Department of Diabetes

St Helens Hospital Marshall Cross Road St Helens WA9 3DA 01744 646200

Medtronic Pump:

01923 212213

Omnipod Pump:

0800 011 6132

T-Slim Pump:

0800 012 1560

Whiston Hospital Warrington Road, Prescot, Merseyside, L35 5DR Telephone: 0151 426 1600





Advanced Bolus Options for Insulin Pump Therapy

Patient Information Leaflet

This leaflet can be made available in alternative languages / formats on request.

如有需要,本传单可提供其他语言/版式 此單張的其他語言/格式版本可按要求提供 Na żądanie ta ulotka może zostać udostępniona w innych językach/formatach.

Author: Diabetes Specialist Dietician
Department: Diabetes Unit
Document Number: STHK1750

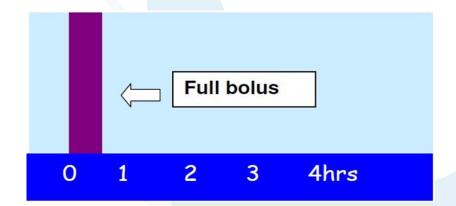
Version: 1

Review date: 01 / 10 / 2024

Normal or standard bolus

A normal or standard bolus delivers the dose of insulin all at once and can be given 15 minutes before the meal.

A normal bolus is usually given with quick or moderately released carbohydrates, such as breakfast cereals, potatoes, bread and toast.



Monitoring with meter / libre / CGM

If blood glucose levels after eating are less than 9mmol/l the bolus has worked well. If not, consider the following:

- If the blood glucose level is raised within the first hour, was the bolus started soon enough? Ideally the bolus should be given 15 minutes before eating, very high GI foods may need the bolus 20-30 minutes before the meal.
- If the blood glucose level is raised at 2 hours for all meals, does the carb ratio need adjusting?
- If the blood glucose level is raised between 3 and 5 hours, you may need to give the insulin over a longer time or increase the dose if the meal is high fat/protein
- If the blood glucose level is low at 1-2 hours, the bolus distribution or dose may need to be changed.

What do I do if I decide to have more food, such as pudding or snack, while the bolus is still running?

You can deliver a normal or standard bolus for extra foods while an extended bolus is running, although this is not recommended if you are testing the bolus.

The bolus can be stopped if necessary, each type of pump works slightly differently, therefore make sure you know how to stop the bolus should you need to.

Ensure the pump is not disconnected while the bolus is running. For example consider where the meal is in relation to showers/bath time.

How do I know if the bolus is working?

To check if the bolus type is working you will need to check your blood glucose levels after eating.

For a normal or standard bolus, check your blood glucose levels 2-4 hours after eating.

For an extended bolus, check your blood glucose levels hourly for the duration of the bolus.

For example, if you have extended your bolus for 3 hours, check your blood glucose levels before eating, then at 1, 2, 3 hours after eating.

You can then decide if the chosen bolus has worked.

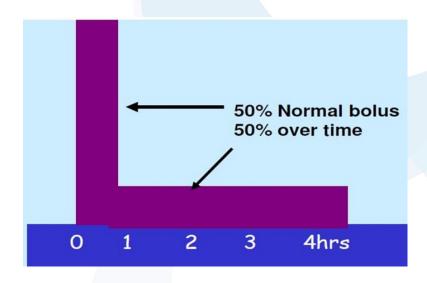
The extended bolus

This feature allows you to program a bolus to be delivered over a longer period of time.

This will depend on the amount of carbohydrate you eat at a meal, the glycaemic index of the meal, the fat and protein content of the meal, as well as your own individual response.

The length of time you choose to extend your bolus can vary for different meals and is individual.

The use of this bolus may also be appropriate for people who have gastroparesis (delayed digestion).



When to consider the use of an extended bolus

| Meal/ Snack | Example | Amount of Carb | When to start delivery | Extended bolus |
|--|--|-----------------------------|------------------------------|---|
| Larger carb meals >60g (Low fat mixed meal with high Gl carbs) | Pasta bolognese; breaded fish, chips and peas; chicken, easy-cook rice, and vegetables | Large amount of carbs | Before eating | Try 70%: 30% or 60%: 40% or 50%: 50% over 60-90 minutes |
| High GI ; Low GI mixed meal | Porridge oats & honey; sweet & sour chicken & basmati rice | Any | Before eating | Try 70%: 30% or 60%: 40% or 50%: 50% over 1-3 hours |
| Low GI mixed meal | Meal with lots of pulses, dahl/ veggie curries with wholemeal pasta/rice | Any | Before eating | Try 30%:70% or 40%: 60% or 50%:50% over 1-3 hours |
| High fat low GI mixed meal | Creamy pasta carbonara; lasagne, pizza, fish and chips, chinese or indian take away | Any | Before eating | Try 30%: 70% or 40%: 60% or 50%: 50% over 4-8 hours |

Glycaemic Index

This refers to how quickly or slowly a carbohydrate containing food breaks into glucose (sugar).

High GI carbohydrate refers to carbohydrate foods that are released quickly into the blood stream (white bread/mash potatoes).

Low GI carbohydrate refers to carbohydrate foods that are released slowly into the blood stream (seeded bread/sweet potatoes).

