

Colon Disorders and Their Ramifications for Physical Activity

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An athlete who presents with a complaint of bloody stools or rectal bleeding always stirs concern from all involved. After a thorough evaluation by a physician, one of the possible diagnoses is inflammatory bowel disease (IBD). IBD is a chronic problem characterized by a

KEY POINTS

Inflammatory bowel disease (IBD) is primarily either ulcerative colitis or Crohn's disease.

Malabsorption occurs either from a narrowed, inflamed bowel or after surgical resection of diseased bowel. Physician diagnosis of IBD involves a multifaceted approach of clinical, laboratory, radiologic, and endoscopic findings.

Despite the difficult and challenging nature of IBD, many people have been able to pursue a physically active lifestyle within the confines of the disease.

Medication, a dietary regimen to reduce inflammation, and monitoring by a gastroenterologist are required for any athlete with Crohn's disease.

Key Words: Crohn's disease, ulcerative colitis, gastroenterology

problem characterized by a painful abdomen and diarrhea,^{1,2} whose cause is unknown.² It has also been defined as a chronic dysregulation of the gastrointestinal tract³ and affects up to 1 million people annually in the United States.⁴

Types of IBD

One form of IBD is ulcerative colitis (UC), which affects primarily the large intestine. UC is characterized by frequent painful spasm of the anal sphincter with little fecal output and frequent small bloody stools. As many as 10–30 stools in a day have been documented in some cases.² Crohn's disease (CD) is the other

major IBD. Of all people with CD, only half have large-intestine involvement, compared with 95% of those with UC.¹ Crohn's patients present with fever, diffuse abdominal pain,

diarrhea, and weight loss. Involvement of the small intestine in CD usually entails complaints of nausea, vomiting, and a possible collateral diagnosis of anorexia nervosa. Adhesions of the affected bowel segments can occur, which can form palpable masses in the abdomen.¹ Many of the effects of CD result from the abnormal narrowing of the intestine affected. This narrowing can lead to fistula, defined as an abnormal passage from one epithelialized surface to another; obstructions; and abscesses.¹ There are several signs and symptoms of IBD that present outside the intestine:

- Reddened nodules; a nonspecific rash of pyoderma, defined as any pus-forming infection of the skin; and/or mouth ulcers.
- Inflammation might be present in the iris or the ciliary body—a thickened portion of the vascular tunic of the eye between the choroid and the iris. It consists of three parts or zones: orbiculus ciliaris, corona ciliaris, and ciliary muscle, or the choroid—the middle vascular tunic between the sclera and retina.
- Inflammation of tendon attachments and arthritis.
- Thyroid inflammation.
- Hepatitis and gallstones.
- Kidney stones.
- Thrombophlebitis.

In addition, colon cancer and lymphoma of the small intestine are possible, and CD

might present with a granulomatous or nodular inflammation anywhere along the gastrointestinal tract.¹

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Prognoses and Sequelae

Approximately 85% of all CD patients require surgery.² The surgery of choice is usually laparoscopy.⁶ Intestinal constrictions from IBD can be treated through endoscopic dilation, in which an endoscope is inserted and coursed down to the affected region and a balloon is inflated to open the constrictures.⁷ Patients who had undergone surgery for CD felt the procedure improved their condition and would do it again if needed.⁸ The malabsorption problem leads to increasing skeletal concerns, with almost half of IBD patients having osteopenia and up to 30% having osteoporosis. Fractures in the IBD population are 40% more frequent than in the general population. People with IBD have many emotional and social problems because their lives must be carried out in proximity to a bathroom.² Even with the difficult and challenging nature of IBD, many people have been able to pursue a physically active lifestyle within the confines of the disease.⁹

Physical Activity and IBD

Because of the nature of IBD, physical activities tend to be severely restricted. Extremely little information is available in regard to physical activity and IBD. The immunology of a person with IBD is a concern. Physical activity can lower the risk of IBD. Exercise at or below 60% VO_{2max} has not demonstrated significant increase in symptoms of IBD. Exercise of moderate levels might be advised for IBD patients when their disease is not in an active phase. In active IBD, especially after intestinal-resection surgery in which a laparoscope was used to remove permanently damaged sections of intestine (a procedure that is common in IBD), exercise capacity is markedly reduced. In a symptom-limited fashion, however, many can participate up to moderate activity levels when their condition is less involved.⁹ There are no figures in the literature defining the number of athletes with CD participating in

team sports. General gastrointestinal complaints ranging from gas to diarrhea in athlete populations range from 27% to 61%.¹⁰ Physical activity is recommended but must be monitored closely by a physician and only during the inactive phase of the disease. Hydration and temperature must be maintained because rapid dehydration and fluctuations in body temperature can occur.¹¹ CD patients are encouraged to exercise at mild to moderate levels according to Dr. Ivan Fuss of the National Institute of Allergic and Infectious Diseases, because this can reduce the risk of injury brought on by long-term corticosteroid use.¹² Strenuous exercise produces heartburn or diarrhea in up to 50% of people with CD. Exercise may continue if no gastrointestinal bleeding is present. No long-term consequences are seen in those training as long as no bleeding is present. If bleeding persists, iron-deficiency anemia becomes a concern for those in training.^{10,13}

Onset of Symptoms

Physically active people and athletic individuals might present at the onset of CD with complaints of overall fatigue during physical-conditioning periods. Typical care on physician referral would include laboratory blood work. Borderline-low hematocrit would trigger prescribed iron supplementation. Frequent follow-up hematocrit levels are recommended if anemia is present, and occult blood screening of stool when fatigue with lower abdominal cramping presents with anemia.^{14,15}

Nutritional Concerns With IBD

Because the digestion of nutrients is directly affected by IBD, many patients with UC or CD will have delayed physical growth and organic problems associated with restricted access to essential nutrients. People with CD must avoid dietary intake of substances that loosen bowels and stool. Symptoms worsen with milk products, fats, sugars, and spicy foods.^{5,16}

Treatment Options

There are several treatment options available, depending on the type of IBD. Optimized approaches in treatment include inducing and maintaining remission. Pharmacologic agents are the mainstay of IBD treatment. Anti-inflammatory agents and immunomodulators to reduce the intestine's inflammatory response