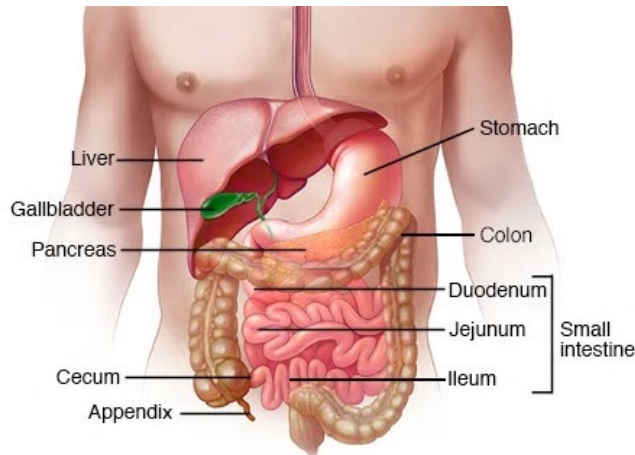


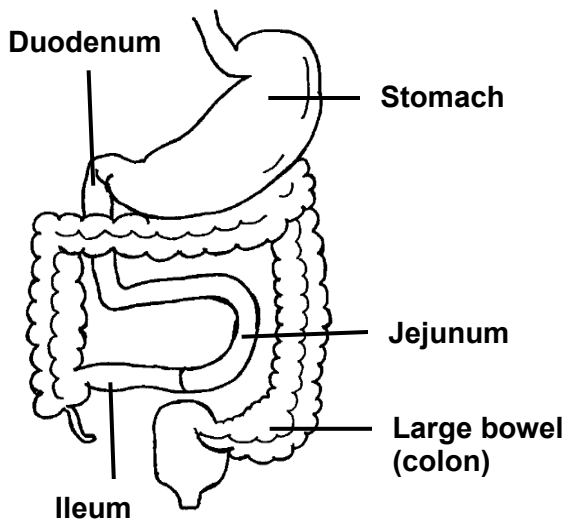
Eating with short bowel syndrome (Small bowel removed with large bowel intact)

Normally an adult has 3 to 4 meters of bowel that absorbs nutrition from food and fluids.

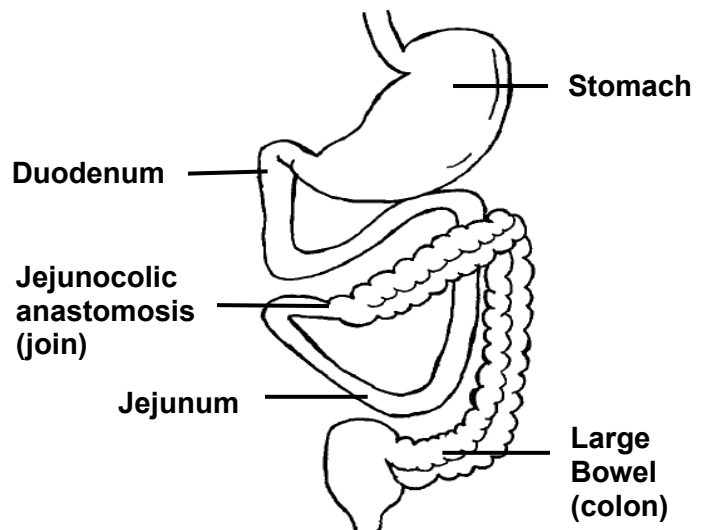


© MAYO FOUNDATION FOR MEDICAL EDUCATION AND RESEARCH. ALL RIGHTS RESERVED.

Short Bowel Syndrome (SBS) occurs when a significant portion of the bowel (intestine) has been surgically removed. The information in this sheet is intended for those who have part or all of their large bowel remaining but have had a significant portion of their small bowel (which consists of the duodenum, jejunum and ileum) removed.



Ileocolic anastomosis (join of ileum to colon)



Jejunocolic anastomosis (join of jejunum to colon)

Symptoms of SBS

The most common symptom of SBS is diarrhoea, due to having a reduced length of bowel to absorb the nutrition from food and fluids. Although everyone is different, it is usually

assumed that between half and two thirds of the nutrition eaten may not be absorbed. This malabsorption is what causes diarrhoea which may lead to weight loss, malnutrition and dehydration.

The severity and duration of diarrhoea depends on several things. These include

- the amount of remaining bowel,
- the health of the remaining bowel,
- how soon it is after the removal of the section of bowel, and
- what you choose to eat and drink.

Over time the remaining bowel adapts to the shorter length in a process called 'gut adaptation'. This process can continue for 2 to 3 years after your bowel resection. This means that over time your diarrhoea should improve to some degree as your body adapts and gets better at absorbing food and fluids. Following a special diet and certain medications can also help. Some people may need fluid or nutrition through the vein (intravenous - IV) to assist with their recovery.

What medications can I take to help manage my SBS?

There are several medications that your doctor can prescribe to help your remaining bowel to adapt.

Commonly used medications include

- Loperamide (e.g. Gastrostop®, Imodium®): works best when taken regularly, usually 30 minutes before meals. The capsules can be opened and the spheres sprinkled on food to improve absorption and effect.
- Codeine: works by slowing down the speed the body moves food through the bowel. Usually given at night as may make you sleepy.

You should take a multi-vitamin as you will no longer be absorbing all the nutrition from food. Your dietitian or doctor may also recommend you take specific vitamins or minerals depending on which parts of your bowel have been removed, and/or your blood test results.

What should I eat to manage my SBS?

The following recommendations have been shown to reduce diarrhoea in many people with SBS with some or all their large bowel remaining.

- Choose “dry” food and meals to reduce fluid volume at meal times. E.g. roast meat with mashed potato and carrots, no gravy or sauce, instead of “wet” dishes like soups and casseroles.
- Drink your fluids away from meal and snack times. At least 30 minutes between eating and drinking will help reduce diarrhoea. Your healthcare team may also recommend you limit the amount and type of fluids you consume.
- Chew your food well and eat slowly to improve time for digestion and absorption.
- Eat smaller, more regular meals / snacks – aim for at least 6 to 8 times over the day. You will need to eat more to make up for what your body is not able to absorb.
- Choose lower fat alternatives to reduce fat malabsorption.
- Choose higher complex carbohydrate foods (bread, pasta, rice, etc.) but reduce the amounts of simple sugars (lollies, soft drinks, etc). This can reduce diarrhoea.
- Avoid foods high in oxalates (see following pages), to reduce the risk of developing kidney stones. If you do eat a food high in oxalates, eating a food high in calcium (e.g. cheese, milk) at the same time can reduce the risk.

See list of foods and sample meal plan provided.

Follow up

It is important you remain in contact with your doctors, pharmacist and dietitian after you go home.

The reasons for this include the need to monitor

- Your weight and nutritional status.
- Your vitamin and mineral levels.
- Changes to your bowels that may allow modifications to your medication and/or diet (and IV fluid and nutrition requirements, if applicable).

For further information contact

Dietitian: _____

Phone: _____

Doctor: _____

Phone: _____

Pharmacist: _____

Phone: _____



Dietary recommendations for SBS (with large bowel)

	Choose	Best to avoid or consume in small amounts
Bread, cereals, rice, pasta, noodles	<p>All refined cereal products are low oxalate</p> <p>White bread/crumpets/English muffins White rice White pasta Noodles White flour, cornflour Plain sweet biscuits, muffins and cakes Plain savoury biscuits and cakes Porridge</p>	<p>All high fibre cereal products are considered high oxalate</p> <p>Wholemeal/multigrain/soy & linseed bread Wholegrain breakfast cereals (e.g. Weet-Bix, All Bran), muesli Fruit bread Muesli bars Brown rice Wholemeal pasta Noodles served in broth Sweet biscuits Muffins/cakes made with wholemeal flour, nuts, dried fruit or coconut Wholemeal flour, wheat germ Bran</p>
Fruit	<p>Low oxalate fruits</p> <ul style="list-style-type: none"> • Banana (not overripe) • Apples (red) • Tinned peaches • Melons <p>Moderate amounts of medium oxalate fruits</p> <ul style="list-style-type: none"> • Berries • Kiwi fruit • Grapes • Apples (green) • Stone fruits • Citrus fruits • Pears 	<p>Fruit juice Dried fruit/trail mix</p> <p>High oxalate fruits</p> <ul style="list-style-type: none"> • Figs
Vegetables, legumes	<p>Low oxalate vegetables</p> <ul style="list-style-type: none"> • Avocado • Broccoli • Cauliflower • Cucumber • Lettuce • Peas • Onions <p>Moderate amounts of medium oxalate vegetables</p> <ul style="list-style-type: none"> • Green beans • Potato • Capsicum • Cabbage • Mushroom • Asparagus • Corn • Tomatoes 	<p>Vegetable juice Soup</p> <p>High Oxalate vegetables</p> <ul style="list-style-type: none"> • Beetroot • Leek • Spinach • Celery • Legumes (baked beans, soy, lentils, split peas) • Rhubarb

	Choose	Best to avoid or consume in small amounts
Meat, fish, poultry, eggs, nuts, seeds, legumes	<p>All animal products are low oxalate</p> <p>Eggs Fish Chicken Beef Lamb Pork, bacon, ham Turkey Duck</p>	<p>Casseroles, wet dishes, meat in sauce Curry/spicy food</p> <p>High oxalate protein foods</p> <ul style="list-style-type: none"> • Nuts and seeds • Legumes e.g. baked beans, lentils, soy beans, kidney beans • Nut pastes e.g. peanut butter • Soy products (soy milk, tofu, TVP)
Milk, yoghurt, cheese	<p>All animal products are low oxalate</p> <p>All types of cheese Cheese spread</p> <p>Milk including flavoured milks allowable but limit quantities</p>	<p>Custard Ice cream/sorbet/frozen yoghurt Yoghurt/soy yoghurt</p>
Extra foods	<p>Generally lower fat options are recommended however the following may be appropriate</p> <p>Potato chips/crisps Hot potato chips/gems Cheeseburgers/hamburgers BBQ chicken/fried chicken Sausage rolls/pasties without sauce Subway without sauce Vegemite Salt, pepper, dried herbs, spices</p>	<p>Large amounts of fat including butter, margarine, mayonnaise, oil Vitamin water Soft drink/ Cordial Alcohol Pies Subway with salad/sauce Gravy, tomato sauce, BBQ sauce, mustard Sugar, jam, honey, syrups, ice cream toppings Jelly, junket Lollies, boiled lollies, jubes, Coconut Chutney and pickles Chewing gum 'Sugar-free' products with sugar alcohols (e.g. sorbitol, xylitol, mannitol)</p> <p>High oxalate extras</p> <ul style="list-style-type: none"> • Coffee • Tea • Hot chocolate • Milo • Ovaltine • Chocolate, especially with nuts

Suggested meal plan

ON WAKING
Small cup of tea/coffee
BREAKFAST
1 cup of porridge (made on milk) OR 2 eggs on 2 slices of toast + scrape of butter
MORNING TEA 1
Banana
MORNING TEA 2
1 slice white bread with 1 tbsp smooth peanut butter
LUNCH
Ham, cheese and tomato sandwich on white roll or 2x slices of bread
AFTERNOON TEA 1
10 water crackers with sliced low-fat cheese
AFTERNOON TEA 2
2-minute noodles with fluid drained
DINNER
Piece of fish/meat/chicken with potato, sweet potato, carrots
SUPPER
10 savoury biscuits