

Nutrition and Dietetics

Carbohydrate Awareness

Introduction

A healthy lifestyle in terms of your diet, activity and weight is very important in managing diabetes. It is also important to understand which foods affect your blood glucose and how you can use this information to achieve steady blood glucose levels during the day.

Carbohydrate awareness forms the key aspect of dietary education for people with diabetes.

What is Carbohydrate?

There are 3 main food groups. These are protein, fat and carbohydrate. Most of our meals are made up of a mixture of all three. However, it is only the carbohydrate that directly affects your blood glucose levels after a meal, as all carbohydrate foods get broken down into glucose, not just sugary carbohydrates.

There are different types of carbohydrates

Starchy Carbohydrates

- Bread
- Chapattis
- Potato
- Pasta, noodles
- Breakfast cereals e.g. porridge
- Rice
- Cous-Cous
- Pastry, batter, breaded products
- Yams
- Cassava
- Pulses
- Plantain
- Green banana

Sugary Carbohydrates

- Sugar – all types, honey, syrup, treacle, glucose
- Jam, marmalade, honey, preserves
- Sugary fizzy drinks, squash
- Sweets and chocolate, biscuits, cakes

Fruit - fresh, tinned, dried, fruit juice and smoothies
All fruit contains a natural sugar called fructose.

Milk and dairy products

- Milk
- Milkshakes
- Yogurt
- Milk puddings
- Ice-cream

Milk and dairy products contain a natural sugar called lactose.

What is the role of carbohydrate?

After eating, carbohydrate foods are broken down into glucose. Glucose is the body's main fuel and therefore it is advisable to include carbohydrate foods regularly throughout the day.

The total amount of carbohydrate in a meal or snack will determine how much glucose is released into the blood. Therefore the more carbohydrate you eat, the higher your blood glucose levels will be after the meal.

The following steps will help you to keep your blood glucose levels steady. Your dietitian will help you to distribute your carbohydrate through out the day, whilst also keeping healthy eating and weight management in mind.

1. Aim to have regular meals throughout the day

Having too much time between meals or having them too close together will affect your blood glucose levels.

2. Try to have similar amounts of carbohydrate from day-to-day

You might be taking the same amount of tablets or insulin every day. In order to get the best out of your medication keep the carbohydrate content of your meals similar also.

3. Plan and manage snacks

Unnecessary snacking can lead to weight gain and increase your blood glucose levels. A snack may be advisable with some diabetes medication, check with your dietitian if this applies to you. If you do snack, try to keep to healthy choices and you may need to reduce the size of your next main meal, discuss this with your dietitian.

How much carbohydrate should I eat per day?

The amount of carbohydrate you need varies depending on your age, gender, weight and activity levels. Keeping a food and blood glucose level diary can help you work out how to get the best blood glucose control by looking at your carbohydrate portions and distribution. Your dietitian can give you a sample food diary to complete.

Calculating carbohydrate from food labels

- Look at the Total carbohydrate figure (not just sugars or starches).
- There will be a total carbohydrate figure per 100g and there may also be a figure per portion of the food.
- If there is only a 100g figure you need to work out how much of the food you will eat.

For example:

If a packet weighs 400g and you eat the whole pack, the carbohydrate content will be 4 x total carbohydrate figure per 100g.

If you eat half the pack, i.e. 200g, the carbohydrate content will be 2 x the total carbohydrate figure.

Weight conversions

1oz = 28g

2oz = 57g

3oz = 85g

4oz = 113g

5oz = 142g

Liquid measures (1ml = 1g)

$\frac{1}{4}$ pint = 142mls

$\frac{1}{2}$ pint = 284mls

$\frac{3}{4}$ pint = 426mls

1 pint = 568mls

The following pages contain a carbohydrate portion guide for common carbohydrate containing foods. This will help you keep to similar carbohydrate amounts at meal times and thus maintain steadier blood glucose levels.

Carbohydrate Portion Guide

Bread

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Medium sliced bread, all types	1 slice	2 slices	3 slices
Thick slice	-	1	2
Breadcake/Teacake (medium)	½	1	2
White finger roll (medium)	-	1	2
French stick	1" slice	3" slice	5" slice
Pitta bread	½ medium	1 medium	2 medium
English bread muffin (oven bottom)	-	1	1½
Croissant	1 mini	1	2
Bagel	-	½	1
Crumpet	-	1	2
Tortillas (wraps) 8"	-	1	1½
Scotch Pancake	1	2	3
Ciabatta	-	½	1
Panini	-	½	1
Malt loaf	½ slice	1 slice	2 slices

Breakfast Cereal

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Branflakes Fruit and fibre Malted wheats	2-3 tbsp	4-5 tbsp	7 tbsp
Allbran	3-4 tbsp	9 tbsp	15 tbsp
Cornflakes	2tbsp	5-6 tbsp	9 tbsp
Rice snaps	3 - 4tbsp	7tbsp	10tbsp
Muesli (no added sugar)	1-1 ½ tbsp	3tbsp	5tbsp/50g
Weetabix Shredded Wheat	1 biscuit	2 biscuits	4 weetabix 3 shredded wheat
Oatibix	1 biscuit	2 ½ biscuits	4 biscuits
Porridge oats (dry ingredients)	2 tbsp	4tbsp	6tbsp
Special K	4-5tbsp	8tbsp	14tbsp
Cheerios	2-3tbsp	6tbsp	10tbsp

Potatoes and Starchy Vegetables

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Jacket potato small (raw weight 100g)	-	1	-
Jacket potato medium (raw weight 180g)	-	-	1
Jacket potato large (raw weight 220g)	-	-	$\frac{3}{4}$
Boiled or new potatoes (egg size)	1	3	5
Mashed potato	1 $\frac{1}{2}$ tbsp or 1 scoop	4 $\frac{1}{2}$ tbsp or 3 scoops	7 tbsp or 5 $\frac{1}{2}$ scoops
Roasted potatoes (egg size)	1	3	5
Chips, medium cut	3-4	10	16-17
Chips, microwave	-	1 box	-
Potato wedges	1 small handful (weighing 35g)	2 small handfuls (weighing 110g)	4 small handfuls (weighing 200g)
Sweet potatoes (medium / palm sized)	$\frac{1}{2}$	1	2
Hash brown	1	3	5
Plantain, boiled	$\frac{1}{4}$	$\frac{1}{2}$	1 whole
Plantain, sliced and fried	2 slices	4-5 slices	7-8 slices
Yam, boiled sliced 1" thickness	$\frac{1}{2}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$

Pasta and Rice

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Rice, white/brown Basmati (cooked)	1 tbsp	3 tbsp	5 tbsp
Cooked pasta, white/wholemeal	1 tbsp	3 tbsp	5 tbsp
Couscous	1tbsp	4tbsp	7tbsp
Pre-prepared Lasagne	75g	150g	300g
Tinned pasta in tomato sauce	$\frac{1}{2}$ small tin (205g tin)	1 small tin (205g tin)	1 large tin (400g tin)

Fruit

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Apple, Orange, Pear, Peach, Nectarine	1 medium	-	-
Apricots, fresh	2-3	-	-
Banana	1 kids size	large banana	-
Satsuma, Kiwi, Plum	2	-	-
Grapes	Approx. 12-15	-	-
Strawberries	Approx. 5-7	-	-
Berries: Blackberry, Blueberry, Raspberry	1 cup full	-	-
Melon	1 large slice	-	-
Dried fruit i.e. raisins	2 tbsp	3 tbsp	4 tbsp
Tinned in juice (420g tin)	½ tin	Full tin	-
Fresh fruit juice	Small glass, 150ml	½ pint or 250ml	-

Dairy Products

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Milk, all types	1/3-1/2 pint/ 200ml	1 pint/ 500ml	-
Milkshake, made with powder	-	½ pint	-
Hot chocolate/malted drink	-	1 cup	1 mug
Low calorie hot chocolate	1 cup	1 mug	-
Yogurt, plain	1 pot (150g)	-	-
Fruit yogurt, low fat	-	1 pot (150g)	-
Fromage frais	1 pot	-	-

Desserts

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Ice cream	1 scoop	3 scoops	-
Choc ice (weighing 50g)	1	-	-
Custard, tinned	¼ large can	½ large can	-
Custard, individual 150g pot	-	1 pot	-
Milk pudding, (e.g. rice) tinned	¼ large can	½ large can	-
Rice pudding, individual pot (190g)	-	1 pot	-
Fruit scone	½	1	-

Biscuits

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Plain digestive, Chocolate digestive	1	3	-
Bourbon cream, Custard cream	2	4	-
Ginger nut	2	4	-
Fig roll	1	2	-
Jaffa cake, Oat biscuit, Shortbread finger	1	2	-
Malted milk, Nice, Rich tea	2	-	-
Flap jack	1 mini bite size	50g piece of standard packet	-

Crackers

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Breadsticks, Cheese straws	2-3	8	-
Cream crackers / Wholegrain	2	5	-
Rice cakes	2	4	-
Oat cakes	2	4-5	-
Crackerbread, Crispbread	2	5	-

Meat and Fish Products

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Steak and kidney pie	-	-	1 individual (160g)
Sausage roll	-	1 medium	2 medium
Fish fingers	3	9	-
Breaded fish	-	1 fillet	2 fillets
Chicken kiev	1 individual	2	-
Chicken goujon	2	6	-
Pork pie, individual	-	1 small	-

Home baking

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Flour	1 level tbsp	2 level tbsp	4 level tbsp
Yorkshire pudding	2 small bun sized or ½ giant sized	1 giant sized	-

Sugars and Preserves

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Jam / marmalade	1 heaped tsp	-	-
Sugar	2 level tsp	-	-

Takeaway Foods

Indian

	10-15g carbohydrate	30g carbohydrate	50g carbohydrate
Naan bread	½ mini naan bread (weighing 60g)	One third of a large naan bread (weighing 160g)	Two thirds of a large naan bread weighing (160g)
Chapatti, thin 8" diameter	-	Two thirds	1
Pilau rice	1 heaped tbsp	½ tray (300g)	Two thirds of a tray (300g tray)
Onion bahji	2	4	-
Samosa	2 small or 1 medium	4 small or 2 medium	-

Chinese

Sweet and sour dish (300g tray)	¼ tray	½ tray	1 tray
Chow mein (350g tray)	¼ tray	Two thirds of a tray	1 tray
Spring roll (2½")	1	3	-

Fish and Chips

Fish	½ medium (135g)	1 medium (330g)	1 large (500g)
Chips - average chip shop serving 210g	¼ portion	½ portion	¾ portion

Information on the carbohydrate content of foods from chain fast food stores is often available in store so please feel free to ask for it. Alternatively you can look at their websites.

“Carbs and Cals” is also another useful source of information and is available in book and mobile phone app form.

Action Plan

1. _____
2. _____
3. _____

Your Dietitian

For further information about any other aspect of diabetes:

Diabetes UK: www.diabetes.org.uk Telephone: 020 7424 1000

If you have any comments about this leaflet or the service you have received you can contact :

Diabetes Centre
Calderdale Royal Hospital
Halifax
HX3 OPW

Telephone No: 01422 222033
Email: cah-tr.diabetesdietitians@nhs.net

www.cht.nhs.uk

If you would like this information in another format or language contact the above.

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

ਬ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਪ੍ਰਾਕ੍ਰਮ ਨਾਂ ਭਾਸ਼ਾ ਵਿੱਚ ਲੈਣਾ ਚਾਹੁੰਦੇ ਹੋ,
ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਉਪਰੋਕਤ ਵਿਭਾਗ ਵਿੱਚ ਸਾਡੇ ਨਾਲ ਸੰਪਰਕ ਕਰੋ।

اگر آپ کو یہ معلومات کسی اور فارمیٹ طرزبان میں درکار ہوں، تو
برائے مہربانی مندرجہ بالا شعبے میں ہم سے رابطہ کریں۔

"إذا احتجت الحصول على هذه المعلومة بشكل مغاير أو مترجمة إلى لغة مختلفة فيرجى منك الاتصال بالقسم
المذكور أعلاه"

SMOKEFREE CHFT We are a smoke and vape free Trust. If you need help to quit yorkshiresmokefree.nhs.uk can help

Leaflet No: cssd0064 v3 review date 7/23 page 9 of 9

© Calderdale and Huddersfield NHS Foundation Trust.

All rights reserved. Not to be reproduced in whole or in part without the permission of the copyright holder.

