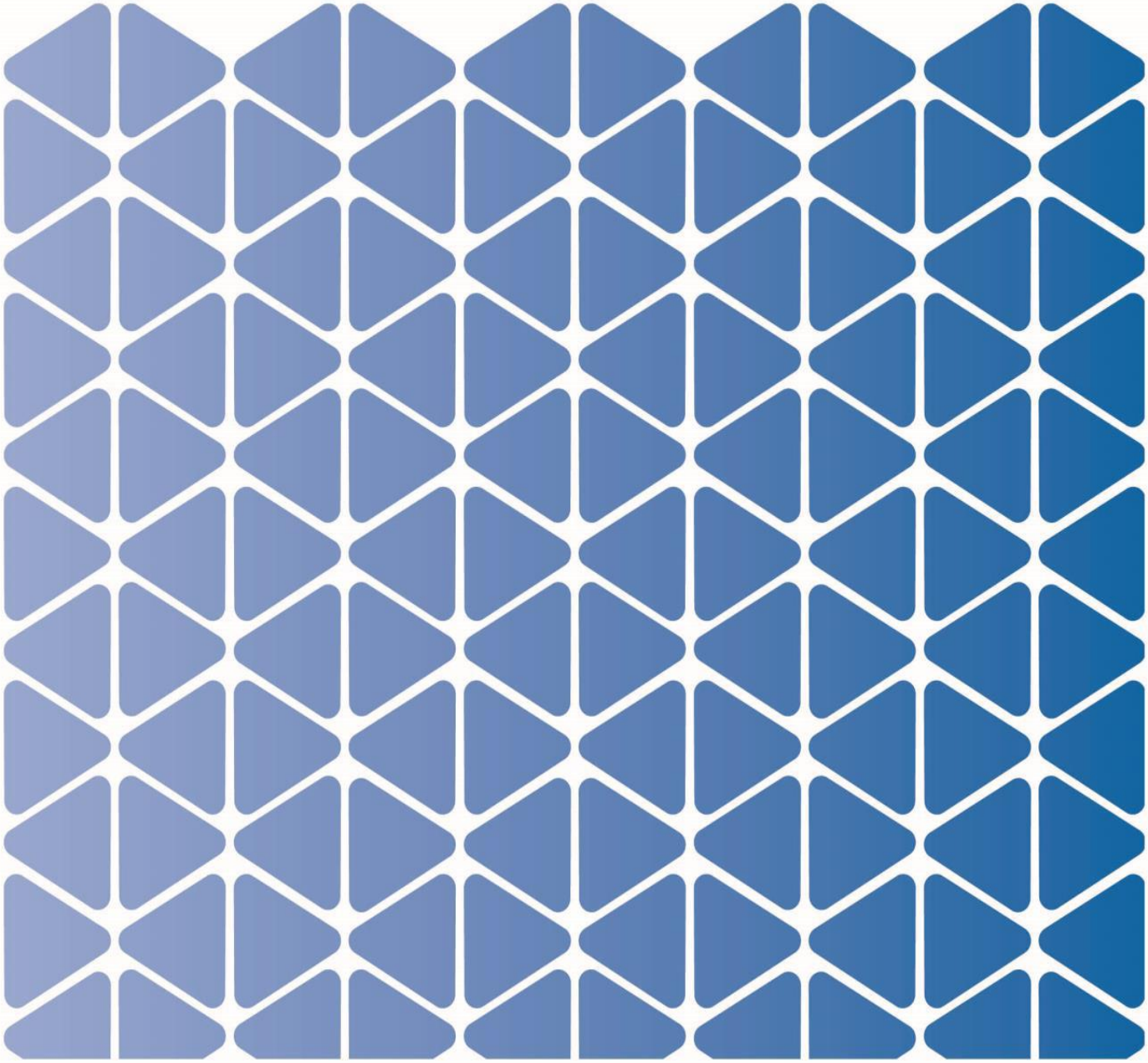
NHS
Worcestershire
Acute Hospitals
NHS Trust

PATIENT INFORMATION

INITIAL ADVICE WHEN STARTING ON INSULIN



WHAT IS DIABETES?

Diabetes mellitus is when the glucose level in your blood is too high. When you have diabetes your body does not make enough insulin or you do not use it effectively. The glucose therefore stays in your blood stream instead of going to the parts of the body which need it for energy.

WHY DO I NEED INSULIN INJECTIONS?

If you have Type 1 Diabetes your body does not make any insulin and you need to replace that insulin with insulin injections.

With Type 2 Diabetes your body gradually becomes resistant to the insulin it makes or does not make enough of it's own insulin over a period of time. The medication you were taking can no longer stop your blood glucose rising and you need insulin injections to help control the level of glucose in your blood.

If you have Type 2 Diabetes you may need insulin along with other medication to control your blood glucose levels.

If you have gestational diabetes, you may need insulin to control your blood glucose levels until your baby is born.

Your type of Diabetes is*……*

Do not worry that there may seem a lot to learn about Diabetes and insulin injections. It will take some time before you feel confident but the Doctors, Nurses and Dietitians are all there to help you.

It is very important that you always continue to take your insulin, even if unwell and not eating, especially if you have Type 1 diabetes. You will need to drink plenty of fluids and do extra blood glucose monitoring when unwell.

INSULIN TYPES AND REGIMENS

There are a range of different insulin types and regimens available.

The most common are;

- Basal insulin only
- Basal bolus regimen
- Mixed insulin

Basal insulin only

This may be given once or twice daily. Usually at the same time each day. This insulin works throughout the day so you should aim to eat regular meals which include some carbohydrate (see page 5) to keep your blood glucose steady.

Basal Bolus Regimen

In addition to the basal (background) insulin, a bolus of quick acting insulin is given at mealtimes (ideally 10-20 minutes before you eat). The amount and timing of quick acting insulin can be altered to fit in with your carbohydrate intake each mealtime.

Mixed insulin
Mixed insulin is often given twice daily, with breakfast and evening meal. It is important to eat regular meals containing some carbohydrate (see page 5).

It is important that your insulin regimen fits with your lifestyle and dietary patterns. You can discuss this further with your nurse or doctor.

Your Insulin Regimen is;
- ☐ Background insulin only
- ☐ Background and quick acting insulin
- ☐ Mixed insulin

INITIAL DIETARY ADVICE
This leaflet contains basic dietary advice now you have started on insulin. Your nurse or dietitian can give you more detailed dietary advice relating to your own circumstances. You can also ask to attend a group education programme.

The diet for diabetes is a healthy diet and is no different to what we should all be doing. It is therefore suitable for all the family.

Healthy Eating
- Enjoy your food and take time to eat meals,
- Fill up on plenty of vegetables and salads,
- Include at least 5 portions of fruit and vegetables daily (e.g. 2 fruit, 3 or more veg),
- Take care with the amount of total fat and total carbohydrate you are eating throughout the day,
- Choose healthier fats for your heart,
- Monounsaturated fats e.g. rapeseed oil (often labelled as vegetable oil), olive oil and spreads based on these oils,
- Small portions of nuts,
- Oily fish, e.g. salmon, mackerel, kippers (aim for 2-4 portions per week),
- Limit added sugar and high sugar foods,
- Sweeteners can be used if required,
- Choose sugar free, No Added Sugar or diet soft drinks,
- Limit salt and salty foods,
- Diabetic foods are unnecessary and are not recommended,
- Limit pre-prepared and convenience foods, fast foods and take-aways,
- Use more home cooked meals and fresh ingredients,
- Drink alcohol in moderation, (maximum 14 units per week).

You might find it useful to keep a food diary or write a list of questions you want to ask about food/ drinks when you see your nurse or dietitian.

Carbohydrate
All foods containing carbohydrate are digested into glucose and will cause a rise in blood glucose levels. It is important to have some awareness of carbohydrate so you can balance your food and insulin.

If you take background only insulin or mixed insulin you need to keep your carbohydrate intake similar from day to day and need to eat regular meals.

If you are on a basal bolus regimen you can learn to vary the timing and amount of carbohydrate consumed and insulin injected.

Carbohydrate is found in many different foods. We can separate them into the following groups: They all raise blood glucose levels.

Starchy carbohydrate	**Added sugars**	**Natural sugars**	**No carbohydrates**
Bread	Sugar	Fruit	Meat
Potatoes	Fizzy drinks	Fruit juice	Fish
Rice	Sweets	Dried fruit	Seafood
Pasta	Biscuits	Milk	Butter, spreads
Noodles	Cake	Yoghurt	Oils
Breakfast cereals	Chocolate	Honey	Nuts
Chapatti	Jam		Mayonnaise
Naan	Ice cream		Cheese, cream
Foods containing flour			Eggs

Glycaemic Index (GI) is a measure of how quickly the glucose is released from carbohydrate foods. However the **amount** of carbohydrate consumed is more important than the **type** of carbohydrate or GI.

Carbs&Cals is a useful book or app which can help you learn more about the amount of carbohydrate in your foods. See www.Carbs&cals.com

Weight Management
If you lose weight you will become less insulin resistant and require smaller amounts of insulin which will help you lose further weight. It should therefore be a primary goal to try to achieve an ideal body weight.

If you find you have to eat additional food or snacks to maintain your blood glucose you may be taking too much insulin.

If you choose to change your diet you may need advice on altering your insulin doses to help maintain blood glucose levels.

Regular Meals
The timings of your insulin and meals depend on which insulin regimen you are on (see page 3). If you find it difficult to be consistent with your meals you should discuss this with your diabetes team.

Snacks
Snacks should not be necessary between meals or at bedtime. If you do need snacks you should reduce the size of your meals to prevent weight gain or you may be able to reduce your insulin dose.

Physical activity
Increasing your activity levels will increase your sensitivity to insulin, helping to reduce insulin doses and promote weight loss. It is important to be as active as you can and to 'move more'.
You should monitor blood glucose regularly, carry hypo treatment and ask your nurse for advice about reducing insulin doses for additional exercise.

Alcohol
We should all keep alcohol to moderation. As alcohol can increase the risk of hypoglycaemia (low blood glucose) you should drink with or after a meal containing carbohydrate, and include a carbohydrate snack at bedtime if you have had more than one alcoholic drink.

BLOOD GLUCOSE MONITORING

Why test blood glucose?
It is important to test your blood glucose so that you can see if your diabetes is well controlled on your insulin treatment and whether the insulin dose is correct for you. It will also help you recognise low blood glucose and high blood glucose.

The **IDEAL BLOOD GLUCOSE RANGE IS USUALLY 5 – 7 MMOL/L before meals**. However you may have individual targets especially if you are pregnant, your Diabetes team will agree these individual target levels with you.

WHEN YOU FIRST START INSULIN TREATMENT YOU NEED TO TEST FREQUENTLY BUT YOU MAY BE ABLE TO REDUCE YOUR TESTING ONCE YOUR BLOOD GLUCOSE LEVELS ARE IMPROVING. YOU WILL BE ADVISED HOW OFTEN YOU NEED TO TEST.

When to test;
- Before Breakfast
- Before Lunch
- Before Evening Meal
- Before Bed

Additional blood glucose testing is recommended when;

- Driving,
- Doing additional exercise,
- Drinking alcohol,
- Feeling unwell,
- Feeling hypo (see page 9 & 10).

INSULIN INJECTIONS

Your type of insulin is called…….……..…….……

……

Your insulin pen device is called…….……...……

You will be shown how to use your insulin pen device and how to give an injection by your nurse.

Where to Inject Your Insulin:

It is recommended that your chosen injection sites are

- Tummy, morning injection / quick acting insulin
- Thighs, evening injection / background insulin
- Buttocks,

- **Always rotate your injection sites using the same part of the body at the same time of day.**
- **Always use a new needle for each injection.**
- **4, 5 or 6mm pen needles should be used and there is no need for a lifted skinfold with these smaller needles.**
- **Always hold the needle in for a count of 10 seconds after delivering your dose.**

Your injection times are:

- Before Breakfast
- Before Lunch
- Before Evening meal
- Once a day at……..……..

DISPOSAL OF SHARPS

Sharps are pen needles, blood glucose lancets and syringes. These should be disposed of safely in a sharps container. Your nurse will explain how to dispose of your sharps.

HYPOGLYCAEMIA

Sometimes called a **HYPO -** this means your blood glucose level is **TOO LOW (Below 4 mmol/l)**.

‘HYPOS’ can happen for several reasons. Your nurse will talk to you about these. The best way to prevent hypos is to balance insulin doses, physical activity and carbohydrate intake. There is generally no need to have snacks between meals unless you are being more active than usual.

If you are having a hypo you will usually get warning signs. For example you may feel one or more of the following:

- SWEATY
- BAD TEMPERED OR MOODY
- DIZZY
- FEELING WEAK
- TREMBLING

When you are hypo your brain becomes depleted of glucose, other people may notice some of the following:

- CONFUSION
- IRRITABILITY
- SLURRED SPEECH
- LOSS OF CONCENTRATION
- AGGRESSION
- CHANGE IN BEHAVIOUR

WHAT TO DO IF YOU HAVE A LOW BLOOD GLUCOSE LEVEL, ‘HYPO?

IMMEDIATELY TAKE 15–20g RAPID ACTING CARBOHYDRATE SUCH AS:

- 3-5 Jelly Babies.
- 200ml pure Orange Juice
- 5-7 Glucose tablets (Dextrose energy tablets)
- 4-5 Glucotabs

Retest after 10-15 minutes and if your blood glucose is still below 4mmol/l repeat as above.

Once your blood glucose is above 4mmol/l have your meal if it is due, or have a snack of about 10g of longer acting carbohydrate, such as a plain biscuit, glass of milk, or piece of fruit.

You may need someone else to assist you if you are unable to treat your hypo yourself. They may need to seek urgent medical help as they should not give you anything by mouth if you are unresponsive.

ALWAYS CARRY RAPID ACTING CARBOHYDRATE WITH YOU

DRIVING
By law you must inform the DVLA and your insurance company that you have diabetes treated with insulin. You must always ensure you are safe to drive and have a blood glucose level of at least 5mmol/l.

You are required to test your blood glucose within 2 hours prior to driving EVEN FOR VERY SHORT JOURNEYS as well as at regular 2 hourly intervals on a longer journey.

You should not drive for 45 minutes after having a hypo.

IDENTIFICATION
It is advisable to carry identification with you at all times stating that you have diabetes.

EXTRA SUPPLIES
Your extra supplies of insulin, tablets, pen needles, testing strips, lancets and sharps container are available from your GP on prescription.

IMPORTANT CONTACTS

Your own GP or practice nurse. Tel ……..…….

Diabetes Specialist Nurse Teams:
- **South Worcestershire 01905 760775/ 01905 733834**
- **Wyre Forest 01562 512324**
- **Redditch/Bromsgrove 01527 512070**

Diabetes UK
Helpline: 0345 123 2399
Email: helpline@diabetes.org.uk
Website: www.diabetes.org.uk

A range of Diabetes Structured Education programmes are available across the county. Contact 01905 733836.
or email wah-tr.worcsdiabetesed@nhs.net (or ask your nurse for more information).

Produced by:
Diabetes Specialist Service
Worcestershire Acute Hospitals NHS Trust

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Friday from 8.30am to 4.00pm. Please be aware that you may need to leave a voicemail message, but we aim to return your call within one working day.

If you are unable to understand this leaflet, please communicate with a member of staff.