

## Welcome to Week 3 of the Crohn's & Colitis Foundation of America (CCFA) Online Support Group.

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).

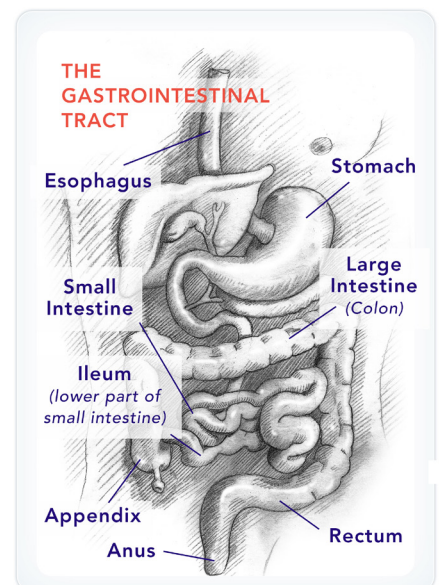
### So what exactly is the effect of IBD on digestion?

First, it helps to have a clear picture of how food is digested—use the figure on the right 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. This mixing is aided by the churning action of the intestine wall to break down nutrients. After digested food is broken down into small particles, it is absorbed through the surface of the small intestine and distributed to the rest of the body by the blood stream. Watery food residue and secretions that are not digested in the small intestine pass on into the large intestine (the colon). The colon then reabsorbs much of the water added to 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 intestine becomes less able to digest and absorb food nutrients fully. Such nutrients, as well as unabsorbed bile salts, can escape into the large intestine to varying degrees, depending on how much and how severely the small intestine has been injured by inflammation. This is one reason why people with Crohn's disease can become malnourished, in addition to the possibility of not having much appetite.

Additionally, incompletely digested foods that travel through the **large intestine** interfere with the water reabsorption process, even if the colon itself is not damaged. Thus, when Crohn's disease affects the small intestine, it may cause diarrhea as well as malnutrition. Should the large intestine also be inflamed, the diarrhea is likely to be worse.

In ulcerative colitis, only the colon is inflamed; the small intestine works normally. Because the inflamed **colon** does not reabsorb water properly, diarrhea can be severe.



## But what is the difference between diet and nutrition?

**Diet** is what you eat. **Nutrition** refers to properly absorbing food and staying healthy. While you may eat a nutritious diet, the impact of Crohn's disease or ulcerative colitis on the digestive system may not allow you to get the nutrition you 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:

- 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 "flaring up;" this is a common occurrence in people with chronic diseases generally.
- Higher association with malabsorption of dietary protein, fat, carbohydrates, water, and a wide variety of vitamins and minerals.

Good nutrition is one of the assets the body uses to restore itself to health. Therefore, finding ways to fight off malnourishment is a priority; restoration and maintenance of good nutrition is a key principle in the management of IBD. As a result, part of your treatment will include your doctor evaluating whether you are getting the proper nutrition from the foods you are eating. Some evaluations to expect are included below.

### 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

### NUTRITIONAL EVALUATION MAY INCLUDE:

#### Patient history and physical exam, including:

- 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



Have you experienced a loss of appetite? Have you discussed nutrition with your healthcare team?

## Let's discuss the role of diet in IBD.

You may wonder if eating any particular foods caused or contributed to your condition. The answer is "no." However, once the disease has developed, paying attention to your diet may help you reduce symptoms, replace lost nutrients, and promote healing. There is no one single diet or eating plan that will work for everyone with Crohn's disease or ulcerative colitis.

Certain diets, however, may also 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, vegetables, and seeds, as well as nuts and corn hulls. A registered dietitian or your doctor can assist you 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 (referred to as TPN or enteral nutrition). This regimen may be useful over a short term period along with medication.

Dietary recommendations must be tailored just for you—depending on what part of your intestine is affected and what symptoms you have, such as diarrhea or constipation, the status of the disease, whether you are in remission or having a flare, as well as the presence of any deficiencies. The diet that is recommended should also take your 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 you. And what worked for you last year may not work for you now.

**?** Are you on a special diet or have you ever tried one?

## Let's address the impact of certain foods.

Although no specific foods worsen the underlying inflammation of IBD, certain ones may tend to aggravate the 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. As you can see, high fiber foods, caffeine and high fat foods are sometimes triggers for flares.

Additionally some people cannot properly digest lactose, the sugar present in milk and many milk products, regardless of whether they have IBD. This may occur because the inner surface of the small intestine lacks a digestive enzyme, called lactase.

Poor lactose digestion may lead to 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. If there is any question, milk ingestion may be limited. Lactase supplements may instead be added to many dairy products, so that they no longer cause symptoms.

### TIPS TO CONTROL IBD SYMPTOMS

1. Use a food diary to help identify “trigger” foods
2. Avoid “trigger” foods (not all IBD patients are affected by the same foods)
3. Consider common foods that may cause GI discomfort:
  - High fiber foods (e.g., nuts, raw, leafy vegetables)
  - High-fat foods (e.g., greasy, fried foods)
  - Caffeine (e.g., coffee, tea, soda, chocolate)
  - Alcohol
  - Carbonated beverages
  - Dairy (lactose)
  - Sugar alcohols in sugar-free foods (e.g., sorbitol)
  - Spicy foods

Although some people do have allergic reactions to certain foods, such as gluten, neither Crohn's disease nor ulcerative colitis is related to 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 you have been diagnosed as being gluten intolerant be sure not to 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?

## What about changes to your diet during times of flare-ups?

When you are experiencing a flare, you will need to pay closer attention to your diet. Here are some helpful tips 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 in your diet, which may cause diarrhea and gas.
- Eat smaller meals at more frequent intervals.
- Limit consumption of milk or milk products if you are 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.
- You may need to eat more protein during this time.
- Restrict your 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

## Finally, what about supplements and deficiencies?

Supplements may be used when dealing with potential calorie, protein, or macro/micronutrient deficiencies. Supplements that may be needed for deficiencies include:

Calcium	An essential mineral, along with Vitamin D for proper building and maintaining of bones and teeth. A deficiency may result in higher risk of osteoporosis.
Folic acid	One of the B vitamins; it assists to convert food into fuel providing the body with energy. Folic acid and B12 work closely together contributing to making red blood cells as well as the proper use of iron. A deficiency may result from the use of certain drugs, such as sulfasalazine and methotrexate.
Vitamin B12	Primarily functions to aid in the formation of blood cells, nerve casing, and various proteins. B12 is involved in fat and carbohydrate metabolism and is essential for growth. A deficiency can result in anemia and nerve damage.
Vitamin D	A fat soluble vitamin that is naturally present in very few foods. It is essential in promoting calcium absorption enabling 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	It has a main role found in the red blood cells called hemoglobin and is essential for transferring 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	Two essential fatty acids, Omega-3 help reduce inflammation whereas most omega-6 fatty acids tend to promote inflammation. Omega-3 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 types among the essential fatty acids, may be a factor in a number of illnesses, including osteoporosis.

Be sure to talk to your healthcare team if you have any questions regarding supplements and what may benefit your health.

We hope this material on 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?
- Have you talked to your doctor about your diet or had a nutrition evaluation?

Next time we will address living well with IBD, including discussing quality of life, social supports and practical tips for coping with IBD.

To join this week's support group, visit: <http://ccfacommunity.org/chatseries.aspx>

## Additional Resources

CCFA offers many resources and services to provide you with accurate, current, disease-related information. Check out the resources below for more information on living well with IBD.

**CCFA's Information Resource Center (IRC)** 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 time. Call 1-888-MYGUTPAIN (1-888-694-8872) or email [info@ccfa.org](mailto:info@ccfa.org).

## CCFA's website ([www.ccfa.org](http://www.ccfa.org))

is a great place to continue your research on IBD and connect with your local chapter to learn more about programs in your area. Additionally, you can:

- View free educational webcasts on a variety of topics at [www.ccfa.org/resources/webcasts.html](http://www.ccfa.org/resources/webcasts.html).
- Visit [www.IBDetermined.org](http://www.IBDetermined.org) to learn more about diet through videos, interactive quizzes, and access GI Buddy for an interactive food tracker!
- Learn more about diet at [www.ccfa.org/resources/diet-and-ibd.html](http://www.ccfa.org/resources/diet-and-ibd.html) or nutrition at [www.ccfa.org/resources/nutrition-and-ibd.html](http://www.ccfa.org/resources/nutrition-and-ibd.html).



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