

The Carbohydrate Connection

Foods found in the Eat Most section of the Healthy Food Pyramid are the carbohydrate rich foods. They contain starch or natural sugar, and include legumes, breads, breakfast cereals, pasta, rice, grains, fruits and vegetables. They are low in fat and should form the basis of all meals and snacks.

Carbohydrate foods are digested (broken down) by the body to glucose, which is then absorbed into the bloodstream. This makes the level of glucose in the blood rise, which happens in everyone. Glucose is fuel for the body, just like petrol is for a car.

The level of glucose in the blood is usually controlled within a certain range. People with diabetes, however, have difficulty controlling the level of glucose in the blood, which can rise well above the normal range.

In order to prevent this problem, it is important to know which carbohydrate foods will have the best effect on blood glucose levels.

Which are the best carbohydrates?

- All carbohydrate foods listed in the Eat Most section of the Pyramid are great for people with diabetes. The ones highlighted in **bold** print, however, are even better! Why?
- The foods in **bold** print are s-l-o-w-l-y digested by the body. This means that the glucose is released into the bloodstream s-l-o-w-l-y, resulting in a s-l-o-w-e-r, flatter rise in blood glucose levels, which is better for people with diabetes.
- These foods are often described as:
 - Slow acting
 - Slow release
 - Low glycemic index (low GI)

Choose the description you like best!

Making the right carbohydrate choices

The carbohydrate foods found in the eat most section of the pyramid are listed below. Remember, all of these foods are great for people with diabetes, but the ones written in **bold** print are even better because they are s-l-o-w acting.

- Legumes (dried peas, beans and lentils), both dried and canned varieties, especially **kidney beans, haricot beans, chick peas** and **baked beans**. Add them to soups, casseroles, lasagne, stir fries, curries, pasta sauces and dips.

- Bread, including wholemeal, rye, **pumpernickel, heavy wholegrain** and **heavy fruit breads**.
- Wholegrain breakfast cereals, especially the s-l-o-w acting varieties, such as **rolled oats, untoasted muesli, rice bran** and **oat bran**.
- **Spaghetti** and **pasta**. All varieties are s-l-o-w acting and therefore suitable choices of carbohydrate.
- All fruit, including fresh, frozen, dried and canned, are suitable for people with diabetes, but especially good are **apples, pears, oranges, grapes, cherries, grapefruits, peaches, plums, kiwi fruits** and **firm bananas**.
- Grains such as **barley, buckwheat, bulgar** and couscous.
- Rice, especially **Basmati** and **Doongara**.
- All vegetables, including fresh, frozen and canned. Especially good are **sweet potato, corn** and **yam**.
- Dry biscuits - low fat varieties.

Here's a tip! Whether a food is slow acting or not cannot be predicted by reading the label. It can only be determined by testing the food on people under controlled conditions. The testing of a wider range of foods is continuing, so consult a dietitian regularly for an update of foods to add to the list of **bold** print foods.

How much carbohydrate?

Foods from the eat most section of the pyramid are encouraged to form the basis of all meals and snacks. In other words, they should fill up 3/4 of the plate. Try to choose at least one s-l-o-w acting carbohydrate food (in bold print) at each meal. This will help to s-l-o-w down the effect of the whole meal.

For individual guidance on the quantity of carbohydrate, consult an Accredited Practising dietitian.

A word about fibre

Many carbohydrate foods have the added advantage of also being high in fibre. There are two types of fibre:

Soluble fibre & **Insoluble fibre**

Soluble and Insoluble fibre occur in foods together, although different foods will have larger amounts of one type of fibre than the other.

SOLUBLE FIBRE

- Can improve blood glucose control by slowing down the digestion and absorption of food.

- Can lower blood cholesterol levels by increasing removal of cholesterol via the bowel.
- Sources:
 - Legumes
 - Oats, barley
 - Some fruits and vegetables
 - Nuts, seeds (caution: high in fat)

INSOLUBLE FIBRE

- Important for maintaining a healthy bowel.
- Sources:
 - Wholegrain breads and cereals
 - Some fruits and vegetables

The foods found in the Eat Most section of the Healthy Food Pyramid are carbohydrate foods, and include legumes, breads, breakfast cereals, pasta, rice, grains, fruits and vegetables.

Carbohydrate foods should form the basis of all meals and snacks

Carbohydrate foods written in bold print are known as s-l-o-w acting” or “low glycemic index” choices. They are especially good for people with diabetes because they have a s-l-o-w-e-r, flatter effect on blood glucose levels.

Try and choose at least one s-l-o-w acting, or low glycemic index, food at each meal.

Fibre is important for good health. For people with diabetes, soluble fibre has particular benefit. Try to include sources of soluble fibre on a regular basis to help diabetes control.

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