

Patient information

Dumping Syndrome Following Upper Gastrointestinal (GI) Tract Surgery

Therapies

What is Dumping?

The name Dumping Syndrome has been given to a collection of symptoms that occur after a meal in patients who have undergone certain operations involving the stomach.

The symptoms fall into two groups:

One group may experience symptoms that appear to be related directly to the digestive tract: bloating and tummy-rumbling. This combination of symptoms sometimes leads up to passing a bulky, loose bowel motion.

The other group of symptoms is quite different: Patients feel tired and want to lie down, this may progress until they actually feel faint and sweaty and are aware that their heart is thumping (palpitations).

What is the cause?

After surgery food can pass into the intestines at a rate that is greater than normal. Normally, when food enters the stomach it mixes with the gastric juice and digestion commences. The valve at the lower end of the stomach, known as the pylorus, works by slowing down the rate at which the stomach empties. If this valve has been removed, or has stopped working, food and digestive juices can pass through too quickly causing symptoms of Dumping Syndrome.

How are the symptoms produced?

Both sets of symptoms are caused by something called 'osmotic pressure'. The body breaks down the food you have eaten into smaller components; carbohydrates that are in your food have been broken down into sugars making the solution passing through your digestive tract more concentrated.

A strong solution of sugar in the intestine makes the bowel contract vigorously (producing the tummy rumbling) so that it is rapidly spread throughout the length (20 feet or so!) of the small bowel. This leads to the body attempting to restore balance to the intestines and equalise the concentrations of sugar in the gut and the blood, which is called osmotic pressure.

This rapid shift in fluid can lead to a fall in blood volume resulting in faintness, sweating, a desire to lie down and palpitations.

The extra estimated three pints of water in the guts leads to the feeling of bloating, makes the tummy rumbling worse, and could lead to the passage of the excess liquid as watery diarrhoea.

Which surgical procedures produce dumping?

The surgical removal of most or all of the stomach (gastrectomy or as part of Oesophagogastrectomy) nearly always involves the removal of the valve at the bottom of the stomach (the pylorus). This may be for technical reasons or because the disease requires this step.

In another operation called a gastroenterostomy the surgeon needs to by-pass the valve by joining the stomach and the part of the intestine beyond the valve. This may be necessary because the valve is blocked. A third group of patients may have had an operation to cut the vagus nerves to their stomach (vagotomy) the purpose being to reduce the amount of acid that the stomach makes.

How common is dumping?

This is a difficult question to answer because dumping is likely to be only an exaggeration of what happens in normal life. We are all familiar with the feeling of abdominal fullness and sleepiness which can follow a large meal but symptoms are usually mild.

Dumping will be most noticeable soon after the operation and will be made worse by larger meals. A small percentage of patients who have recently undergone a stomach operation as described above will notice such symptoms, and those who do not probably have the same changes going on inside them, but their circulations are less sensitive to the fall in blood volume and their intestines are less sensitive to bloating.

As time passes, the symptoms become less, until by twelve months after the operation fewer than 5% of patients still complain of symptoms. The other 95% may also have them to a minor degree, but have learned to live with them. This means that they have discovered ways of reducing the impact of the condition on their lives.

What is the treatment?

Firstly, it is worth remembering that dumping usually improves without any treatment at all. If you are still experiencing symptoms a year after the operation, it would be worth asking for help from your hospital Consultant or Dietitian. Meanwhile, there are plenty of common-sense measures that you can implement yourself.

Since the symptoms are directly related to each meal, you should limit the size of your meals: stop eating a meal while you can still eat more or revert back to a smaller plate. To ensure adequate nutrition, increase the frequency of meals you take aiming for around six small meals per day. This step is not always easy, especially if it does not fit in with your work-pattern.

Avoid the feeling of faintness by resting, at least sitting if not lying down, after the meal. The symptoms usually last only 20-40 minutes, so try not to go straight back to your job or housework immediately after the break. Again, this may be difficult to achieve.

Think about what you eat and try to minimise your intake of sugar in all forms -jams, cakes and chocolate and in your tea and coffee. You may need to switch to artificial sweeteners, or make the decision to cut out sugar from beverages. It will help your symptoms if you leave a half hour gap either side of eating before you have a drink.

For severe symptoms

If you are one of the few people with severe symptoms that are not adequately controlled by simple measures and which have persisted for more than a year, you should ask to see the surgeon who performed your operation. He or she will probably do a simple test to confirm the diagnosis of dumping; for example, testing whether a concentrated glucose drink would cause the symptoms, it may then be possible to advise if an operation is available to improve your rapid stomach emptying. If no operation is available, drug treatment will possibly be recommended.

Useful tips on Diet

1. Eat small frequent, regular meals.
2. Leave half an hour either side of food before you have a drink.
3. Avoid too much sugar and sugary foods. If necessary, you can use artificial sweeteners.
4. Chew food well and eat slowly.
5. Avoid food temperature extremes.
6. If you are underweight seek advice from a Dietitian regarding your dietary intake.

Try To Avoid These Sugary Foods	Try Low Sugar Foods Like These Instead
Sugar, glucose, fructose	Artificial sweetener (Canderel, Hermesetas, Sweetex, Slendasweet, Splenda, supermarket own brands)
Sugar coated cereals	Plain cereals not coated in sugar with no added sugar. Use an artificial sweetener if necessary
Marmalade, jam, honey, syrup	Reduced sugar jams, marmalade and pure fruit spreads
Full sugar cordials or squashes and sweetened fruit juices	Sugar free or no added sugar cordials and unsweetened fruit juices
Fizzy drinks (lemonade, cola, tonic, some flavoured waters)	Diet, slimline, low calorie drinks, soda water, diet cola, lemonade, sugar free tonic, sugar free flavoured water
Boiled sweets, puddings, desserts and ice creams	“no added sugar” / “reduced sugar” instant desserts: Angel Delight, Instant Whip, sugar free jelly, low sugar rice pudding-tinned or made with sweetener, low sugar custard, plain ice cream
Chocolate, sugar, sweets, cakes	Currant loaf, tea cakes, scones, malt loaf, low sugar cakes, cakes made with sweetener

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Further information:

The 'Little and Often' Upper GI Support group meets monthly at Broadgreen Hospital for more details contact:

- **Upper GI Dietitians**
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CORE: fighting Gut and Liver disease
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