Nutrition Post Gastrectomy

What is a Gastrectomy?
A Gastrectomy is an operation that removes all or part of the stomach (total or partial). As a result, the stomach is smaller with less room for food to be held. It may also mean that you will feel full more quickly, and food will pass through into your gut sooner after eating. You should still be able to enjoy all the foods you ate before your operation; however you may have to make some changes to your eating habits.

Common problems and management
It can cause problems as described below. However not everyone will get these symptoms.

1. Feeling full early
   - Eat small meals every few hours; aiming for a total of six or more meals each day.
   - Eat nutritious snacks between meals.
   - Have drinks at least 30 minutes before or after meals, not with meals as this may fill you up too quickly.

2. Diarrhoea
   - Drink plenty of liquids between meals.
   - If diarrhoea occurs 15 to 30 minutes after eating, you may be experiencing “dumping syndrome”. See advice below. If diarrhoea persists, seek medical advice.

3. Weight loss
   - Eat nutritious snacks between meals e.g. cheese and crackers, sandwiches, nuts, dried fruit, yoghurt, dairy desserts.
   - Include foods that contain fat and protein at each meal e.g. eggs, meat, chicken, fish, tofu, baked beans, cheese, milk, olive oil, avocado or nuts (including peanut butter).
   - Choose nourishing drinks – select milkshakes, Milo™, Sustagen™, or Ensure™ rather than tea and coffee.
   - Monitor your weight weekly and let your Dietitian know if you keep losing weight, or ask for a referral from your GP.

4. “Dumping Syndrome”
Normally there is a muscle at the bottom of the stomach that controls the amount of food the stomach lets into the small intestine. This muscle is often taken out or doesn’t work as well following a gastrectomy, causing food to move too quickly from the stomach into the small intestine.
The following **symptoms** may occur after your stomach surgery including:

- Nausea and vomiting
- Bloating, cramping or diarrhoea
- Palpitations, sweating or shakiness
- Fullness
- Lack of concentration or tiredness

These symptoms are referred to as “dumping syndrome”. Most people experience symptoms 10 to 30 minutes after eating (early dumping syndrome), others have symptoms one to four hours after eating (late dumping syndrome).

To help prevent these symptoms:

- Avoid large meals; choose six to eight small meals or snacks each day.
- Have drinks 30 minutes before or after meals, instead of with meals.
- Avoid food and drink that contains a lot of sugar e.g. regular cordial, soft drink, mixed alcoholic beverages.
- Include high fibre foods if you have late dumping symptoms or trial a fibre supplement. High fibre foods include: lentils, baked beans, oat bran, wholegrain breads and cereals, skins on fruit and vegetables.
- Lying down after eating may help if you experience severe symptoms.

- Taking a starchy snack (e.g. slice of bread, banana, oatmeal biscuit) may help symptoms.

5. **Vitamins and Minerals**

When all or part of your stomach is removed, your body may be unable to absorb vitamin B12 and iron as easily from your food. Both of these nutrients are required for healthy blood. Your doctor may need to give you injections to replace vitamin B12.

To help your body get the iron it needs you can:

- Eat foods high in iron: red meat, chicken, fish, eggs, liver, kidney, shellfish, and breakfast cereals or meat alternatives with added iron (e.g. *Special K™*, cornflakes, tofu).
- Eat foods high in vitamin C within 30 minutes of eating iron rich foods. These include: fruit (especially citrus fruits, fruit juices, and berries) and vegetables (especially tomatoes, capsicum).

You may also be at increased risk of low calcium and vitamin D intake or absorption.

- Try to include 2 serves of dairy each day (e.g. cheese, yoghurt, milk, custard, ice cream, fortified soy
products). You may need to take a supplement if your levels are low or you cannot meet this with diet alone.

- A multivitamin can help if you are unable to manage a wide variety of foods from the different food groups.

**Eating again**

- Following your surgery your diet will be progressed back to normal over time. The steps below will explain how your diet might change over the next several days.

- After your surgery, you may only be allowed sips of water or clear fluids under the direction of the surgeon.

**1. Free fluids – liquids only**

This diet is usually followed for 1-2 days if clear fluids have been well tolerated. Options should include liquids only:

- Soup: smooth and liquid based with no bits or lumps.

- Jelly, custard, ice cream.

- Hot or cold drinks: tea, coffee, hot chocolate, plain milk (aim to avoid carbonated / fizzy drinks).

- Nutritional Supplements: *Ensure Plus™*, *Sustagen™*, *Resource Plus™* are suggested for the first few weeks to help in meeting your increased nutrient needs after surgery.

**2. Pureed diet**

Your surgeon may move you to a pureed diet if free fluids have been tolerated well. Alternatively, you may be placed directly onto a soft diet. Pureed options include:

- Soup: thick and smooth, continue to avoid large chunks.

- Pureed meat and vegetables: select from the pureed hospital diet or puree in a blender with extra liquid.

- Cereals: milky porridge, softened *Weetbix™* with extra milk.

- Creamy desserts: semolina, mousse, crème caramel.

**3. Soft diet**

If liquids have been well tolerated, you may be able to move directly to a soft diet under the direction of your surgeon.

- Softened foods: minced, mashed, chopped or stewed foods using the five main food groups (cereal, meat, vegetables, fruit and dairy).

- Moist foods: add extra sauce, gravy or liquids to soften foods.

- Avoid hard foods: tough meat/gristle, seeds/pips/skins, fresh/multi-grain bread, hard crusts, hard/stringy fruit
and vegetables (e.g. celery, beans, grapes, tomatoes, orange pith).

4. Normal diet
You may tolerate soft foods better for a period of time. However you should be able to progress back to a normal textured diet as tolerated.

Making the most of what you eat
If you can’t manage a lot of food throughout the day, it is important to make the most of what you do eat. Suggestions include:

Dairy
• Add cream or cheese to main meals such as scrambled eggs, omelettes, casseroles.
• Add skim milk powder to your milk drinks to make them doubly nutritious.
• Choose dairy snacks like custard, yoghurt, ice cream, rice puddings, mousse and other similar products.

Meat and meat alternatives
• Add meat, lentils or other legumes to dishes such as soups and casseroles.
• Eggs make a nutritious addition to meals or make an easy snack.

Beads and cereals
• Add a thick spread of butter, margarine, jam, dip, cheese, peanut butter or your favourite spread to a variety of bakery products.
• Choose nutrient dense sandwich fillings e.g. sliced meat, canned fish, baked beans, cheese, avocado, tinned spaghetti, eggs.

Fruit and vegetables
• Add margarine, butter, oil or cheese to vegetables for extra energy e.g. cauliflower cheese or a creamy potato bake.
• Add ice cream, yoghurt or custard to fruit.
• Try to eat a variety of types and colours to ensure you are getting a good variety of nutrients.
• Include fruit / vegetable juice if you have difficulty eating enough fruit and vegetables.

Easy snacks
• Supermarket freezers can provide ready-made meals and snacks that require little preparation.
• Dairy foods like custard, yoghurt, rice pudding, milk desserts, milk drinks
make easy snacks. Choose full cream options where possible.

- Muesli bars, pre-packaged cheese and dips/crackers and *Up & Go™* make good handy snacks.

**Future nutrition goals**

If over time, you are able to tolerate a more normal diet and your weight is stable, aim to progress back to the general healthy eating guidelines with regular exercise to aid healthy weight maintenance.

**General rules for eating after Gastrectomy**

- Eat a healthy diet choosing a wide variety of foods
- Eat slowly and chew foods well
- Avoid very sugary food and drink (such as soft drinks, cordials, lollies etc.) and monitor caffeine
- Have your fluids at different times to your meals
- Include foods that contain fat and protein at each meal
- Aim for 6 to 8 smaller meals/snacks throughout the day
- Discuss alcohol use with your doctor

**Sample Meal Plan in the first few weeks**

<table>
<thead>
<tr>
<th>Approximate Time</th>
<th>Food or Drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>7am - On waking</td>
<td>Glass of fruit juice (unsweetened)</td>
</tr>
<tr>
<td>9 am - Breakfast</td>
<td><em>Weetbix™</em> softened with full cream milk + added cream and honey</td>
</tr>
<tr>
<td>10am - Early Morning</td>
<td>Glass of <em>Sustagen™</em> made on milk</td>
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<tr>
<td>11am - Mid-Morning</td>
<td>Mashed banana + peanut butter on bread</td>
</tr>
<tr>
<td>12pm - Lunch</td>
<td>Sandwich with boiled egg and grated cheese and margarine/butter/avocado/mayonnaise</td>
</tr>
<tr>
<td>2pm - Early Afternoon</td>
<td>Glass of <em>Sustagen™</em> made on milk</td>
</tr>
<tr>
<td>3pm - Mid-Afternoon</td>
<td>Tub of yoghurt / rice pudding / crème caramel / sponge and custard</td>
</tr>
<tr>
<td>5pm - Late Afternoon</td>
<td>Water / Tea / Coffee (decaffeinated) / Milk</td>
</tr>
<tr>
<td>6pm - Dinner</td>
<td>Shepherd’s Pie - diced zucchini, carrot, pumpkin in mince with mashed potato and cheese topping</td>
</tr>
<tr>
<td>7pm - Supper</td>
<td>Water / Tea / Coffee (decaffeinated) / Milk</td>
</tr>
<tr>
<td>8pm - Before Bed Snack</td>
<td>Tinned fruit and ice cream</td>
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