, pens and preloaded pens.

You can choose an injection site that suits you. This can be in your thighs, abdomen or buttocks. Your doctor or nurse can advise which is best for you. Do not use the same spot in your chosen site every time. Move the point of injection around to ensure that your insulin is absorbed well. Your doctor or nurse will teach you how and when to change the injection site.

The site where you intend to inject your insulin should be clean and dry. If you are using 8mm needles, you should lift the skin between the thumb and forefinger. Insert the needle at 90 degrees to the skin surface into the fatty tissue lying below so that the metal of the needle is no longer visible. Insulin should be injected slowly, count to 10 and then withdraw the needle.

If you are in any doubt at all about where, how and when to inject your insulin, you should contact your doctor or nurse.

How do I store my insulin?

- Injecting cold insulin can be uncomfortable. You can keep the insulin you are using at room temperature for up to a month. The insulin inside will then not be cold when you inject it.
- Store spare insulin in the door or vegetable compartment of your fridge.
- Never allow insulin to freeze.
- Avoid leaving insulin in direct sunlight, for example, on a windowsill .
- Do not leave insulin in a hot place, such as above a radiator.
- If you are traveling, keep your spare insulin cool. If you are traveling by air, always carry your insulin in your hand luggage. Do not place it in luggage in the hold.
- Do not use insulin that is lumpy or a strange colour as it may be damaged.
- Your doctor or nurse will tell you how to dispose of your needles and injection devices safely.

Healthy eating

As you know, your diet plays a vital role in helping to control your diabetes. The same guidelines for healthy eating still apply when you are taking insulin:

- Eat regular meals
- Avoid sugary foods, for example, fizzy drinks, sweets
- Eat more fibre such as wholemeal bread, potatoes, beans, vegetables
- Eat less saturated fat, for example, fried foods, butter, margarine

It is important that you try to have roughly the same amount of starchy food every day, divided between three regular meals. This allows your blood glucose levels to be maintained evenly. Your daily meal pattern will probably look like this:

- Breakfast
- Lunch
- Dinner
- Bedtime snack, if your blood glucose reading is less than 8mmol

Your dietitian will discuss your food and meal pattern with you.

Exercise

- Insulin injections bring your blood glucose levels down.
- Exercise uses glucose for energy so it will also bring your blood glucose levels down.
- Controlling blood glucose is a matter of balance between insulin, food and daily activity.
- Regular exercise is good for everybody, especially for people with diabetes, and it helps you to control your blood glucose levels.
- In addition, exercising regularly can help you to control your weight. It will improve your circulation and strengthen your heart.
- If you do not exercise regularly, please discuss this with your consultant or nurse.

How is my diabetes monitored?

Your consultant or nurse may now advise you to test your blood glucose levels regularly. This will help you control your diabetes and help you, your doctor or nurse to adjust your insulin dose if necessary. These tests are easily carried out at home.

Blood is obtained by pricking the end of your finger with a special needle called a lancet. We will give you a blood glucose meter and this will give you the correct reading of your blood glucose levels.

We will give you instructions as to when and how often you need to test your blood. Although there are no set rules, a common practice is one test a day at different times each day.

What do I do if I have a hypo?

A hypo or hypoglycemic attack is the medical term for low blood glucose levels. Delayed or missed meals or snacks, eating too little or taking more exercise without the necessary precautions may cause hypos. Taking too much insulin, by mistake, can also cause a hypo.

You may have already experienced hypos but, if you are not familiar with them, typical symptoms are feeling weak, sweaty, hungry, nervous, excited or irritable. You may also have a tingling in your lips, tongue or fingers, feel confused or have blurred vision.

If you suspect that you are going hypo, you should take some glucose immediately. This can be in the form of sugar lumps, a fizzy drink (not the diet variety), sweets or glucose tablets. This should be followed with some starchy, carbohydrate food like a sandwich, some fruit or the next meal, if it is due.

If you are unsure about the cause of the hypo, you should consult your doctor or nurse for advice. You may need to change your food intake or meal pattern, or your insulin dose.. Your diabetes clinic can give you some more information on hypos.

What should I do if I am ill?

- Under no circumstances should you stop taking your insulin.
- If you have an infection or illness, your blood glucose levels may rise. For this reason, you should test your blood glucose more frequently during illness.
- Depending on your blood tests, you may need to increase your insulin dose. Your doctor or nurse will tell you how to do this.
- If you are unable to eat properly, you should substitute the starchy foods in your diet with light foods and sweet drinks in order to maintain your carbohydrate intake. Your dietitian or nurse can help you with this.
- If you are vomiting and cannot keep anything down, contact your consultant or GP.

General health care

Exercise precautions

Taking exercise is important for everyone in order to remain fit. For people with diabetes, exercise is particularly important because it helps to control blood glucose levels.

Changes in diet or insulin are not usually needed for mild exercise like a short, brisk walk. However, for more strenuous exercise, some alteration in treatment will be necessary to prevent a hypo. Your diabetes clinic will give you further advice on this subject.

Alcohol

Drinking in moderation is not harmful to people with diabetes but some precautions are needed. Alcohol lowers blood glucose levels and can make hypos more likely. Your dietitian will tell you more about sensible drinking.

Smoking

This is dangerous for everyone but people with diabetes are at an even greater risk of heart attacks, strokes and circulation problems. If you are a smoker, you should ask your consultant or GP for advice on how to give up. Stop smoking today.

Foot care

Feet and shoes can cause problems for people with diabetes. Circulation may be poor and nerve damage may make the feet numb and prone to injury. You should get into the habit of looking after your feet because most problems are avoidable. Regular visits to a state-registered chiropodist may be needed – discuss this with your consultant or nurse.

Eye care

Diabetes can affect the blood vessels at the back of the eyes. A free annual eye test is available for people with diabetes. You should have your eyes checked every year by an ophthalmic optician.

Can I find out more?

You can find out more from:

Diabetes UK on 0345 123 2399

<https://www.diabetes.org.uk/>

If you have any questions, or if there is anything you do not understand about this leaflet, please contact:

Diabetes Team on 01384 244399 (9am to 5pm, Monday to Friday)

Russells Hall Hospital switchboard number: 01384 456111

This leaflet can be downloaded or printed from:

<http://dudleygroup.nhs.uk/services-and-wards/diabetes-and-endocrinology/>

If you have any feedback on this patient information leaflet, please email dgft.patient.information@nhs.net

This leaflet can be made available in large print, audio version and in other languages, please call 0800 073 0510.

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