

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.

How is suspected hypoglycaemia investigated?

Your GP may give you a blood glucose monitor and shown how to record your blood glucose levels when you experience hypo like symptoms. Keep a log of the episodes.

You may also be asked to keep a food diary to look at your eating habits in more detail. Make sure you record the types and amounts of food and drink you consume, the time you had them and any symptoms as they occur. You should keep a diary for a week and take it with you to your appointments.

In the majority of cases reactive hypoglycaemia can be effectively treated through dietary changes alone. However, if your symptoms don't improve or worsen despite implementing the changes above then please let the Dietitian know as you may need further investigations.

What to do if you have a low blood glucose level

Hypoglycaemia can be serious if left untreated and can lead to loss of consciousness. Therefore, if you have symptoms of profuse sweating and dizziness or know your blood glucose levels are below 4 mmol/L with any of the symptoms above, it is important to bring your blood glucose levels back within the range between 4 - 7mmol/L) as quickly as possible.

How to treat a low blood glucose level

- Step 1.** You will need to take a form of fast acting carbohydrate such as; 2-3 Dextrose tablets OR 120mls of orange juice (to provide 6-12g carbohydrate).
- Step 2.** If you have a glucose monitor you should check your blood glucose levels after 15 minutes to ensure that they are above 4 mmol/L. If they are still low, repeat step 1.
- Step 3.** You will then need to follow this up with a small snack containing carbohydrate and protein such as; a couple of wholegrain crackers and cheese, ½ a piece of toast with peanut butter, pitta bread and hummus, a small bowl of wholegrain cereal or your next meal if it is due. This will help to stabilize your blood glucose levels.

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.

Response to dietary treatment may vary 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 glucose 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 a drop in blood glucose levels 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.
- Be aware of alternative names for sugar eg. glucose, sucrose, fructose, dextrose and honey. You may wish to use artificial sweeteners instead eg. Canderel[®], Hermesetas[®], Splenda[®], Sweetex[®], supermarket own brand.
- Eat slowly, this can help digestion.
- Remember the 20:20:20:20 rule
 - Chew every mouthful of food 20 times
 - Put cutlery down for 20 seconds between mouthfuls
 - Take about 20 minutes to eat a meal, dispose of any remaining food
 - Don't take more than 20 pence piece sized mouthfuls
- 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 eg. meat, fish, eggs. eat protein first, then the complex carbohydrates (starch) and lastly healthy fats
- Rest after each meal, laying down for 30 minutes 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 void these
- 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 of 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	LOW GLYCAEMIC INDEX FOODS
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	LOW GLYCAEMIC INDEX FOODS
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
Bulgur (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

INTERMEDIATE GI FOODS (55-70)

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
Potatoes (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
HIGH GI FOODS >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 - Porridge to Go Breakfast Bar
 - Tesco healthy living apple and strawberry cereal bar
 - Atkins day break bars
 - Quaker crunchy bars
- Wholewheat crackers/oatcakes /pitta 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**

For more information about bariatric surgery at CHFT, the bariatric team and resources, please scan the QR code below:



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

Your Healthcare Professionals:

Bariatric Surgery Specialist Dietitian's and Nurse

Telephone: 01484 355217

or email: Bariatric@cht.nhs.uk

www.cht.nhs.uk

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

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

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