

Healthy eating for young people with type 1 diabetes

Information and advice for parents and carers

Paediatric Diabetes

Introduction

Eating healthy foods is an important part of managing your child's diabetes. It will help to control your child's blood sugar (glucose) levels and reduce their risk of developing other illnesses such as heart disease.

There is no special diet to follow but with type 1 diabetes it is important that your child:

- Eats regular meals. He/she should have breakfast, lunch and an evening meal.
- Eats healthy foods.
- Checks their blood sugar levels regularly and gives themselves insulin.
- Learns to carbohydrate count. (see page 6)
- Has starchy carbohydrate foods with each main meal.
- Cuts down on sugary foods and drinks.
- Cuts down on fried and fatty foods.
- Eats the right type of fat.
- Avoids diabetic products because these are high in calories and are expensive too.
- Eats more food which is high in fibre.

You should encourage your child to enjoy their food.

How is blood sugar made?

Blood sugar is made from the food we eat which contains carbohydrates. Carbohydrates are found in sugar and starchy foods. Your child's dietitian will tell you more about carbohydrates.

How does what we eat affect our blood sugar level?

Food and drink high in sugar will increase blood sugar levels quickly. Starchy foods generally give a more steady release of sugar. It is important to eat starchy foods at every meal as they give us the energy we need to get through the day.

Sugar and diabetes

When you eat sugar or foods with sugar, the sugar will go into your blood very quickly and make your blood sugar levels go up.

Your child's body cannot cope with this fast rise in blood sugar. It may make them feel thirsty, tired and cause them to pass urine more. This doesn't mean that they need to avoid sugar all the time, but they should only have these foods and drinks when their body needs a quick boost of energy or as an occasional treat.

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Top tips for cutting down sugar

- Change to sugar free or no added sugar squash drinks.
- Have the 'diet' version of fizzy drinks.
- Try sweeteners instead of sugar.
- Have plain biscuits instead of chocolate and jam/cream filled biscuits.
- Try a scone, teacake or crumpet instead of cake.
- For pudding try; fresh fruit, tinned fruit in its own juice, diet yoghurts, low sugar milk pudding or low sugar instant whip.
- Try jams with reduced sugar or pure fruit spreads.

Fats and Diabetes

Many people eat more fat than they need. Eating too much fat increases the risk of becoming overweight. Being overweight makes it harder to control blood sugars. Eating too much fat also increases the risk of developing heart disease later in life.

Cutting back on the total amount of fat in the diet can help but it is also important to ensure that your child is eating healthier types of fats too.

There are 3 main types of fat:

- **Saturates** – these fats can raise blood cholesterol (fat in the blood). If your child has high blood cholesterol then he/she is at greater risk of developing heart disease. Foods which contain saturated fats include biscuits, cakes, butter, cheese, lard, ghee, party, pies, fat on meat and full fat milk.
- **Polyunsaturates** – these fats can help lower blood cholesterol and are found in vegetable oils such as sunflower oil, corn oil, soya oil and in margarine.
- **Monounsaturates** – these fats can also help lower blood cholesterol and are found in olive oil, rapeseed oil and in margarine.

Try to replace saturated fats with polyunsaturated and monounsaturated fats.

Top tips for cutting down on fat

- Only use small amounts of margarine or butter. Choose a low fat version and one that is high in polyunsaturates or monounsaturates.
- Try to cook without adding any fat and pour off any excess fat.
- Try grilling, boiling, steaming or baking food instead of frying.
- Remove any visible fat from meat and the skin from chicken.
- Choose fat free or low fat dressings such as mayonnaise and salad cream.

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- Limit snack foods such as biscuits, crisps, cakes, Bombay mix, sausage rolls, pastries and chocolate.
- Choose lower fat cheeses such as Edam or reduced fat varieties of cheddar, cottage cheese or cream cheese and cheese spreads.
- Choose diet or light varieties of yoghurts.

Children under 5

Children under the age of 5 need plenty of fat in their diet for them to grow well. Children under 2 should have full fat varieties of foods. After the age of 2, start to introduce some reduced fat foods, such as semi-skimmed milk. By 5 years old they can eat the same healthy diet as the whole family.

Fibre and diabetes

Our bodies cannot digest fibre in foods. Fibre is sometimes called roughage.

There are 2 types of fibre

- **Insoluble fibre** – helps have a healthy bowel (gut) and prevents constipation. Foods which contain insoluble fibres include wholemeal bread, breakfast cereals, pasta and rice.
- **Soluble fibre** – is important in diabetes for the following reasons:
 - It slows down the rate that sugars are taken into your blood.
 - It can stop your blood sugar levels from going too high.
 - It can keep your heart healthy by keeping fat levels (cholesterol) in your blood low.

Foods which contain soluble fibre include fruit, vegetables, beans, lentils and oats.

How do I include foods containing fibre in my diet?

- Aim for your child to have vegetables every day, ideally at their lunch and evening meals.
- Aim to give them fruit 2-3 times a day.
- Beans and lentils can be added to curries, soups, stews and mince dishes.
- Porridge oats is a good breakfast choice.
- Wholegrain breakfast cereals such as wheat biscuits and bran flakes are good at breakfast too.
- Try wholemeal, wholegrain or 50:50 bread instead of white bread.

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Carbohydrate counting

Carbohydrate counting will help you manage your child's diabetes. Carbohydrates in your child's food will have the main effect on their blood sugar level.

It is a skill, which can be used along with basal bolus therapy (also known as multiple daily injections). Your dietitian will teach you about carbohydrate counting and provide separate written information about it.

The main foods which contain carbohydrates are:

- Starchy foods such as bread, rice, potatoes, pasta, flour, chapattis, breakfast cereal, milk and noodles.
- Sugary foods and drinks such as sweets, cakes, pastries, chocolate, ordinary squash and fizzy drinks.
- Fruit and vegetables (including baked beans) and lentils.
- Processed foods such as sausages, chicken nuggets, fish fingers, pies and pastries.
- Sauces and thickening agents.

Your child's dietitian can give you more information about different foods and their carbohydrate values.

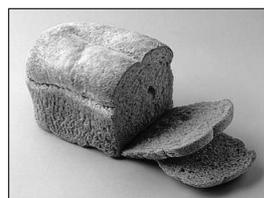
Foods containing carbohydrates:



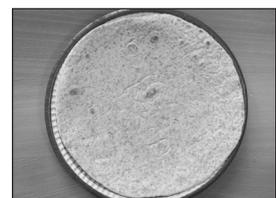
High fibre cereal



Glass of milk



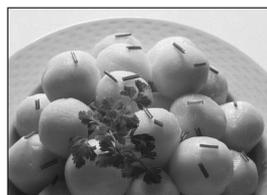
Wholemeal bread



Chapatti



Beans on toast



Boiled potatoes



Spaghetti



Boiled rice



Fruit



Yoghurt

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Sample meal plan

g = grams (this is the total amount of carbohydrate in the food below)

Breakfast

2 medium slices of toast	30g
Glass of milk	10g

Mid-morning snack

Apple	15g
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Lunch

3 slices of wholemeal bread	45g
Margarine	0g
Ham	0g
Pot of diet yoghurt	15g
Pear	15g

Evening meal

Roast chicken	0g
Carrots and cauliflower	0g
2 medium potatoes	30g
Low sugar jelly	0g

Evening snack

1 crumpet	15g
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Your meal plan

Breakfast

Mid-morning snack (optional)

Lunch

Mid-afternoon snack (optional)

Evening meal

Evening snack (optional)

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Food labels

Most foods these days have their nutritional values on the packets. The label will usually provide nutritional value per 100g of the product and usually the value per portion.

Your child may be asked to complete a food records chart by the diabetes team so their carbohydrate counting technique can be checked for accuracy. The total nutritional value per portion your child eats is the value that is required for food record charts.

Hypoglycaemia

A hypo occurs when the blood sugar level drops too low (below 4mmol/L). This is called hypoglycaemia. The symptoms of a hypo can vary but can include confusion, dizziness, sweating, tingling on the lips and paleness.

Hypos can be caused by:

- Having a late meal or missing a meal.
- Not eating enough starchy food in a meal.
- Taking too much insulin.
- Not preparing for exercise properly.
- Drinking large amounts of alcohol.

Treatment for a hypo

Take one of the following:

- 3 glucose tablets or 2 teaspoons of sugar dissolved in water
- Quarter of a glass of an energy drink
- Half a glass of ordinary pop
- Half a glass of fruit juice

If your child does not feel better in 10 – 15 minutes then repeat the above.

Remember to follow this with a long-acting carbohydrate snack such as a piece of fruit, plain biscuit or 1 slice of toast unless a meal is due in the next 30 minutes.

If you do not treat a hypo your child will eventually lose consciousness.

Exercise

Exercise is good for everyone and should be encouraged. The recommended amount of exercise for children is 60 minutes per day.

During exercise the body uses sugar for energy. Your child may need to take extra

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carbohydrate or reduce their insulin dose before the exercise to keep their blood sugar level in the normal range.

The type and amount of carbohydrate that your child will need depends on the intensity and length of the exercise.

If exercise is planned:

If your child is going to do exercise within 3 hours of eating a meal, then you could reduce their insulin dose with that meal.

Remember to test their blood sugar before and after the exercise to check if the reduction of insulin has worked.

If your child wants to take up a new sport then speak to their diabetes team first.

If exercise is unplanned:

If exercise is unplanned, then your child should have an extra snack containing carbohydrate. The amount of extra carbohydrate they should have depends on the intensity and length of the exercise.

- **Suitable snacks before intense exercise include:** Fruit juice, banana, small packet of raisins, cereal bar, glucose tablets
- **Suitable exercise snacks before prolonged exercise include:** Sandwich, biscuit, fruit loaf or a bagel.

During exercise:

Treat any signs of a hypo immediately.

Make sure your child:

- Always carry's glucose tablets or a sugary drink.
- Drinks water and sugar free squash during exercise to keep hydrated.
- Always carry's or wears their diabetic identification

Illness

If your child is ill, they should:

- Never stop their insulin
- Drink plenty of fluids
- Check their blood sugar regularly
- Test for ketones – If ketones are present, phone the hospital or diabetes team for advice.
- Take sugar-free varieties of paracetamol/ibuprofen or cough medicines if they need to.

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- Try to return to their normal diet as soon as possible – If your child's appetite is poor and they cannot manage their normal diet, then try giving emergency fluids or foods at regular intervals throughout the day.

Emergency fluids and foods

In case of a diabetic emergency, your child should:

- Quarter of a glass of lucozade (50ml)
- Half a glass of fruit juice (100ml)
- Half a glass of ordinary lemonade or cola
- 2 tablespoons of ordinary jelly
- 1 scoop of ice cream

Remember

Your child should:

- Try to eat regular meals
- Learn to carbohydrate count
- Eat a variety of foods
- Not eat too much fat
- Eat more high fibre foods
- Eat more fruit and vegetables
- Limit their intake of sugary foods
- Choose low sugar foods

And remember that eating is fun.

For further advice please speak to your child's dietitian.

Useful websites

Diabetes UK

www.diabetes.org.uk

Further information

For more information about our hospitals and services please see our websites www.swbh.nhs.uk and www.swbhengage.com, follow us on Twitter @SWBHnhs and like us on Facebook www.facebook.com/SWBHnhs.

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Sources used for the information in this leaflet

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If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5495 or email: swb-tr.swbh-gm-patient-information@nhs.net



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