

What should I know about Crohn's Disease?

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Crohn's disease is serious chronic illness that inflicts severe damage to the intestinal tract, causing diarrhea and abdominal pain. Though it can strike anywhere along the GI tract from the mouth to the anus, Crohn's disease usually affects the endmost portion of the small intestine, called the "ileum." Crohn's disease is an inflammatory condition; the delicate mucous membrane lining the intestinal wall becomes inflamed and ulcerated in spots called "skip lesions." The intestinal lining looks somewhat like an old cobblestone street, with lesions spaced between normal tissue. The inflammation can penetrate the bowel wall, leading to the development of abscesses and deep cracks. Even worse, these cracks may lengthen, forming complete openings from the inside of the intestine to the outside called "fistulas." The intestinal wall eventually becomes hardened and inflexible. In later stages of the disease, the intestine may become obstructed. Crohn's disease is one of two inflammatory bowel conditions that affect the intestinal lining. The other is ulcerative colitis. The exact cause of these conditions is not known for certain. Both illnesses are thought to have a genetic component. Other contributing factors have been implicated, including food allergies, stress, poor nutrition, and infection. It is also believed that an "autoimmune response," where the immune system attacks the body's own tissue as though it were a foreign invader, may play a role in Crohn's disease. Although Crohn's disease is sometimes mistaken for ulcerative colitis, it has several unique features. Crohn's disease most commonly affects the small or large intestine, while ulcerative colitis shows up in the lower intestine and the rectum. Ulcerative colitis is more common than Crohn's disease, but the incidence of Crohn's appears to be on the rise.⁽¹⁾ Although these conditions hit the gastrointestinal tract hardest, they can lead to many other conditions affecting different parts of the body.⁽²⁾ Food allergies and Crohn's disease appear to be closely related. Inflammation and irritation of the intestinal wall cells can eventually increase sensitivity to many foods. When the cells are damaged, they leave gaps between them through which large proteins can penetrate, a phenomenon known as "leaky gut". These molecules, identified as antigens by the immune system, stimulate an inflammatory reaction in the gut lining. Many people afflicted with the disease have identified and eliminated foods that aggravate symptoms. Such foods include chocolate, dairy products, yeast, cereal grains, fats, and artificial sweeteners. In one multicenter trial, subjects with Crohn's disease who followed a diet that excluded the foods they were allergic to remained symptom-free almost twice as long as those receiving standard therapy with corticosteroid drugs treatments.⁽³⁾

Statistics

- It is estimated that there may be up to 1,000,000 Americans with IBD.
- Males and females appear to be affected equally.
- Most cases are diagnosed before age 30, but the disease can occur in the sixth, seventh, and later decades.

Signs and Symptoms

Diarrhea is the most common symptom of Crohn's disease. About 90 percent of people with Crohn's disease suffer from chronic diarrhea.⁽¹⁾ A constant discharge from the colon contributes to the diarrhea. The intestinal wall thickens with scar tissue that prevents digested food from passing through as it should, resulting in abdominal cramping after meals. Other symptoms of Crohn's disease include severe weight loss, anorexia, right lower abdominal pain, low-grade fever, rectal bleeding, and gas. Malabsorption, anemia, and nutritional deficiencies are common.

¹ Smeltzer SC, Bare BG. *Medical-Surgical Nursing*. Philadelphia: JB Lippincott Co; 1992.

¹ Marz RB. *Medical Nutrition from Marz*. Portland, OR: Omni-Press; 1997:375.

² Kirsner JB. Recent developments in 'non-specific' inflammatory bowel disease. *N Engl J Med*. 1982;306:775.

3 Riordan AM, et al. Treatment of active Crohn's disease by exclusion diet: East Anglian multicentre controlled trial. *Lancet*. Nov1993;340(8880):1131-4. Crohn's and Colitis Foundation of America, 2000. ~~~~~

Leaky Gut Syndrome. Altered Immunity & Leaky Gut Syndrome

The leaky gut syndrome is the name given to a very common health disorder in which the basic organic defect (lesion) is an intestinal lining which is more permeable (porous) than normal. The abnormally large spaces present between the cells of the gut wall allow the entry of toxic material into the bloodstream that would, in healthier circumstances, be repelled and eliminated. The gut becomes leaky in the sense that bacteria, fungi, parasites and their toxins, undigested protein, fat and waste normally not absorbed into the bloodstream in the healthy state, pass through a damaged, hyperpermeable,

porous or "leaky" gut. This can be verified by special gut permeability urine tests, microscopic examination of the lining of the intestinal wall as well as the bloodstream with phase contrast or darkfield microscopy of living whole blood.

Why is The Leaky Gut Syndrome Important?

The leaky gut syndrome is almost always associated with autoimmune disease and reversing autoimmune disease depends on healing the lining of the gastrointestinal tract. Any other treatment is just symptom suppression. An autoimmune disease is defined as one in which the immune system makes antibodies against its own tissues. Diseases in this category include lupus, alopecia areata, rheumatoid arthritis, polymyalgia rheumatica, multiple sclerosis, fibromyalgia, chronic fatigue syndrome, Sjogren's syndrome, vitiligo, thyroiditis, vasculitis, Crohn's disease, ulcerative colitis, urticaria (hives), diabetes and Raynaud's disease. Physicians are increasingly recognizing the importance of the gastrointestinal tract in the development of allergic or autoimmune disease. Understanding the leaky gut phenomenon not only helps us see why allergies and autoimmune diseases develop but also helps us with safe and effective therapies to bring the body back into balance. Due to the enlarged spaces between the cells of the gut wall, larger than usual protein molecules are absorbed before they have a chance to be completely broken down as occurs when the intestinal lining is intact. The immune system starts making antibodies against these larger molecules because it recognizes them as foreign, invading substances. The immune system starts treating them as if they had to be destroyed. Antibodies are made against these proteins derived from previously harmless foods.

Human tissues have antigenic sites very similar to those on foods, bacteria, parasites, candida or fungi. The antibodies created by the leaky gut phenomenon against these antigens can get into various tissues and trigger an inflammatory reaction when the corresponding food is consumed or the microbe is encountered. Autoantibodies are thus created and inflammation becomes chronic. If this inflammation occurs in a joint, autoimmune arthritis (rheumatoid arthritis) develops.

If it occurs in the brain, myalgic encephalomyelitis (a.k.a. chronic fatigue syndrome) may be the result. If it occurs in the blood vessels, vasculitis (inflammation of the blood vessels) is the resulting autoimmune problem. If the antibodies end up attacking the lining of the gut itself, the result may be colitis or Crohn's disease. If it occurs in the lungs, asthma is triggered on a delayed basis every time the individual consumes the food which triggered the production of the antibodies in the first place. It is easy to see that practically any organ or body tissue can become affected by food allergies created by the leaky gut. Symptoms, especially those seen in conditions such as chronic fatigue syndrome, can be multiple and severely debilitating.

The inflammation that causes the leaky gut syndrome also damages the protective coating of antibodies of the IgA family normally present in a healthy gut. Since IgA helps us ward off infections, with leaky gut problems we become less resistant to viruses, bacteria, parasites and candida. These microbes are then able to invade the bloodstream and colonize almost any body tissue or organ. When this occurs in the gums, periodontal disease results. If it happens in the jaw, tooth extraction or root canals might be necessary to cure the infection. In addition to the creation of food allergies by the leaky gut, the bloodstream is invaded by bacteria, fungi and parasites that, in the healthy state, would

not penetrate the protective barrier of the gut. These microbes and their toxins, if present in large enough amounts, can overwhelm the liver's ability to detoxify. This results in symptoms such as confusion, memory loss, brain fog or facial swelling when the individual is exposed to a perfume or to cigarette smoke that he or she had no adverse reactions to prior to the development of the leaky gut syndrome. Leaky gut syndrome also creates a long list of mineral deficiencies because the various carrier proteins present in the gastrointestinal tract that are needed to transport minerals from the intestine to the blood are damaged by the inflammation process. For example, magnesium deficiency (low red blood cell magnesium) is quite a common finding in conditions like fibromyalgia despite a high magnesium intake through the diet and supplementation. If the carrier protein for magnesium is damaged, magnesium deficiency develops as a result of malabsorption. Muscle pain and spasms can occur as a result. Similarly, zinc deficiency due to malabsorption can result in hair loss or baldness as occurs in alopecia areata. Copper deficiency can occur in an identical way leading to high blood cholesterol levels and osteoarthritis. Further, bone problems develop as a result of the malabsorption of calcium, boron, silicon and manganese

The Causes

The leaky gut syndrome is basically caused by inflammation of the gut lining. This inflammation is usually brought about by the following:

- Antibiotics because they lead to the overgrowth of abnormal flora in the gastrointestinal tract (bacteria, parasites, candida, fungi)
- Alcohol and caffeine (strong gut irritants)
- Foods and beverages contaminated by parasites like giardia lamblia, cryptosporidium, blastocystis hominis and others
- Foods and beverages contaminated by bacteria like helicobacter pylori, klebsiella, citrobacter, pseudomonas and others
- Chemicals in fermented and processed food (dyes, preservatives, peroxidized)
- Enzyme deficiencies (e.g. celiac disease, lactase deficiency causing lactose intolerance)
- NSAIDS (non-steroidal anti-inflammatory drugs) like ASA, ibuprofen, indomethacin,
- Prescription corticosteroids (e.g. prednisone)
- High refined carbohydrate diet (e.g. candy bars, cookies, cake, soft drinks, white)
- Prescription hormones like the birth control pill
- Mold and fungal mycotoxins in stored grains, fruit and refined carbohydrates

The leaky gut syndrome can cause the malabsorption of many important micronutrients. The inflammatory process causes swelling (edema) and the presence of many noxious chemicals all of which can block the absorption of vitamins and essential amino acids. A leaky gut does not absorb nutrients properly. Bloating, gas and cramps occur as do a long list of vitamin and mineral deficiencies. Eventually, systemic complaints like fatigue, headaches, memory loss, poor concentration or irritability develop. Prescription broad spectrum antibiotics, especially when taken for extended periods of time, wipe out all the gut friendly bacteria that provide protection against fungi and amoebic (parasitic) infections, help the body break down complex foods and synthesize vitamins like B12 and biotin. Since this friendly bowel flora is killed off, the body now has no local defence against the parasites or fungi that are normally held in check. This then causes an inflammatory reaction leading to the leaky gut syndrome. Food allergies quickly develop and these may trigger the signs and symptoms of arthritis, eczema, migraines, asthma or other forms of immune dysfunction. Other common symptoms of this bowel flora imbalance and leaky gut syndrome are bloating and gas after meals and alternating constipation with diarrhea. This set of symptoms is usually labelled as IBS (irritable bowel syndrome) or spastic bowel disease and treated symptomatically by general practitioners and gastroenterologists with antispasmodic drugs, tranquilizers or different types of soluble (psyllium) and insoluble (bran) fiber.

The Leaky Gut and IBS

The mainstream thinking on IBS is that it is caused by stress. Irritable bowel syndrome is the number one reason for general practitioner referrals to specialists. In well over 80% of the cases, tests like the intestinal permeability test (a special urine test involving the determination of absorption rates of two

sugars called lactulose and mannitol), CDSA or livecell darkfield microscopy reveal the presence of an overgrowth of fungi, parasites or pathogenic bacteria. The one-celled parasite, blastocystis hominis and different species of candida are the most common microbes seen in IBS. The only stress associated with IBS is that which is generated by infection and the leaky gut syndrome. If allowed to persist without the correct treatment, IBS can progress into more serious disorders like the candidiasis syndrome, multiple chemical sensitivities, chronic fatigue syndrome, many autoimmune diseases and even cancer. If treated medically, IBS is rarely cured. To treat it correctly, natural treatments work best and must include the removal of the cause, improvement of gastrointestinal function and healing the lining of the gut.

How to Reverse Leaky Gut Syndrome

Band-aid treatments with corticosteroids, prescription antibiotics and immuno suppressive drugs may be temporarily lifesaving for acute episodes of pain, bleeding or severe inflammation as occurs in lupus or colitis. In the long run, however, none of these treatments do anything to heal the leaky gut problem. To reverse the leaky gut syndrome the diet must be completely changed to one which is as hypoallergenic as possible. Sugar, white flour products, all gluten-containing grains (especially wheat, barley, oats and rye), milk and dairy products, high fat foods, caffeine products, alcohol and hidden food allergies determined by testing must all be eliminated for long periods of time (several years in the most severe cases). Treatment might also include the use of natural antibiotics (echinacea, garlic), and antifungals (grapefruit seed extract) depending on the type of infection which shows up on objective tests. It is rare that victims require prescription drugs for these infections and they should be discouraged. The drugs are usually expensive, have unpleasant side effects and are best reserved for life-threatening conditions. Leaky gut syndrome patients can help themselves by chewing their food more thoroughly, following the basic rules of food combining, eating frequent small meals rather than three large ones and taking more time with their meals. Gastrointestinal function can be improved with a juice fast or a hypoallergenic diet and supplements like lactobacillus acidophilus and bifidus as well as FOS (fructooligosaccharides).

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