


Truth about 'carbs'

What exactly are carbohydrates and why are they particularly important for people with diabetes **Fiona Cuddy** has the answers

Carbohydrates, or 'carbs' as they are often known, are big news these days with many newspapers and magazines reporting on diets that recommend 'low carbs' or 'curbing your carb intake'.

This can be very confusing especially when you attend your diabetes appointments where the doctor, diabetes nurse and dietitian all talk about making sure you include appropriate types and amounts of carbohydrates in your daily food intake.

With the word 'carbs' or 'carbohydrates' bouncing around so much it may seem difficult to ask your diabetes team these simple, but very important, questions.

- What exactly is a carbohydrate?
- What foods are considered carbohydrates?
- How important really are carbohydrates in the diet?

Hopefully this article will help to answer these questions for you.

What are carbs and what do they do?

Carbohydrate is a word used to describe a particular group of foods. The main function of this food group is to give us energy. However, they are also a valuable source of fibre, vitamins and minerals, for example, vitamin C and a range of B vitamins.

- We eat carbohydrates
- We then digest them
- They are broken down into sugar (glucose)
- This glucose is released into the blood.

Insulin (which is produced by an organ called the pancreas) then carries this sugar from the blood into the muscles and various cells in the body, giving us the energy we need to live our lives and do our work.

It is important to realise that the more carbohydrate you eat at a time, the greater the amount of energy in the form of sugar that will be formed from it. For example if you have two slices of granary toast for breakfast on Monday this may lead to a blood sugar of 7.5mmol/l two hours later. However, if on Tuesday you eat four slices of granary bread for breakfast, you can expect your blood sugar to be higher than it was on Monday.

The reason carbohydrates are often seen as 'fattening' foods is because if we do not work off all the energy formed from these foods it is stored as extra weight in our body. This is why controlling our portion size of these foods is so important. We need to create a balance between the energy that is being consumed and the energy that is being worked off. And at the same time we need to keep blood sugar levels steady.

EXAMPLES OF STARCHY CARBOHYDRATE FOODS

- Bread
- Potatoes
- Rice
- Pasta
- Crackers
- Cereals
- Couscous
- Chapatti
- Ciabatti
- Noodles

Which foods are carbs?

Carbohydrate foods can be divided into three different groups:

- Starchy or complex carbohydrates
- Sugars
- Naturally occurring sugars.

Starchy or complex carbohydrates

Starchy or complex carbohydrates should form the basis of each meal, You should include at least 1-2 portions of these foods at each of your three main meals daily *(see 'Examples of starchy carbohydrate foods; and 'Portion sizes of starchy carbohydrate').*

Try to keep your portion sizes similar at each meal to help control your blood sugars. It's also important to choose wholegrain or wholewheat varieties of starchy carbohydrate foods because these are generally digested more slowly. They

PORTION SIZES OF STARCHY CARBOHYDRATES

***One portion** =

- A small bowl of breakfast cereal
- 1 small-medium potato
- 1 slice bread, or half a pitta bread, or half a roll
- 2 Ryvita or 3 crackers
- 3 dessertspoons of cooked rice or pasta

* Please note, used here, a 'portion' of starchy carbohydrate food refers to the portion sizes recommended for healthy eating for the whole population. Some people with type 1 diabetes may be using the carbohydrate counting system which uses the term 'carbohydrate portion' to mean something slightly different

LOWER SUGAR ALTERNATIVES

Choose these	Instead of these
Artificial sweetener, for example: • Canderel • Splenda • Hermesetas.	• White or brown sugar • Honey • Syrup • Treacle • Glucose • Sweeteners containing sucrose
Reduced sugar marmalade and jams or pure fruit spreads, for example: • Kelkin • Follains • Poiret • Robertsons.	• Marmalade • Jams 
• Sugar-free mints • Sugar free chewing gum	• Sweets • Chocolates • Toffees
High fibre cereals, for example: • Porridge • Bran flakes • Weetabix • No-added sugar muesli • Special K.	Sugar coated cereals, for example: • Frosties • Coco Pops • Crunchy Nut Corn Flakes.
• Sugar-free diet fizzy drinks • Sugar-free diet squashes	• Fizzy drinks • Squashes
Plain biscuits, for example: • Digestives • Rich Tea • Marietta • Crisp breads.	• Cakes • Chocolate-coated biscuits • Buns

therefore lead to a steadier rise in your blood sugars after a meal.

Sugars

Sugars include table sugar (white and brown), honey, sweets, cakes, chocolate, biscuits, buns, jams, marmalades and non-diet fizzy drinks.

These foods are generally very concentrated sources of refined sugar and when you eat them they will cause your blood sugars to rise more rapidly than other foods *(see 'Lower sugar alternatives').*

However, it's important to remember that having diabetes does not mean you can never again have another sugary food. If you fancy the occasional treat why not have a smaller portion than you used to have, such as a fun-sized chocolate bar, and have it just after your main meal? This way it will not have as rapid an effect on your blood sugars as if you were to have it as a snack on its own.

Naturally occurring sugars

These are sugars that occur naturally in foods, While they are foods that are encouraged as part of a healthy diet it is important not to eat very large portions at a time.

Foods that contain natural sugars are:

- Fruit and fruit juices
- Milk
- Yogurt
- Pulses and vegetables (peas, beans, lentils)

Often people think, and are sometimes told by 'experts', that when you have diabetes you cannot eat certain fruits and vegetables. However, you will be delighted to hear that you can eat all fruit and vegetables *(see 'Suitable portions of fruit to avoid rapid rises in blood sugars').*

PORTIONS OF FRUIT TO AVOID RAPID RISES IN BLOOD SUGARS

- 1 medium sized apple, orange, banana, pear, peach or nectarine
  or
- 2 plums, 2 kiwis, or 2 mandarins
  or
- 8-10 grapes or strawberries
  or
- A small glass (150ml) of unsweetened fruit juice with a meal

Carbohydrates – the final word

So as you can see carbohydrates, and more importantly the type of carbohydrates that you eat, play a very important role in controlling your diabetes. They are an important source of energy, fibre, vitamins and minerals for all of us, with or without diabetes, and should be included in every meal.

Carbohydrates are also the only food group that lead to a rise in your blood sugar levels after eating. Because of this, if you take insulin, or tablets that increase the amount of insulin your body produces (for example, Diamicron or Amaryl), it is essential that you include some starchy carbohydrate at your three main meals in order to prevent your blood sugars going low.

While there are other factors that can affect your blood sugars, knowing why you are advised to include certain foods in your daily intake can go a long way in helping to incorporate the advice into your daily life. If you still find the whole area of carbohydrates confusing, ask for an appointment with a dietitian to discuss it.

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