

You can find a guide on how to register and how best to use the App here:

<https://www.digibete.org/digibete-app/>

Please sign up with one family email address and a password that can be shared with carers. Up to 6 devices can access the same App.

### WISH group details

The WISH group is a family support group run by parents and families of children & young people with diabetes.

They meet every month on the 2<sup>nd</sup> Friday of the month at the 4F Centre in Rainhill 18:30-20:30 hrs.

The WISH group also have a Facebook group which is **WISHCDG**. <https://www.facebook.com/wish.cdg>

### Contact Details

Email: [WhistonHospital.CYPDTeam@sthk.nhs.uk](mailto:WhistonHospital.CYPDTeam@sthk.nhs.uk)  
Helpline Monday – Friday 10am-6pm 07789174893  
Diabetes Office - 0151 430 1404  
Out of Hours Ward 3F – 0151 430 1616

Your key worker is \_\_\_\_\_

Your consultant is \_\_\_\_\_

Whiston Hospital  
Warrington Road,  
Prescot, Merseyside, L35 5DR  
Telephone: 0151 426 1600

[www.MerseyWestLancs.nhs.uk](http://www.MerseyWestLancs.nhs.uk)

## Information Leaflet for Children & Young People Newly Diagnosed with Type 1 Diabetes

If you need this leaflet in a different language or accessible format please speak to a member of staff who can arrange it for you.

اگر به این بروشور به زبان دیگر یا در قالب دسترس پذیر نیاز دارید، لطفاً با یکی از کارکنان صحبت کنید تا آن را برای شما تهیه کند.

Jeśli niniejsza ulotka ma być dostępna w innym języku lub formacie, proszę skontaktować się z członkiem personelu, który ją dla Państwa przygotowuje.

Dacă aveți nevoie de această broșură într-o altă limbă sau într-un format accesibil, vă rog să discutați cu un membru al personalului să se ocupe de acest lucru pentru dumneavoastră.

如果您需要本传单的其他语言版本或无障碍格式，请联系工作人员为您安排。

إذا احتجت إلى هذه النشرة بلغة أخرى، أو بتنسيق يسهل الوصول إليه، يرجى التحدث إلى أحد الموظفين لترتيب ذلك لك.

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Department: Paediatrics  
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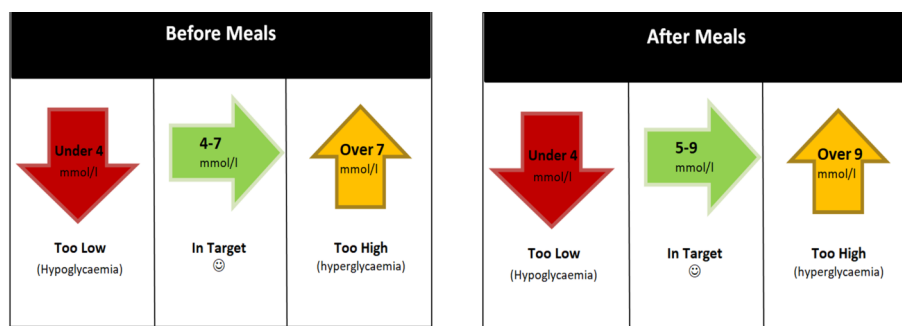
## Introduction

Type 1 diabetes is when the body stops producing insulin, causing your glucose levels to rise. The exact cause of type 1 diabetes is unknown but there is nothing you could have done to prevent it. The treatment is to replace the insulin and this can be done via injections or an insulin pump. Glucose levels need to be monitored and this can be done by doing finger prick blood tests or by using a continuous glucose monitor (CGM).

Monitoring and managing your glucose levels are very important to help you to reduce your risk of short and long term diabetes related complications. These can be prevented by keeping glucose levels within the targets below.

## Glucose Monitoring

Glucose levels are measured in mmol/l and these are the targets to aim for. If you are using a CGM then you will be able to monitor your time in range (TIR). You should aim for as much time as possible between 4-10 mmol/l (at least 70% TIR) with less than 5% low (<4 mmol).



## DigiBete

The DigiBete App is for you to use at home for free, to support communication with your clinic and provide additional education resources for you to view at home.

Here are the **3 reasons** for you to download the free DigiBete App today from either the App Store or Google Play....

### Better Communication

Your diabetes teams can send you relevant information and resources about managing your type 1 diabetes at home newsletters, as well as updates.

### Store Ratios

You will have a place in the App to store all your insulin ratios safely should your pump break. You will also be able to store care plans, future appointments and notes.

### Essential help, resources and awards!

You will have direct access to over 200 type 1 diabetes films including sick days and age appropriate resources to support self-management, including exercise and all essential training.

### Download

On downloading the DigiBete App, you will be asked to enter either 'log in' or 'sign up'. You will need to press 'sign up' on your first visit. You will then create an account and enter your unique clinic code.

**Your Clinic Code is: UKHIJ**

You will be offered 4 clinic appointments every year at the hospital, and these are with the multi-disciplinary team (MDT). You will be seen by a consultant, specialist diabetes nurse and dietitian at every appointment.

We run nurse-led education and support clinics for extra support if needed and the dietitians also offer additional appointments. The nurses and the dietitians run download review clinics twice a week where we will review glucose levels and offer advice. To access this, you just need to ring the helpline or send an email to the email address on the back page.

### Paediatric diabetes psychology support

Adjusting to a diagnosis of diabetes can be an emotional rollercoaster for the whole family. Sometimes it can feel as if managing glucose levels is a normal part of your day, and sometimes it can feel more difficult, frustrating, or may impact you or your child's mood. Feeling frustrated, worried or stressed about diabetes is common, and you may find that this feeling comes and goes. However, if you find that these feelings are not going away and are causing a lot of distress, or they are impacting yours or your child's ability to engage with day-to-day life, help is available from the team's psychologist. Although we will not be able to make diabetes go away, we can support your family with their current difficulties and the thoughts and feelings that come with them.

To be referred, please contact your child's diabetes nurse who will be happy to assist.

For more information on what we can offer, please see the psychology leaflet for newly diagnosed patients.

### Treatment - Insulin

There are 2 types of insulin:

- 1) Rapid acting e.g. Novorapid (also known as bolus insulin). It starts to work within 15 minutes, peaks at 90 minutes and stays in the system for between 3-5 hours. Novorapid should be given:
  - 15-20 minutes before eating
  - for all meals, most snacks and also for correction doses if glucose level is higher than the target.
- 2) Long acting e.g. Levemir (also known as basal insulin). Given twice a day, morning and evening.

### Hypoglycaemia (low glucose level also known as hypos)

A glucose level of less than 4 mmol/l, can occur if:

- Too much insulin is given
- Not enough food is eaten
- More exercise undertaken than planned

**Symptoms** -can include being shaky, pale, hungry, tearful, feeling sick or having a butterfly feeling in the stomach.

**Treatment** \_\_\_\_\_grams glucose (this is based on weight, 0.3 gram / kg, and will change as you grow)

Eg \_\_\_\_\_ lift tablets **or** \_\_\_\_\_ mls of lift juice.

Re-test glucose level after 15-20 minutes and if still less than 4 mmol/l then may need further glucose. Once above 4 mmol/l, if not due a meal or snack for the next 1-2 hours then **may** need small snack (5g) e.g. plain biscuit.

## Hypoglycaemia continued...

If it is a mealtime and insulin is due - wait 15 minutes after glucose treatment and re-test glucose level.

Insulin can be given before the meal if blood glucose level is greater than 5.5 mmol/l or >4 mmol/l and the arrow heading up on the libre scan or other sensor.

Severe hypos are very rare but can cause a seizure.

The diabetes team will explain how you would manage this in the unlikely event of it occurring.

## Hyperglycaemia (high glucose level)

A glucose level greater than 7 mmol/l pre meals and 9 mmol/l 2 hours after meals. Can occur if:

- Not enough insulin is given
- Too much food is taken
- If unwell

Symptoms can include increased thirst, increased need for the toilet, lethargy (feeling tired) and change in behaviour.

**If the glucose level is >14 mmols/l then you should check blood ketones and follow the advice in the table on the next**

## The Paediatric Diabetes Team

**Consultants:** Dr Ahmad, Dr Upadrasta & Dr Roberts

**Nurses:** Laura Jones, Anne Brennan, Adele Skillin & Laura Bradshaw

**Dietitians:** Jennie Brown & Claire McGee

**Psychologist:** Dr Ami Brooks

**Diabetes Co-ordinator:** Cheryl Cunningham

**Secretaries:** Holly Stockton & Chloe Redfern

Once you have been discharged from the hospital you will be under the care of our Hospital at Home Team for a few days.

This is to provide you with extra support either through home visits or telephone calls. This outreach nursing team will provide you with all the information and contact details you need.

The diabetes nurses are available during the week Monday – Friday between 10am and 6pm for ongoing diabetes support via the helpline number or the email above. You will be offered ongoing training as appropriate but please feel free to contact us anytime for advice and support. The dietitians and the nurses run the JuICE (Junior Insulin and Carbohydrate Education) course which continues and builds on the education that is started on the ward. This is a 3 week course which is currently run on a Monday evening. This course is offered to all new patients but also anyone who wants a refresher.

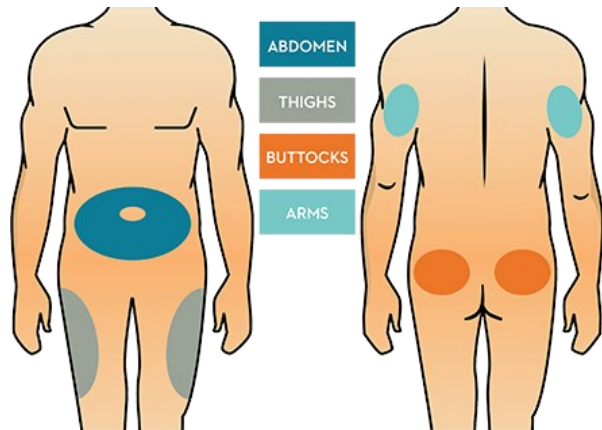
## Diet

The recommended diet for someone with type 1 diabetes is a healthy balanced diet, the same as would be advised for anyone.

Carbohydrates affect the glucose levels and counting carbs is really important to keep your levels steady. The dietitians will teach you how to carb count and how to match the insulin to the carbs you eat and drink.

## Injection Sites

It is **very** important to rotate injection sites and use all sites available. You must use a new needle for each injection. A build up of fatty lumps can occur if injecting repeatedly into the same site. Fatty lumps do not absorb the insulin the same way as healthy tissue and this can lead to a variability in glucose levels (highs and lows) and increased insulin requirements.



Blood Ketone	Action
Less than 0.6	Normal
0.6-1.5	Drink extra sugar free fluids. Correct with extra novorapid/fiasp insulin as per correction formula. Retest every 2-4 hours. If not improving must ring advice line.
1.5-3.0	Ring Advice line. Correct with extra novorapid/fiasp insulin as above and extra fluids. Retest every 2 hours as situation needs watching carefully.
3.0 or more	Ring in <b>urgently</b> as may need hospital assessment and/or admission. <b>DO NOT DELAY.</b> If altered level of consciousness ring 999.

The development of ketones in diabetes is an indication that things are not right.

In large quantities they can cause a condition called **Diabetic Ketoacidosis**.

This can be **life threatening** if appropriate treatment is not sought or if treatment is delayed.

Give a correction of rapid acting insulin using your correction dose.

## Correction dose (also known as correction factor or insulin sensitivity factor) used to correct high glucose levels by giving extra novorapid.

To calculate your correction dose we use **Rule 100**.

To work this out add together the previous days insulin (rapid and long acting). This is called total daily dose (TDD). Then divide 100 by TDD.

E.g. If total Levemir was 15 units and total novorapid given was 10 units then this would be a TDD of 25 units.  $100 \div 25 = 4$ .

This means that for every 1 unit of novorapid given the glucose level will drop by 4 mmols. This is your correction factor.

Initially aim to correct glucose level to 10 mmols and then when more confident aim to correct to 8 mmols. So if the glucose level is 16 mmol and you are aiming to correct to 10 mmols then you want to drop the glucose level by 6 mmols.

Divide this 6 by your correction factor eg.  $6 \div 4 = 1.5$   
You would then give 1.5 units of novorapid as a correction dose. If this was a mealtime, then this dose would be in addition to the mealtime insulin

## Sick Day Rules – what to do if you are ill.

NEVER stop insulin (May need more rapid acting insulin, see correction dose above). NEVER stop carbohydrate intake. Carbohydrates can be taken in liquid form if unable to eat. Drink plenty of fluids (sugar free unless diarrhoea/vomiting).

Check glucose levels more frequently and check ketones even if glucose level is normal.

If ketones are present, see chart on previous page for advice and if vomiting for 6 hours or more then ring the help line or the ward if out of hours.

## Exercise

Exercise is very good for you and should be encouraged but it can affect glucose levels. Most exercise lowers the glucose levels (aerobic exercise) but depending on the type of exercise it can sometimes cause them to rise (anaerobic exercise).

Examples of aerobic exercise: - swimming, cycling, walking, dancing.

Examples of anaerobic exercise: - sprinting, weightlifting, interval training.

If doing aerobic exercise that is going to be for more than 30 minutes, then aim for a glucose level of at least 7 mmols before starting. If less than 7 mmols then give a small snack or some Lucozade sport without insulin.

Check glucose levels regularly throughout the exercise and give extra snacks or Lucozade sport if required.

**If ketones are  $>0.6$  you should not exercise until they have come down.**

This is basic exercise management. A more personalised plan can be done for any child/young person who does a lot of exercise.