

## Diet strategies for managing dumping syndrome after bariatric surgery

This information sheet will help you choose what to eat and drink to manage symptoms of dumping syndrome after bariatric surgery.

### What is Dumping Syndrome?

Dumping syndrome can occur when food moves too quickly from the stomach into the small intestine, causing uncomfortable symptoms and/or low blood glucose levels after food intake. It can be a side effect that happens after both gastric bypass and gastric sleeve surgeries.

It can be caused by **eating foods or drinking fluids high in sugar or carbohydrates**.

There are two types of dumping syndrome that can occur:

- **Early dumping syndrome**

OR

- **Late dumping syndrome** (also called **post-prandial hypoglycaemia**).

### Early dumping syndrome

Usually occurs during or right after a meal (10-30 minutes after eating/drinking). Early dumping is more common than late dumping.

Symptoms include:

- Nausea / vomiting
- Bloating / cramping
- Diarrhoea, often urgent
- Dizziness
- Sweating
- Rapid heart rate

### Late dumping syndrome (post-prandial hypoglycaemia)

Typically occurs 1-3 hours after eating. The body releases a large amount of insulin. Insulin is a hormone that helps move glucose from food into our body cells to be stored and used as energy. This rise of insulin can cause hypoglycaemia (low blood glucose levels [BGL]).

Symptoms include:

- Rapid heart rate
- Sweating
- Hunger
- Confusion / difficulty concentrating
- Fainting / shaking
- Fatigue

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### **How do I get dumping syndrome diagnosed?**

After bariatric surgery, it is common to experience a range of gastrointestinal symptoms. Your healthcare team can help work out if your symptoms are specific to dumping syndrome and if so, support the management of this condition.

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### **What do I do to reduce or manage these symptoms?**

There is a stepped approach to the management of dumping syndrome.

- Step 1: Dietary and lifestyle management
- Step 2: Medical management: This can include further medical tests, referral to a specialist doctor (e.g. Endocrinology) or medicine.

#### **Step 1. Dietary Management**

Making dietary changes can help manage both early and late dumping syndrome symptoms. The below information is a starting point for dietary management. It is not meant to replace advice from your bariatric surgery healthcare team:

1. Eat small meals, about 1/2 -3/4 cup regularly. It is important to have at least 3 meals, spaced out through the day, with around a 3-hour gap between meals. Extra meals/snack advice can be provided by your dietitian. Take your time eating, and make sure you chew your food well.
2. Do not drink fluid with meals. Stop drinking at least 15-30 minutes before eating and wait 30 minutes after eating a meal.

3. Make a lean protein the main part of your meal or snack. Protein sources include eggs, meat, fish, chicken, and legumes/lentils. Also, smooth peanut butter, low sugar/high protein yoghurt, milk and cheese.
4. Eat small portions of carbohydrates (e.g. 20-30g with meals and 15g with snacks). Low glycaemic index (GI) carbohydrates are better. These include legumes/lentils, traditional oats, sweet potato, and wholegrains. See GI table below.
5. Add vegetables to meals. Include high fibre vegetables such as broccoli, carrots, zucchini, corn and pumpkin. Fibre supplements (e.g. Benefibre or Metamucil) can also increase fibre content.
6. Adding a small amount of healthy fats can help. Try avocado, smooth peanut butter, extra virgin olive oil.
7. Avoid high sugar foods or 'added sugars'. For example, sweets, sugary cereals, honey, syrups, custard, and ice cream. Also, sugary drinks such as soft-drink, juices and cordials.
8. Avoid or limit alcohol, caffeine, artificial sweeteners, and lactose if these make your symptoms worse.

### Low GI simple swaps

Glycaemic Index (GI) is a measure of how fast a carbohydrate-containing food is digested. Lower GI options take longer to digest, help to regulate your BGL's, and are the better choice if having carbohydrate foods.

Food	Lower GI – Better Choices	Higher GI- To avoid/reduce intake
Breakfast cereal	Traditional rolled oats or steel cut oats (porridge) Wholegrain or multigrain high fibre cereals Multigrain weetbix/ oat bran wheat biscuits	Instant/quick oats Sultana Bran Just Right Cornflakes Rice Bubbles

Breads and crisp breads	Dense grainy/ seeded breads Traditional sourdough High fibre Low GI breads or wraps with Low GI certified symbol  White corn tortilla Pumpernickel  Grainy/seeded crackers for example Ryvita multigrain or Vita-wheat seed and grain	White, Wholemeal bread Dark or Light rye Bagel Crumpets Turkish, focaccia English muffins White buns  Rice and water crackers Salada, Sao Corn thins, Rice cakes Cruskits Pretzels Milk coffee biscuits
Rice, pasta, grains	Long grain rice (white or brown): basmati, mahatma, doongara Low GI certified rice (Sunrice) Wild rice, black or red rice Chia and quinoa rice blends Quinoa, bulghur, pearl or Israeli cous cous All dried or canned legumes including kidney beans, chickpeas, lentils, baked beans Wheat pasta Vermicelli Soba, udon, hokkien noodles	Jasmine rice Medium grain rice (white or brown) Arborio rice Cous cous Corn or rice pasta Potato gnocchi Noodles/ instant noodles Canned spaghetti
Vegetables	Sweet potato (flesh) Nicola, Carisma potato Corn cob, corn Parsnips Taro	All other white potato varieties (Desiree, new, Pontiac, Sebago) Instant mashed potato Sweet potato purple skin, kumara Broad beans
Fruit	Apple, pear Banana lightly ripe	Cantaloupe/rockmelon Watermelon



	Nectarine, Peach, apricot Berries Orange, mandarin, kiwi fruit Grapes Paw paw, mango	Lychee
Dairy	Milk, yoghurt Soy milk, soy yoghurt	Rice milk Oat milk Sweetened condensed milk
Reference: Glycemic Index Research (Glycemicindex.com) and Glycemic Index Foundation (gisymbol.com)		

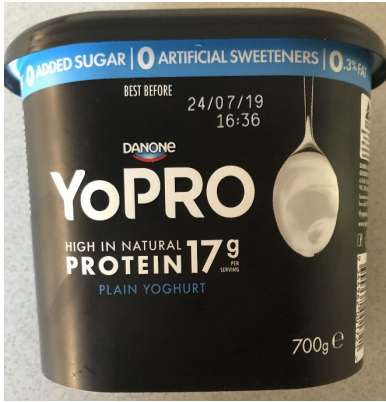
## Sample meals

### Low GI / high fibre and high protein meal ideas

- Porridge: 1/3 cup of traditional oats (not quick oats) with  $\frac{3}{4}$  -1 cup low fat milk and topped with nuts/berries/ peanut paste (~1tbsp)
- One poached egg, with  $\frac{1}{2}$ - 1 slice multigrain toast
- $\frac{1}{2}$  cup baked beans (130-140g tin) with  $\frac{1}{2}$  slice multigrain toast or  $\frac{1}{2}$  multigrain English muffin
- Small tin (95g) tuna and salad sandwich using Abbotts™ /Tip Top™ Mixed grain sandwich thins or Mission™ low carb wrap
- $\frac{1}{2}$  cup stir-fried lean beef/lamb/pork or tofu and vegetable with  $\frac{1}{4}$  cup cooked soba noodles or basmati rice
- Grilled salmon (1/2 fillet or 70g raw) with 2-3 florets broccoli and 1-2 tbsp sweet potato
- $\frac{1}{2}$  cup savoury mince (cooked with lean mince and grated vegetables e.g., carrot, zucchini) with  $\frac{1}{4}$  cup doongarra rice / mashed sweet potato

### Low GI / high protein snack ideas

- Small tub yoghurt (~125-170g) with a few berries
- 2 Ryvita™ or Vita-Wheat™ grainy/seeded crackers with 30-40g cheese or 1 tbsp hummus/ peanut butter
- One boiled egg



YoPRO yoghurt is high in protein and low in carbohydrates, sugar and lactose.



Nut butters adds protein and healthy fats to meals



Try adding tasteless protein to lower protein foods such as porridge, mashed vegetables.



Avocado adds healthy fat to meals



Adds fibre to your day.



Legumes like chickpeas add fibre and protein to meals



Low GI rice – serve a small amount with a protein based meal



Low GI rice – serve a small amount with a protein based meal



Try protein pasta paired with protein sauce (e.g. minced meat/bean sauce)

## Step 2 Medical Management

Medical investigations can include:

- A period of regular self-blood glucose monitoring (BGL monitoring).
- A 'mixed meal tolerance' test, carried out in hospital.

If any of these are needed, your doctors will talk to you about this.

If changing your diet does not improve symptoms, your doctors may suggest a trial of medications. Your doctor will talk to you further about this as required.

If you do have low blood glucose levels, information on how to treat this can be found here:

- Baker Institute Hypoglycaemia or 'hypo' [information sheet](#)
- This may not be suitable for all individuals all of the time. Speak to your bariatric surgery team for individualised advice.

In addition, hypoglycaemia is a safety risk to you and to others, if driving or undertaking certain high-risk activities. You will need to discuss this further with your doctors.

### Take home messages

- Aim for a **regular eating routine** e.g., three meals (e.g., breakfast, lunch and dinner) a day and any extra snacks as required (see your dietitian)
- **Drink between meals** only
- Eat meals that are **high protein** and include small amounts of **high fibre/low GI foods**
- Avoid **simple sugars or added sugars**

Things I can work on:

1.

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2.

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3.

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**For further information, contact your dietitian or nutritionist \_\_\_\_\_**