

# Dietary Advice for Reactive Hypoglycaemia and Dumping Syndrome following Bariatric Surgery

## What is Dumping syndrome?

Dumping syndrome is caused when food moves suddenly into your small intestine. The solid parts of a meal get “dumped” directly from the stomach into the small intestine without being digested, thereby causing unpleasant symptoms. It is more common after having foods/drinks which are high in sugar or fat (greater than 5g of sugar or fat per 100g/portion).

Dumping syndrome can occur after bariatric surgery, especially if you have had a gastric bypass. It can also occur if you have had a sleeve gastrectomy however, it is not as common.

## What are the symptoms of Early Dumping Syndrome?

Symptoms are most common during a meal or within the first hour following a meal. Symptoms may include gastro-intestinal symptoms such as abdominal pain, cramps and may lead to an urgent bowel movement, bloating, nausea and vomiting and vaso-motor symptoms such as fatigue flushing, desire to lie down, perspiration, low blood pressure and rapid heart rate.

Symptoms of early dumping syndrome are due to the rapid passage of nutrients including fat and sugar to the small intestine, which shifts fluid from the blood into the intestine decreasing blood volume and distending the small intestine. A rapid delivery of carbohydrate to the small intestine leads to a high glucose concentration in the intestine and more insulin is produced by the pancreas leading to low blood glucose levels.

Dumping will first become noticeable 3 months - 1 year after bariatric surgery. Not everybody will get the same degree of dumping symptoms and some people may have more severe symptoms than others.

## What is the treatment for Dumping Syndrome?

A change to your diet is the initial treatment. If your symptoms are severe then medications may be used to slow emptying of food into the gut. The aim of dietary treatment is to avoid foods which are more likely to cause unpleasant symptoms and including foods (particularly carbohydrates) that break down slowly into the bloodstream.

Treatment may vary with individuals and does not work for everyone.

## What is Reactive Hypoglycaemia/ Late Dumping Syndrome?

Signs and symptoms can also develop later, often one to three hours after eating. This is called late dumping syndrome or reactive hypoglycaemia. It is a condition where the blood sugar level drops after a few hours of eating a meal.

## What are the Symptoms of Reactive Hypoglycaemia?

- Mild reactive hypoglycaemia - Increased or sudden hunger, feeling shaky or dizzy. Pounding heartbeat, sweating (cold and clammy), headache or stomach ache.
- Moderate reactive hypoglycaemia - Headache, anxiety, nausea, confusion, impaired vision and slurred or slow speech.
- Severe reactive hypoglycaemia - Dizziness, fatigue, irritability, seizures, loss of consciousness.

## What is the treatment for reactive hypoglycaemia?

The aim of dietary treatment is to prevent drops in blood sugars through a regular eating pattern, and including foods that break down slowly and release glucose (sugar) into the bloodstream more steadily (low glycaemic index foods).

### Ideas on how to reduce early and late dumping syndrome

- Reduce the quantity of high sugar foods and drinks in your diet
- Eat slowly, this can help digestion
- Have smaller more frequent meals. Split your three meals into six, no more than 2-3 hours apart. Larger portions increase the likelihood of symptoms
- Consume more protein-rich foods e.g. meat, fish, eggs. Eat protein first, then the complex carbohydrates (starch) and lastly healthy fats.
- Rest after each meal, laying down for 30minutes after meals can help to avoid the feeling of faintness
- Have a snack before bed to prevent symptoms of reactive hypoglycaemia at night. See snack list for suitable options.
- Try and identify if certain foods trigger your symptoms and avoid these
- Reduce the quantity of high sugar foods and drinks in your diet
- Include fibre in your diet as this can delay absorption of the sugars into your blood stream:
  - Fruit
  - Vegetables
  - Nuts and seeds
  - Oats
  - Beans and pulses

- Psyllium (soluble fibre supplement) pectin (a natural gelling agent found in ripe fruit) or 15g guar gum can also be added to foods to help thicken them and slow the absorption down.
- Include slow release (low glycaemic index) starchy foods at each meal. Low GI foods are foods with a GI less than 55. Intermediate GI foods are foods with a GI between 55 and 70. High GI foods are foods with a GI greater than 70.

Food	Glycæmic Index
Aubergines	10
Broccoli	10
Cabbage	10
Garlic	10
Green vegetables	10
Lettuce	10
Mushrooms	10
Onions	10
Red peppers	10
Tomatoes	10
Walnuts	15
Apricots (fresh)	20
Fructose	20
Grapefruit	20
Peanuts	20
Soya (cooked)	20
Cherries	22
Dark chocolate (<70% cocoa solids)	22
Lentils - Green	22
Peas - Split	22
Plums	22

Food	Glycæmic Index
All Bran	30
Apple	30
Beans/chickpeas	30
Lentils - Brown	30
Milk (semi-skimmed)	30
Peach	30
Apricots (dried)	35
Carrots (raw)	35
Chinese vermicelli (mungo bean)	35
Fig (fresh)	35
Ice cream (made with alginates)	35
Maize/Corn on the cob (traditional variety)	35
Orange	35
Pear	35
Peas - Dried (cooked)	35
Quinoa (cooked)	35
Yoghurt (full-milk)	35
Yoghurt (skimmed)	35

Food	Glycæmic Index
Black bread (German)	40
Flour T200 (unrefined) - Bread	40
Flour T200 (unrefined) - Pasta	40
Grapes	40
Kidney beans	40
Orange juice (freshly pressed)	40
Peas (Fresh Petis Pois)	40
Rye (wholemeal bread)	40
Bulgour (wholegrain, cooked)	45
Bran bread	45
Flour T150 (unrefined) - Pasta	45
Spaghetti (hardgrain, cooked al dente)	45
Flour T150 (unrefined) - Wholemeal bread	50
Kiwi	50
Rice (Basmati)	50
Rice (Brown)	50
Sorbet	50
Sweet potato	50

Shortbread biscuit (Flour B)	55
White pasta (normal cooking)	55
Rice (long grain, white)	60
Banana	65
Brown flour T85 (Brown bread)	65
Jam	65
Melon	65

Food	Glycæmic Index
Orange juice (industrial)	65
Potatos (boiled in their skins)	65
Raisins	65
Semolina (refined)	65
Cereals (sugared)	70
Chocolate bars (eg. Mars bar, Twirl)	70
Carbonated drinks eg cola, lemonade	70
Cornflour	70
Flour T65 - country style bread	70
Maize/Corn on the cob (modern variety)	70
Noodles, Ravioli	70
Potato (peeled and boiled)	70
Rice (pre-cooked and non-stick)	70
Sugar (saccharose)	70
Turnip	70
Pumpkin	75
Watermelon	75
Broad beans (cooked)	80
Crackers	80
Potato crisps	80
Tapioca	80
Carrots (cooked)	85
Corn flakes	85
Flour T55 - Baguettes	85
Popcorn (no sugar)	85
Rice cake	85
Honey	90
Mashed potato	90
Rice (pre-cooked)	90
Potato (chips)	95
Puffed rice	95
Beer	110

## Drinks

- Avoid drinking with meals as this reduces the amount of fluid entering the bowel. Wait approximately thirty minutes after food before taking a drink
- Avoid adding sugar, syrup or honey to drinks
- Avoid alcohol, pure fruit juice, full sugar juices and full sugar fizzy drinks
- Suitable fluids include water, no added sugar squash, diet drinks, fruit and herbal teas and tea or coffee.

## Meal Ideas (total 30g carbohydrate each meal)

### Breakfast ideas

Cereal (All Bran/Branflakes/Special K) with milk

**Or** porridge/oat bran made with milk

**Or** unsweetened muesli with skimmed milk (add banana or apple or nuts/seeds to add fibre)

**Or** oat based/seeded or rye bread/crackers with peanut butter

**Or** oat based/seeded toast/crackers with scrambled egg/poached eggs/oily fish/baked beans

### Lunch ideas

Sandwich (rye, oat or wholegrain bread) with low fat cheese/meat/poultry/oily fish

**Or** vegetable soup (with lentils/pulses or barley) with oat based/seeded bread or oatcakes/wholemeal crackers

**Or** oatcakes or wholewheat crackers with hummus or peanut butter or cheese or pate

**Or** baked sweet potato with cheese or chilli or baked beans

**Or** toast (oat based/seeded) with scrambled or poached eggs/oily fish/baked beans/tinned spaghetti

**Or** cold pasta/basmati rice salad with chicken/fish/prawns

### Main meal ideas

Meat/fish/poultry/beans/pulses

**Plus** boiled potatoes with skins/yam/sweet potato/pasta/basmati rice

**Plus** vegetables/salad

(add pearl barley/pulses/nuts/seeds to dishes where possible if tolerated)

## Puddings

Fruit (fresh or poached) with low fat crème fraiche/low fat yoghurt/custard made with low fat milk/low fat Greek yoghurt

Or sugar free jelly with fruit, with or without yoghurt

Or baked apples with dried fruits and nuts

## Snack ideas

- Fruit, e.g. apple/peach, pear, grapes, cherries
- Glass of skimmed milk
- Carrot sticks with hummus
- Low sugar cereal bars e.g.
- Nature valley chewy protein bar
- Quaker chewy 25% less sugar
- Tesco healthy living apple and strawberry cereal bar
- Atkins day break cappuccino nut bar
- Quaker crunchy ginger/pecan bar
- Wholewheat crackers/oatcakes /pita with lentil spread/hummus/peanut butter/pate or cheese
- Nuts/seeds
- Low fat yoghurt/low fat Greek yoghurt
- Boiled egg

**Please contact your healthcare provider or bariatric team  
if your symptoms continue**

**If you have any comments about this leaflet or the service you have received you can contact :**

Bariatric Surgery Healthcare Team:

Telephone: 01484 355217

[www.cht.nhs.uk](http://www.cht.nhs.uk)

**If you would like this information in another format or language contact the above.**

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