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Dietary and Nutritional Recommendations for Patients with Dumping Syndrome (Rapid Gastric Emptying)

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Dumping syndrome describes a collection of symptoms that occurs when food is emptied too quickly from the stomach, filling the small intestine with undigested food that is not adequately prepared to permit efficient absorption of nutrients in the small intestine.

Dumping syndrome is most commonly seen after a gastrectomy – the surgical removal of all or part of the stomach, usually for ulcer disease. It is now recognized that other types of patients, including those with symptoms suggestive of functional dyspepsia, may have rapid gastric emptying.

The symptoms of dumping syndrome include nausea, abdominal cramps, diarrhea, dizzy spells, weakness, and cold sweats either with or after eating. The symptoms are often divided into "early" symptoms which begin during or right after a meal. These include nausea, vomiting, bloating, cramping, diarrhea, dizziness, and fatigue. Late dumping symptoms occur 1–3 hours after eating and include hypoglycemia, weakness, sweating, and dizziness. People with dumping syndrome often have both types of symptoms.

The diagnosis of dumping syndrome is based primarily on the development of symptoms in a patient with a history of stomach surgery. Tests may be needed to exclude other conditions that have similar symptoms. These tests may include blood tests, upper endoscopy, and/or gastric emptying test. Gastric emptying demonstrates rapid stomach emptying, especially in early scans taken one half and one hour after eating the test meal which shows nearly complete stomach emptying.

Medical management of dumping symptoms involves dietary changes, and at times, the use of medications. A change in diet is tried in most cases as the initial treatment. In moderate to severe cases, medications are taken to slow the stomach emptying and movement of food in the GI tract. Rarely, doctors recommend surgery.

The following suggestions may help guide your eating to maximize your nutrition status and minimize symptoms of dumping:

Basic Dietary Guidelines for Dumping Syndrome

- Eat smaller, more frequent meals. Eating 5 or 6 small meals more often will allow you to eat the equivalent of 3 regular meals without feeling full too fast. Eat slowly and chew all foods thoroughly. Sit upright while eating.
- Solid foods account for most episodes of dumping. Symptoms are triggered more by solid food that requires breakdown in the stomach such as a piece of steak or pork chop rather than ground meat that is already broken down by the butcher.
- Limit fluid consumption during meals. Drink liquids 30–60 minutes before or after meals instead of with meals.
- Avoid nutrient-rich drinks since dumping syndrome is easily triggered by any rich emulsions such as a liquid nutritional supplement or a milk shake.

- Eat fewer simple sugars. Foods high in simple sugar should be avoided because they pass through your stomach quickly and may cause diarrhea and cramping. Avoid or limit high sugary foods and beverages including the following examples: Kool-Aid, fruit juices/drinks, soda, cakes, pies, candy, doughnuts, cookies.

- Eat more complex carbohydrates such as whole grains, pastas, potatoes, rice, breads, bagels, unsweetened cereals, etc.

- Eat more foods high in soluble fiber. Foods high in soluble fiber slow stomach emptying and prevent sugars from being absorbed too quickly. The following examples are foods high in soluble fiber: apples, beets, Brussels sprouts, carrots, oats, spinach, pears.

- Try increasing the amount of fats in your diet. Fats slow the stomach emptying and may help to prevent dumping syndrome from developing. Butter, margarine, mayonnaise, gravy, vegetable oils, salad dressings, and cream cheese are good choices; use some at all meals and snacks (for those trying to lose weight, an individual meal plan can be designed with a registered dietitian).

- Increase the protein in your diet. Eat a protein containing food with each meal. Examples of high protein foods include the following: Eggs, meat, poultry, fish, milk, yogurt, cottage cheese, cheese, peanut butter.

- If milk causes distress, try lactose-free milk. Milk and milk products are often not tolerated; reduce or avoid consumption if this it true for you. It will be important to ensure that adequate calcium and vitamin D are eaten in the diet.

If you have difficulty maintaining your weight, ask to meet with a registered dietitian to help you with a meal plan. One possibility is to drink a nutritional supplement for extra calories; unfortunately, some of these may worsen symptoms. If tried, drink slowly to prevent symptoms.

Most patients have relatively mild symptoms and respond well to dietary manipulations. In patients with low blood pressure after meals (feeling lightheaded or sweaty), lying down for 30 minutes may help. For patients that do not respond to the above dietary treatment, medications are sometimes given. The drug acarbose delays carbohydrate absorption and has been shown to help patients with late dumping. Another drug, octreotide, has been used with some success also. Octreotide is a synthetic form of somatostatin, a naturally occurring hormone in the body. Octreotide and somatostatin delay stomach emptying and exert a strong inhibitory effect on the release of insulin and several gut-derived hormones. Octreotide is a therapy used sparingly since this treatment significantly impairs digestion. There are several newer agents that are also beginning to be used in attempt to slow gastric emptying (many of these are also used to treat patients with diabetes). In patients who do not respond to medical treatment, surgery is *sometimes* considered.

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