

Diabetes and haemodialysis

Diabetes occurs when you do not have enough **insulin**, or your insulin does not work properly. Good blood glucose control should be a goal for diabetic patients on haemodialysis to prevent progressive damage to organs, reduce thirst and control fluid intake. It is important to balance your two diets to help control your blood glucose and other laboratory values.

Blood glucose levels are best controlled by

- **eating the right type and amount of food**
- **weight loss**, if you are overweight
- **regular activity** - for example walking for at least 30 minutes daily
- **tablets or insulin** as prescribed by your doctor

The following guidelines are designed to help you follow a suitable diet for diabetes while you are on dialysis.

CARBOHYDRATE FOODS

Carbohydrate foods are broken down to **glucose** during digestion. Glucose passes from the gut into the bloodstream and, with the help of insulin, is taken into the cells of the body where it is used for **energy**.

Eat **regular** meals, with snacks if necessary, with an **even** distribution of carbohydrate foods.

Carbohydrate foods are broken down to glucose and digested at different rates. The rate depends on a number of factors, including

- ❖ **the type of food:** e.g. foods with whole grains, a high fat content or particular types of starch are digested slowly.
- ❖ **processing:** foods that are cooked or processed are digested more rapidly.
- ❖ **fibre content:** foods high in fibre are more slowly digested, especially those high in soluble fibre (oats, apple, psyllium husk, legumes).
- ❖ **other foods eaten at the same time:** foods eaten with a meal are more slowly digested.

There is also some individual variation on how quickly carbohydrate foods are broken down to glucose and used by the body. You may find some carbohydrate foods seem to increase your blood glucose levels, while others will have little effect.

How should I include carbohydrate foods in my meals?

Include a **variety** of carbohydrate foods/drinks from the table below every day. You will need to avoid food from the higher potassium column if you have a **high blood potassium level** and/or the higher phosphate column if you have a **high blood phosphate level**. If both of your blood potassium and phosphate levels are within the normal range you can choose from carbohydrate foods/drinks in all three columns.

	Lower in potassium and phosphate	Higher potassium	Higher phosphate
Breads	White bread, rye bread,	Multigrain bread, pumpernickel bread	Pikelet, scones, lebanese bread, english muffin
Cereals and grains	<i>Weet-bix</i> , porridge, long grain or basmati rice, pasta, wholemeal or whole grain crackers (eg. <i>Ryvita</i> , <i>Premium</i> , <i>Salada</i> , <i>Vitawheat</i>)	<i>All bran</i> , <i>Just right</i> , <i>Sultana bran</i>	<i>All bran</i> , toasted muesli, oat bran with fruit,
Fruit and fruit juice	Apple, oranges, mandarin, pear, grapes, plum, fruit juice	Banana, nectarine, dried fruits, fresh pineapple, mango, peach	
Starchy vegetables and legumes	Boiled potato or sweet potato, chick peas, lentils, corn	Potato baked or mashed, baked beans	
Dairy products (limit to 1 cup per day)	Ricotta, cottage, parmesan, creamed cheese, custard, <i>Fruche</i>		All milk, soy milk, yoghurt
Extras (rarely consume these if weight loss is required or if blood glucose levels are high)	Corn chips, sponge cake, carrot cake, fruit cake, swiss roll, lamington	Potato crisps, fried potato chips,	Chocolate cake, sponge cake





SUGAR AND SWEET FOODS

It was once thought that sweet foods and added sugar must be **totally** avoided in diabetes. However, recent research has shown that including small amounts of added sugar (for example a spread of jam or honey on toast, a few lollies, sugar in baked cakes and biscuits) will **not** significantly increase blood glucose levels.

Artificial sweeteners e.g. aspartame (“Equal”, “Nutrasweet”), sucralose (“Splenda”), saccharin and cyclamates (“Sugarine”), and Stevia may be used if desired.

How do I manage hypoglycaemia (“HYPOS”)?

Hypoglycaemia or ‘hypos’ occur when your blood glucose levels fall below 3.5 mmol/L. It is very important that hypos are treated quickly and properly because very low blood glucose levels can progress to loss of coordination, confusion or even loss of consciousness.

To help prevent hypos, eat regular meals and snacks, and do not skip meals.

To treat a hypo, follow two steps,

1. Give one serve of *fast acting (or ‘emergency’) carbohydrate*

immediately

- eg. 3 glucose tablets
7 jelly beans
2 tablespoons honey
(100ml Lucozade - fluid)
(125ml non-diet soft drink or cordial (1:4 dilution) - fluid)

Carry these foods with you **at all times**, especially when you go out. Using fluids to regularly treat hypos may cause you to gain too much fluid.

2. If your next meal is more than 20 minutes away follow this with at least one serve of *slow acting* carbohydrate.

- eg. 1 slice toast or fruit loaf
1/2 sandwich
2 Arrowroots or wheatmeals, 2-3 crackers
1 piece of fruit (eg. apple, pear)
1 tub of low fat yoghurt