

Welcome to the Crohn's & Colitis Foundation's Online Support Group for Caregivers

Last week's material focused on the medical management of Crohn's disease and ulcerative colitis. This week we will focus on diet and nutrition and how it relates to inflammatory bowel diseases (IBD).

How IBD affects digestion

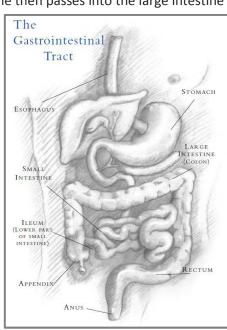
First, it helps to have a clear picture of how food is digested – use the figure below to follow along!

The real work of digestion goes on in the small intestine, which food enters after leaving the stomach. In the small intestine, digestive fluids from the liver (called *bile*) and the pancreas mix with food. After digested food is broken down into small particles, the nutrients (such as vitamins and minerals) are absorbed through the surface of the small intestine and distributed to the rest of the body by the blood stream. Whatever is not digested or absorbed in the small intestine then passes into the large intestine

(the colon). The colon then re-absorbs much of the water that was added to the food in the small intestine. The remaining solid, undigested food residue is then passed from the large intestine as a bowel movement.

In cases where the small intestine is inflamed—as it often is with Crohn's disease—the small intestine cannot digest food and absorb nutrients fully. This is one reason why people with Crohn's disease can become malnourished, in addition to not having much appetite. Additionally, the incompletely digested food that then travels into the large intestine can interfere with the absorption of water, resulting in diarrhea. If the large intestine is also inflamed, the diarrhea is likely to be worse.

In ulcerative colitis, only the colon is inflamed – the small intestine is not affected and it works normally. The inflammation prevents the colon from absorbing water, resulting in diarrhea.



What is the difference between diet and nutrition?

Diet is what you eat. Nutrition refers to properly absorbing food and staying healthy.

While your loved one may eat a nutritious diet, the impact of Crohn's disease or ulcerative colitis on the digestive system may not allow them to get the nutrition they need.

People with Crohn's disease and ulcerative colitis are at a greater risk of becoming malnourished than the general population for several reasons, including:

- The inflammation can make it difficult to properly absorb the protein, fat, carbohydrates, water, vitamins, and minerals the body needs to stay properly nourished.
- Lack of appetite or avoiding certain nutritious foods because they may trigger symptoms.
- The body's need for additional energy (calories) to restore health, especially when IBD is active.

The Effect of IBD on Nutrition

IBD patients are at an increased risk for:

- Nutritional deficiencies
- Weight loss
- Iron deficiency
- Folic acid deficiency
- Vitamin B12 deficiency
- Mineral/electrolyte deficiencies
- Dehydration
- Osteoporosis
- Growth delays in children

Good nutrition is one of the things your body uses to restore itself to health. Therefore, finding ways to prevent malnourishment is a priority for those with IBD. As a result, part of your loved one's treatment plan should include the doctor evaluating whether they are getting the proper nutrition from the foods they are eating.

Some nutritional evaluations to expect may include:

- Height and weight
- Complete blood count (CBC)
- Biochemical profile, magnesium
- Inflammatory markers (CRP, ESR)
- Serum iron studies, including ferritin
- Albumin and pre-albumin
- Folic acid/Vitamin B12
- 25 OH Vitamin D
- Bone density testing (called a DEXA scan) if concerned about low bone density



- Has your loved one experienced a loss of appetite?
- Has your loved one discussed nutrition with their healthcare team?
- Has your loved one made an appointment with a dietician or nutritionist who has an expertise in IBD?

The role of diet in IBD

You may wonder if eating any particular foods caused or contributed to your loved one's IBD. The answer is "no." However, certain foods can make IBD symptoms worse. Therefore, once the disease has developed, paying attention to your loved one's diet may help reduce symptoms, replace lost nutrients, and promote healing.

Since everyone's disease is different, there is no one single diet or eating plan that will work for everyone with Crohn's disease or ulcerative colitis.

However, there may be times when certain diets may be prescribed to help manage symptoms during a flare, including:

- A low-fiber, low-residue diet minimizes the consumption of foods that add bulk or "scrappy" residue to the stool. These include raw fruits and vegetables, as well as seeds and nuts. A registered dietitian or the doctor can assist your loved one in developing such a diet when appropriate.
- An elimination diet helps identify which trigger foods in an individual's diet may contribute to unnecessary IBD symptoms. Many good books discuss the proper way to follow such an "elimination diet," which involves keeping a food and symptom diary over several weeks.
- **Total bowel rest** requires a period of complete bowel rest during which patients are nourished with fluids delivered intravenously or nasally, which is discussed later in this document.

Dietary recommendations must be tailored specifically for your loved one—depending on what part of their intestine is affected, what symptoms they have (such as diarrhea or constipation), the status of their disease, whether they are in remission or having a flare, as well as the presence of any vitamin or mineral deficiencies. The diet that is recommended should also take your loved one's overall health into consideration.

Crohn's disease and ulcerative colitis vary from person to person and even change within the same person over time. What worked for your friend may not work for your loved one. And what worked for your loved one last year may not work for them now.



Is your loved one on a special diet or have they ever tried one?

Impact of certain foods on IBD

Although no specific foods make the intestinal inflammation worse, certain foods may aggravate symptoms. It is important to remember though that not all IBD patients are affected by the same foods.

Consider these tips to control IBD symptoms.

- Use a food diary to help identify "trigger foods"
- Avoid "trigger foods" (not all IBD patients have the same trigger foods)
- Common foods that may cause gastrointestinal discomfort include:
 - High-fiber foods (ex. raw, leafy vegetables, nuts)
 - High-fat foods (ex. greasy, fried)
 - o Caffeine (ex. coffee, tea, soda, chocolate
 - Alcohol
 - Carbonated beverages
 - Dairy (lactose)
 - Sugar alcohols in sugar-free foods (ex. sorbitol)
 - Spicy foods

Additionally, some people with or without IBD cannot properly digest the sugar in milk and milk products (known as lactose intolerance), resulting in cramps, abdominal pain, gas, diarrhea, and bloating. Because symptoms of lactose intolerance may be very similar to the symptoms of IBD, recognizing lactose intolerance may be difficult. A simple "lactose tolerance test" can be performed to identify the problem. For those with lactose intolerance, lactase supplements may be added to many dairy products, so that they no longer cause symptoms.

Although some people do have allergic reactions to certain foods, such as gluten, neither Crohn's disease nor ulcerative colitis is related to a food allergy. Often times, people with IBD may think they are allergic to foods because they associate the symptoms of IBD with eating. That being said, if your loved one has been diagnosed as being "gluten intolerant," be sure they do not eat foods containing gluten since it could worsen symptoms.



Have you tried any of the suggested tips for controlling IBD symptoms? What was the result?

Diet tips during a flare

When your loved one is experiencing a flare, they will need to pay closer attention to their diet. Here are some helpful during these times:

- Be careful of uncooked vegetables and fruits.
- Carbohydrates that are more refined and contain less fiber (e.g. oatmeal, potato, sourdough, and French breads) are generally tolerated better than whole grain carbohydrates.
- Reduce the amount of greasy or fried foods, which may cause diarrhea and gas.
- Eat smaller meals at more frequent intervals.

- Limit consumption of milk or milk products if lactose intolerant.
- Avoid carbonated beverages if excessive gas is a problem.
- Restrict caffeine when severe diarrhea occurs, as caffeine can act as a laxative.
- Bland, soft foods may be easier to tolerate than spicy foods.
- They may need to eat more protein during this time.
- Restrict intake of certain high-fiber foods such as nuts, seeds, corn, and popcorn. Because they are not completely digested by the small intestine, these foods may cause diarrhea. That is why a low-fiber, low-residue diet is often recommended.

Considerations for Vegetables

- Cooked, pureed, or peeled vegetables may be better tolerated
- Eat select vegetables that are easier to digest (e.g., asparagus, potatoes)
- Avoid vegetables that are gas-producing or have a tough skin (e.g., broccoli, Brussels sprouts)
- Add vegetable stock to rice or pasta for additional nutrients

Considerations for Fruits

- Cooked, pureed, canned, or peeled fruit may be better tolerated
- Eat select fruits that are easier to digest (e.g., applesauce or melon)
- Avoid fruits with high fiber content (e.g., oranges, dried fruit such as raisins)

Considerations for Protein

- Lean sources of protein may be better tolerated, such as fish (salmon, halibut, flounder, swordfish), skinless chicken, turkey, eggs, and tofu
- Excess fat can lead to poor absorption and may make symptoms worse
- Try smooth nut butters (peanut, almond, cashew)
- Avoid fatty, fried, or highly processed meats, as well as nuts and seeds

Deficiencies and supplements

Supplements may be used when dealing with potential calorie, protein, or nutrient deficiencies.

Supplements that may be needed for deficiencies include:

Calcium	Helps build and maintain bones and teeth. A deficiency may result in higher risk of osteoporosis.
Folic acid	One of the B vitamins. Helps convert food into fuel, providing the body with energy. A deficiency may result from certain drugs, such as sulfasalazine and

	methotrexate.
Vitamin B12	Primarily functions in the formation of blood cells and nerves. It is also essential for growth. A deficiency can result in anemia and nerve damage.
Vitamin D	A vitamin that is naturally present in very few foods. It is essential in normal bone development. A deficiency can affect proper absorption of calcium, which can cause an inability to heal bone fractures and lead to osteoporosis.
Iron	Is essential for delivering oxygen in your blood from the lungs to the tissues. Iron deficiency is the most common nutritional deficiency and the leading cause of anemia.
Omega fatty acids	There are two essential fatty acids: 1. omega-3 fatty acids help reduce inflammation, 2. omega-6 fatty acids tend to promote inflammation. Omega-3 fatty acids have an anti-inflammatory effect, but are not yet proven to provide relief to people with IBD. It is suggested that low levels of essential fatty acids, or the wrong balance of essential fatty acids, may be a factor in a number of illnesses, including osteoporosis.

Before your loved one takes any supplements, be sure to speak with your loved one's healthcare team.

Probiotics

Probiotics are live bacteria that are similar to beneficial (often called "good" or "friendly") bacteria that normally live in the intestines. Under normal circumstances, good bacteria keeps the growth of bad bacteria in check. If the balance between good and bad bacteria is thrown off, causing harmful bacteria to overgrow, diarrhea and other digestive problems can occur.

Probiotics are used to restore the balance of these good bacteria in the body. They are available in the form of dietary supplements (capsules, tablets, and powders) or foods (yogurt, milk, miso, tempeh, and some beverages). There is some evidence to suggest that use of probiotics may help people with IBD. Scientific studies have also shown that they may be useful for preventing and treating pouchitis. Taking probiotics is generally safe and any side effects (such as gas or bloating) are usually mild.

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Nutrition support therapy

For some of those diagnosed with IBD, it may be especially difficult to take in enough calories and nutrients. If the normal method of eating food is not allowing enough nutrients to be absorbed, than other methods of getting nutrients must be used. These methods may include enteral nutrition and parenteral nutrition.

Enteral Nutrition uses a nutrient-rich liquid formula (containing a balanced mixture of proteins, carbohydrates, fats, vitamins, and minerals) to ensure adequate nutrition. This form of nutrition can be taken by mouth or delivered through a feeding tube that is inserted directly into the stomach or small intestine. The tube can be inserted into the nose (*nasogastric tube*), down the throat, and into

the GI tract, or through an opening in the abdominal wall, leading directly into the stomach (*gastrostomy tube*) or small intestine (*jejunostomy tube*). Tube feedings are usually given overnight, while the patient is sleeping. In the morning, the tube is removed so the patient can go to work or school and generally pursue normal activities.

Parenteral nutrition delivers nutrients directly through a large vein, usually in the chest. This method may be needed when a flare is too severe, medical therapy alone is not enough, or bowel rest is needed. This form of nutrition may also be needed in Crohn's disease patients who are severely malnourished or who have short bowel syndrome.

This week's online support group

We hope this week's material on the *Diet and Nutrition* has been informative. In preparation for this week's live online support group session, consider the following:

- What did you learn from this material?
- What do you still want to learn?
- Are you or your loved one apprehensive about the possibility of needing surgery?
- Do you have a clear understanding of your loved one's treatment?

Next time we will address *Managing the Roller Coaster*, where we will discuss the importance of caring for yourself and learn appropriate coping techniques. **To join this week's support group, visit:**http://ccfacommunity.org/chatseries.aspx

Crohn's & Colitis Foundation Resources

The Crohn's & Colitis Foundation offers many resources and services to provide you with accurate and current disease-related information. Check out the resources below for more information:

- **IBD Help Center** is a support line for patients and caregivers living with IBD. We can help guide you in the right direction—whether you need to locate a doctor, find financial resources, or have questions about your disease. Specialists are available Monday-Friday, 9 AM to 5 PM Eastern Standard Time (EST). Call 1-888-MY-GUT-PAIN (1-888-694-8872) or email info@ccfa.org.
- **Crohn's & Colitis Foundation Website** (<u>www.ccfa.org</u>) is a great place to continue your research on IBD. Additionally, you can:
 - View free educational videos and webcasts
 - Download free brochures and fact sheets
 - Connect with your local chapter
 - Find ways to get involved