

# Managing your diet on basal-bolus insulin

## First-line advice

Information for patients



## You have recently been started on insulin to help manage your diabetes.

The reason you need insulin will have been explained to you by the diabetes team who will be happy to answer any questions you have.

## You have been prescribed two different kinds of insulin.

One is a background or “**basal**” insulin which works steadily over 24 hours.

The **basal** insulin (e.g. Abasaglar, Lantus, Levemir, Tresiba, Toujeo) should be taken at the same time every day. Your Diabetes Specialist Nurse will have advised you on how to increase or decrease the dose gradually in order to get the dose right for you. The dose is then usually the same every day.

The other is a “**bolus**” (mealtime) insulin which works quickly and is taken with carbohydrate containing food.

Your **bolus** (mealtime) quick-acting insulin (e.g. Fiasp, Apidra, Humalog, NovoRapid) should be taken with each meal that contains carbohydrate. It stops the blood glucose level from going too high after eating and helps your body to use the glucose from carbohydrates to make energy.

The diabetes team may advise you to take the same dose with your meals each day, or may tell you to vary the dose depending on how much carbohydrate is in the meal.

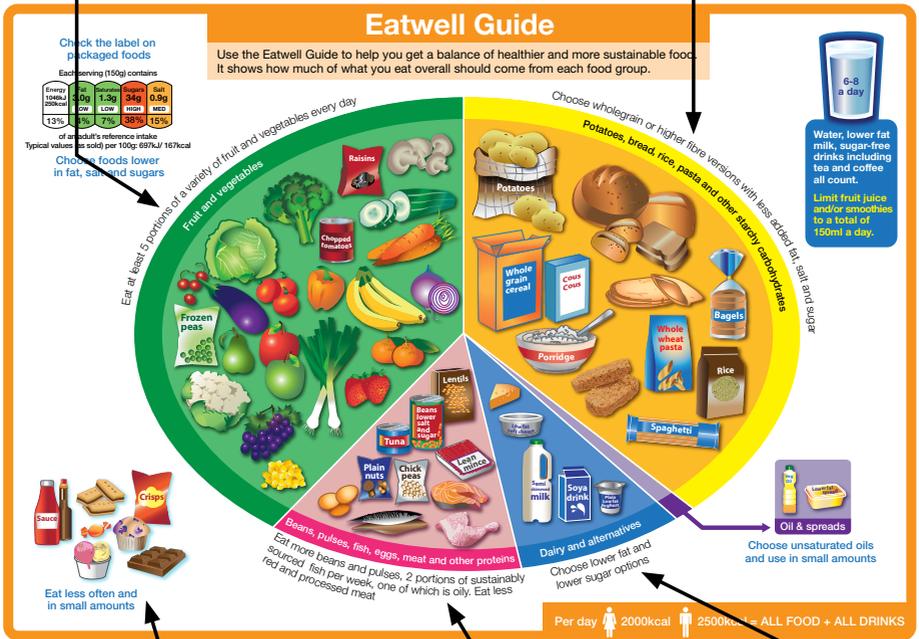
Your dietitian can give you individual advice on this.

# Which foods contain carbohydrate?

A healthy diet consists of food groups as shown on the Eatwell Guide. Some foods within each group contain carbohydrate. Examples are highlighted below.

Fruit smoothies and fruit Juice

Bread, pasta, rice, chapattis, cereals, potatoes, grains and yams



Anything made with sugar, flour, potatoes or corn and breaded/ battered items contain carbohydrates

The majority of these foods in this group do not contain carbohydrates unless they are breaded or battered

Milkshakes, yogurt & milk puddings

Source: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland © Crown copyright 2016

## Food and your blood glucose level

- All carbohydrate (not just sweet or sugary food), is broken down into glucose. Insulin helps your body use the glucose for energy
- Carbohydrates are the only foods that have a direct affect on your blood glucose
- Protein and fat (plain meat, fish, eggs, cheese, butter, margarine) do not affect blood glucose levels
- Vegetables, beans and pulses have very little affect on your blood glucose levels

## The following tips, for food and drink choices, can help you keep your blood glucose levels within your target range

1. Avoid sugary drinks such as full sugar pop, milkshakes, smoothies, sugar or honey in tea and coffee. Limit fresh fruit juice to one small glass per day. Instead try diet or no added sugar drinks or an artificial sweetener for hot drinks.
2. Try to have three meals per day. If you miss a meal do not take quick-acting insulin (bolus insulin) at that mealtime. If you have a meal with no carbohydrate or very little carbohydrate e.g. omelette and salad or just meat and vegetables, do not take bolus/mealtime insulin with that meal.

3. At first try to have similar amounts of starchy carbohydrate with your meals day to day. For example:-
  - Potatoes – 4 new or small (egg size) potatoes (200g cooked weight)
  - Bread – 2 slices medium thickness
  - Chapatti/wrap/injira – 1 small/medium (size of a dinner plate)
  - Pitta - medium (70g)
  - Rice/cous cous – 4 tablespoons of cooked (160g cooked weight)
  - Pasta/noodles – 4 tablespoons of cooked (145g cooked weight)
  - Yam /plantain/ fufu – fist size – (100g cooked weight)
4. If you have an extra meal, e.g. supper, you may need some bolus/mealtime insulin with it.
5. If you are more active than usual you may need a small healthy snack between meals e.g. a portion (handful) of fruit or a small glass of milk.
6. Drinking alcohol will affect your blood glucose levels. For the first few weeks try to limit the amount of alcohol you drink until your blood glucose levels are nearer to your target range.
7. If you are getting several hypos (blood glucose level below 4mmol/l) despite following the above advice you may need to reduce your insulin doses. The diabetes team can advise you on this.

## Next Steps

### What is Carbohydrate Counting?

By working out how much carbohydrate is in the meal or snack you are going to have, you can give the right insulin dose to match this. This allows you to be more flexible with what you eat, drink and when.

Your dietitian can work with you to:

- Become confident in carbohydrate counting and ways to make this easier including reading food labels, recipes that list carbohydrate content or carbohydrate counting tables/books. You may need to use measuring cups & spoons or weigh food.
- Use a food and blood glucose diary to help you work out your individual insulin requirements.
- Check your background basal insulin dose is right for you, so the basal/bolus insulin works for you.





Dietitian

Contact number



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***Your views matter***



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