

## Nutrition Guidelines for Patients with Short Bowel Syndrome

### What is short bowel syndrome?

Short bowel syndrome or “SBS” occurs when the bowel does not absorb nutrients as well as it should. This may be caused by loss of bowel length or loss of bowel function. This handout will help you choose foods and eat in a way that will help your bowel to absorb more of the nutrients.

Symptoms of SBS may include:

- Gas
- Cramps
- Diarrhea
- Fluid loss
- Weight loss

### Does it matter what part of my bowel has been lost?

Yes. There are two main sections of your bowel, the small intestine (small bowel) and the large intestine (colon). The small bowel can also be broken down into 3 sections, the duodenum, jejunum, and the ileum. In the “normal” bowel, each section will absorb certain nutrients.

Portion of the bowel	Where is it?	What is absorbed?
Duodenum	Right after the stomach	Calcium, magnesium, and iron
Jejunum	After the duodenum	Most things are absorbed here, like sodium, magnesium, and fluids.
Ileum	After the jejunum	Vitamins A, B <sub>12</sub> , D, E, and K, and bile salts which help absorb fat

Portion of the bowel	Where is it?	What is absorbed?
Colon	Connects the small bowel and the rectum	Most fluids and electrolytes

### Will my shortened bowel ever be able to absorb more fluids and nutrients?

Yes. Over time your bowel that remains will be able to absorb more. This starts about 24-48 hours after the loss of the bowel and will increase mostly within the first 2 years. During this time, it is common to have diarrhea.

### What can I do to help my body absorb as much as it can?

**Eat 5 to 6 small meals a day.** Eating small, frequent meals will put less stress on your shortened bowel. Small meals help control your symptoms and will help you digest and absorb nutrients. Eat slowly and chew your food well. Once your bowel adapts, you can resume having 3 meals a day.

**Select high protein foods.** Eat foods high in protein at least 6 times per day. This includes meat, fish, poultry, eggs, legumes, and dairy, if you can handle it.

**Limit your fats.** If you have foul-smelling stools that appear oily and or frothy, decrease the amount of fat in your diet. High fat foods include fried foods, oils, butter, margarine, avocado, nuts, high fat chips and crackers, and cookies.

**Choose complex carbohydrates.** Good choices are complex carbohydrates. These are found in bread, cereal, pasta, potatoes, and rice.

Poor choices are foods rich in simple sugars. This includes regular soda, candies, frozen desserts, sugary cereals, ‘fruit snacks’, and fruit juice.

### **Include soluble fiber into your diet.**

Soluble fiber may help slow movement through the bowels and result in a more formed stool. Examples would include Metamucil<sup>®</sup>, Benefiber<sup>®</sup> or guar gum, pectin, or foods such as oatmeal, oat bran, barley, and legumes.

Insoluble fibers hold more fluid in the bowel and can increase diarrhea, so you may want to limit them. Examples include bran from grains, woody vegetable stems, fruit and vegetable skins, and seeds.

### **May need to limit oxalate absorption.**

Oxalate is an organic acid that is found in many foods and made by our bodies when breaking down some foods. Patients sometimes absorb too much oxalate after their ileum is removed. This could lead to too much oxalate in the urine which may form kidney stones.

To reduce the amount of oxalate absorbed:

- Have calcium-rich foods at each meal and snack. Calcium binds to oxalate and helps it to be removed from the body.
- Consume probiotic foods like kefir and yogurt with “live active cultures.” These foods help break down oxalate and remove it.
- Eat many types of fruits and vegetables, as tolerated. These provide fuel for good bacteria (probiotics) in your gut, which break down oxalate.

You may need to lower your oxalate intake if you have high urinary oxalate and if increased calcium intake is not taking care

of it. Your registered dietitian can help you create a meal plan.

### **Use vitamins, minerals, and supplements.**

- Take a daily liquid or chewable multivitamin with iron.
- Take a 500mg calcium supplement (calcium citrate or Tums<sup>®</sup>) 3 times daily, for a total of 1500mg per day.
- You may need vitamin B12 injections if the last part of your ileum has been removed.
- If you’re having a lot of diarrhea your doctor may prescribe a zinc supplement.
- Keep a salt shaker at the table and use it.

### **Limit fluids at meal time and avoid high-sugar drinks.**

- Only drink ½ cup (4 ounces) of fluid during each meal. Drinking large amounts of fluid pushes food through your bowel faster, giving it less time to digest and absorb nutrients.
- Drink fluids between meals and at least 8 cups (64 ounces) of fluids per day.
- Limit or avoid milk or dairy products if they cause bloating, gas, or diarrhea.
- Avoid high-sugar drinks, such as fruit juices and soda.
- Avoid caffeine and alcohol.
- If you have high stool output you should add extra fluids. Oral rehydration drinks can help maintain fluids and electrolytes in your body. Try Cera-Lyte<sup>®</sup>, Equalyte<sup>®</sup>, Rehydralyte<sup>®</sup>, Drip Drop<sup>®</sup>, or make your own. Try the recipes on the next page.

**You may need a rehydration drink if you have frequent stools.** This is not the same as a sports drink (such as Gatorade®). Below are drink recipes that will help maintain fluids:

**Solution No. 1**

½ teaspoon salt  
¼ teaspoon salt substitute  
8 teaspoons sugar  
½ teaspoon baking soda  
1 liter water

**Solution No. 2**

1 cup orange juice  
8 teaspoons sugar  
¾ teaspoon baking soda  
½ teaspoon salt  
1 liter water

You should not have nutrition supplements, such as Ensure®, if you have high ostomy output. They have too much sugar. Gatorade® and juice can be too sugary alone. Try these recipes:

**Ensure Plus® Improved**

1 ounce Ensure Plus®  
8 ounces 2% milk

**Gatorade 2® Improved**

4 cups Gatorade G2®  
¾ teaspoon salt

**Apple Juice Improved**

1 cup apple juice  
3 cups water  
½ teaspoon salt

**Cranberry/Grape Juice Improved**

½ cup juice  
3 ½ cup water  
½ teaspoon salt

**Some foods help naturally thicken stool. Try adding them to your meals.**

- No sugar added applesauce
- Bananas
- Cheese
- Cream of rice
- Mashed potatoes
- Peanut butter (creamy)
- Rice
- Soda crackers
- Tapioca
- Weak tea

**Take medicine as prescribed.** For high ostomy output, your doctor may have you take medicine to help slow down output. If you are not on these medicines and are having high ostomy output, talk to your doctor about increasing or adding medicine to help.

- Antidiarrheals - take these 30 minutes before eating.
  - Imodium® (loperamide)
  - Lomotil® (diphenoxylate)
  - Tincture of Opium
- Proton Pump Inhibitors (PPI)
  - Nexium® (esomeprazole)
  - Protonix® (pantoprazole)
  - Prilosec® (omeprazole)
  - Prevasid® (lansoprazole)
- Histamine2-Receptor Antagonists
  - Cimetidine (Tagamet®)
  - Famotidine (Pepcid®)
  - Ranitidine (Zantac®)

## **Teach Back:**

What is the most important thing you learned from this handout?

What changes will you make in your diet/lifestyle, based on what you learned today?

If you are a UW Health patient and have more questions please contact UW Health at one of the phone numbers listed below. You can also visit our website at [www.uwhealth.org/nutrition](http://www.uwhealth.org/nutrition).

Nutrition clinics for UW Hospital and Clinics (UWHC) and American Family Children's Hospital (AFCH) can be reached at: **(608) 890-5500**

Nutrition clinics for UW Medical Foundation (UWMF) can be reached at: **(608) 287-2770**

If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright 3/2019 University of Wisconsin Hospital and Clinics Authority. All rights reserved. Produced by the Department of Nursing HF#369.