

Nutrition and Management of GI GvHD

GI GvHD refers to Graft vs. Host Disease of the gastrointestinal (GI) tract, a problem that can occur after an allogeneic transplant.

We may suspect you have GI GvHD if you are having GI symptoms **after** your neutrophil (white blood cell) count recovers.

Symptoms to watch for include chronic lack of appetite, chronic nausea/vomiting, watery diarrhea, and abdominal cramping.

If you are diagnosed with GI GvHD

- You will need to stop eating foods and drinking fluids for a while to allow your digestive system to heal
- You may be given intravenous (IV) nutrition or Total Parenteral Nutrition (TPN) to nourish you with calories, protein, vitamins, minerals, and fluid while you are not eating or drinking
- As you recover and start feeling better, your oral diet will be advanced slowly so your body can learn how to tolerate foods and fluids again
- At first – and with your doctor's permission - drink small amounts of clear liquids allowed on the **GI GvHD Clear Liquid Diet** (fruit juices, popsicles, broth, or gelatin)
- If you tolerate these clear liquids, you may be allowed to eat some solid foods. This is called **GI GvHD Diet Phase I and Phase II**.

While you are in the recovery phase, you may need to avoid foods that are known to cause problems for people with GI GvHD.

Foods to Avoid

- **High-fat and Greasy Foods:** These can be difficult to digest, and may cause more diarrhea.
- **High-fiber foods:** Insoluble fibers (whole wheat products, dried fruits, vegetable husks like corn or peas), seeds, and nuts may worsen diarrhea, and cause gas and bloating. Soluble fibers (bananas, applesauce, and oats) are easier on your digestive system, and promote formed stools.
- **Sugar Substitutes:** Most foods and beverages made with sugar substitutes or artificial sweeteners can cause symptoms similar to GI GvHD, such as diarrhea, gas or bloating. Therefore, sugar substitutes – with the **exception of sucralose** (Splenda®) - should be avoided.
- **Lactose:** This sugar found in milk may be difficult for you to digest when you have GI GvHD even if you have never been lactose intolerant before.
- **Acidic or spicy foods:** Citrus fruits and juices, tomato-based products, or heavily-seasoned foods may be irritating to your mouth, throat, and GI tract.

Delayed Gastric Emptying

Most patients with GI GvHD find that they get full very quickly when they eat. This is because the stomach takes longer than usual to move digested food from the stomach to the small intestine. As a result, you feel full even long after you've eaten. These tips may be helpful.

- Small meals with snacks in between are usually better tolerated than 2 or 3 large meals a day, and can help you meet your calorie, protein, and fluid goals.
- Your doctor or nurse may prescribe a **promotility agent**, such as Reglan® or erythromycin, to help your stomach release digested food in a timely manner.
- You may need to rely on liquid nutritional supplements in addition to foods to help you meet your calorie needs until you are able to tolerate larger amounts of food at a sitting.
- Your dietitian will assist you in finding foods and beverages that you can tolerate well to help you meet your nutrition goals during the recovery process.

Diet Progression

The following table lists the progression of diet for patients diagnosed with GI GvHD:

- **Step 1: NPO.** Nothing to eat or drink by mouth (NPO) so the GI tract can rest and heal. TPN (IV nutrition) if ordered by your doctor.
- **Step 2: GI GvHD Clear liquid diet.** This diet includes juice, broth, tea, gelatin, Italian ice, hard candy, popsicles, and lollipops. Note: Avoid most sugar-free items; they can worsen diarrhea, gas, and bloating. Sucralose is allowed, as it does not appear to cause these symptoms.
- **Step 3: GI GvHD Phase I Diet.** This diet introduces easily digested solid foods such as low-fiber breads and cereals (cream of rice, cream of wheat, oatmeal, puffed rice, Cheerios®), plain bagels, English muffins, crackers, rice, potato, noodles, pretzels, yogurt, and low-fiber/low-acidic fruits such as bananas, applesauce, peaches, and pears.
- **Step 4: GI GvHD Phase II Diet.** This diet expands your choices, allowing low-fat, low-fiber, lactose-free foods and beverages. (See table on next page of foods to include and foods to avoid during this phase of the diet.)
- **Step 5: Low Microbial Diet.** This phase resumes the low microbial diet you followed before you were diagnosed with GI GvHD. Dairy products containing lactose will be available to you at this time. Your doctor may order a lactase enzyme tablet to take before eating dairy-based foods and beverages to help you digest and tolerate them better.

GI GvHD Phase II Diet

Food Group	Recommended Foods	Foods to Avoid
Fruits	<p>Juices: apple, cranberry, grape</p> <p>Fresh fruits: peeled apple, banana, melon</p> <p>Canned fruits: peaches, pears, fruit cocktail, applesauce</p>	<p>Juices: orange, prune, tomato, V-8 Juice</p> <p>Fresh fruits: All raw fruits except those specifically allowed</p> <p>Canned fruits: All canned fruits except those specifically allowed</p> <p>Dried fruits: All</p>
Vegetables	<p>Cooked vegetables: tender-cooked beets, carrots, green beans, mushrooms, pumpkin, sweet potato or yams (no skin) , winter squash</p> <p>Skinless potatoes (baked, boiled, mashed, baked French cut fries, baked hash browns)</p>	<p>ALL cooked vegetables except those specifically allowed (no beans, broccoli, Brussel sprouts, cabbage, corn, peas, cooked greens, tomatoes)</p> <p>ALL Raw vegetables.</p> <p>Fried potatoes.</p>
Cereals and Grains	<p>Low-fiber refined grains: bagels, breads, crackers, English muffins, French toast, pasta, noodles, pancakes, pretzels, rice, rolls, tortillas</p> <p>Cereals: cream of wheat, cream of rice, oatmeal, Cheerios®, corn flakes, Special K®, Frosted Flakes®, Rice Krispies®</p>	<p>High-fiber or whole grains: Any cereal, grain, or bread with more than 2 g of fiber per serving (bran flakes, Shredded Mini Wheats®, Raisin Bran®)</p> <p>Any cereal, grain, or bread with dried fruit, seeds, or nuts</p>
Meat, Fish, Poultry, Eggs, Cheese, Nuts, Legumes	<p>Well-cooked lean cuts of baked, roasted, grilled or broiled meat, skinless poultry; lean ham, or fish</p> <p>Canned, water-packed tuna</p> <p>Casseroles made with allowed foods</p> <p>Well-cooked eggs Low-fat hotdogs or luncheon meats Turkey bacon</p> <p>Cooked tofu</p>	<p>Meats: Fried meats or fish. regular luncheon meats, regular hotdogs, pepperoni, pickled or cured meats or fish</p> <p>Peanut butter</p> <p>Nuts, seeds, and legumes</p> <p>Cheese</p> <p>Raw tofu</p>
Milk, Non-Cheese Milk Products	<p>Lactose-free milk, soy milk or rice milk</p> <p>Yogurt</p>	<p>Any milk or milk-based product, including cheese, pudding, ice cream, and sherbet</p>

Food Group	Recommended Foods	Foods to Avoid
Liquid Nutritionals	<p>Lactose-free nutritional supplements free of artificial sweeteners* including Ensure Clear® Therapeutic Nutrition Beverage, Ensure®, and Boost®</p> <p>* Sucralose is allowed</p>	<p>Any lactose- containing nutritional supplement (i.e. Carnation Instant Breakfast® or milkshakes)</p> <p>Nutrition supplements containing artificial sweeteners other than sucralose.</p>
Fats	<p>Low or non-fat choices: low-fat dressing, low fat mayonnaise, nondairy creamer, low-fat gravies and sauces made with lactose-free milk or broth</p>	<p>Butter, sour cream, salad dressings, and cream cheese</p>
Desserts	<p>Jell-O®, Italian Ice, popsicles without artificial sweeteners*</p> <p>Low fat baked goods (i.e. angel food cake or low fat plain cookies) (*Sucralose is allowed.)</p>	<p>Cakes (other than angel food), pies, doughnuts, Danish, cookies (other than plain/low fat), ice cream, sherbet, and pudding</p>
Soups, Sauces, Gravies	<p>Low-fat gravies, broth based soups</p>	<p>Homemade gravies and cream-based soups.</p> <p>Any soups containing vegetables not recommended. (Refer to list of vegetables on page 3.)</p>

If you have any questions, please call the
Nutrition Department at Roswell Park
716-845-2398