



BREAKING BARRIERS TO SPORT FOR PEOPLE WITH IBD

BOOST GUIDE FOR PEOPLE WITH INFLAMMATORY BOWEL DISEASE

Physical activity, nutrition and wellbeing — a practical guide

• FIRST EDITION •

PREPARED WITHIN THE BOOST PROJECT (ERASMUS + SPORT)

BOOST

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NOTES AND HOW TO USE THIS GUIDE

Important note

All information in this guide is educational. It does not replace medical or psychological consultation, diagnosis or treatment. Talk to your gastroenterologist about physical activity before you start, and especially after surgery, during a flare, or when a new therapy is introduced. Nothing here is a reason to change your treatment on your own.

About this guide

This guide is written for people living with Crohn's disease or ulcerative colitis who want to be physically active whether you are returning to a sport you used to do, starting something for the first time, or simply looking for a way to move that fits the body you have today. It was produced within the BOOST project, a cooperation between patient associations and sports organisations in Italy, Croatia and Serbia, and it brings together the perspectives of gastroenterologists, nutritionists, psychologists and people who live with IBD every day. A companion guide, written for sports instructors and coaches, covers the same ground from their side.

How to use this guide

You do not have to read this guide from beginning to end. Each part stands on its own, and you can go straight to whichever one you need today.

Part	What it gives you	When to turn to it
Physical and sports activity in IBD	What the disease does to the body, what the research says about exercise, and what your doctor is weighing up.	Before you start, and whenever you want to understand the reasoning behind a recommendation.
Nutrition, hydration and supplementation	Energy, protein and fluid needs, meals around training, supplements, recipes, a 7-day meal plan and a shopping list.	When you are planning meals around activity, or when eating has become difficult.
Psychological aspects of sport in IBD	What movement does for stress, mood, sleep and trust in your own body, and how to work with the barriers that get in the way.	When motivation is the problem, rather than the body.
General recommendations before engaging in sports	The practical precautions that apply to any activity, your traffic light, and a checklist for your next appointment.	Before your first session, and before each new activity.
Introducing the sports	Ten BOOST sports and several further activities, each with benefits, preparation, step-by-step start and a traffic light.	When you are choosing what to try, and before each session.
Annex - Competitive sport with IBD	What changes when recreation becomes regular competition.	If you are considering competing.
Contacts	Patient associations in Serbia, Croatia and Italy, the international umbrella body, and emergency numbers.	When you want support, information, or to find people in the same situation.

A note on language

Throughout this guide we write "person with IBD" or "you" rather than "patient", except where the text is about the medical consultation itself. In a gym, on a trail or in a dance hall you are not a patient. You are a person who has come to move. We also write about toilets, urgency and stomas plainly and without euphemism, because these are ordinary practical matters and treating them as unmentionable is part of what keeps people at home.

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PHYSICAL AND SPORTS ACTIVITY IN INFLAMMATORY BOWEL DISEASE

The gastroenterologist's perspective



Characteristics of Inflammatory Bowel Disease and their impact on systemic balance and quality of life

Inflammatory Bowel Disease, Crohn's disease and ulcerative colitis, are chronic, lifelong diseases of the digestive tract caused and conditioned by an altered and exaggerated immune response to corresponding factors from the external environment or the organism itself. In genetically predisposed individuals, this exaggerated immune response triggers a pronounced and uncontrolled inflammatory process that predominantly affects the wall of the small and large intestine (rarely also the esophagus, stomach, and duodenum), which, in its progression, leads to temporary or permanent damage to the intestinal wall and disruption of the function and integrity of the digestive tract. In this altered immune process, a leading role is played by a large number of different inflammatory factors, so-called inflammatory mediators (molecules of varying composition whose predominant function is to activate and enable communication between cells of the immune system in order to maintain physiological balance and an adequate immune response), which, once the balance is disturbed and under the influence of pathological stimuli, favor the inflammatory process. The altered ratio of inflammatory mediators, their constant presence in the systemic circulation, and the state of sustained inflammation define both the chronic and systemic nature of these diseases, even in the absence of symptoms and signs of disease, and also explain the symptoms and signs of involvement of other organ systems, the occurrence of extraintestinal manifestations of the disease, and the disruption of systemic balance – chronic fatigue, malaise, an unfavorable impact on psychological factors, and disruption of metabolic and systemic balance.

Inflammatory bowel diseases occur in the largest percentage in the younger population, with the dominant incidence in the 20–40 age group. The onset of a chronic disease in this, potentially the most productive segment of the population (education, initial professional potential, social

relationships, the reproductive period – family planning, as well as specific psychological and physiological factors characteristic of this population), truly defines a severe, unfavorable impact as well. And ahead of that, the greatest burden is certainly the nature of the disease itself, that is, the characteristics of its symptoms and signs. Persistent abdominal pain, episodes of elevated body temperature, loss of appetite and body weight, bowel movement disturbances, predominantly frequent loose stools with frequent traces of blood and mucus, exhaustion, changes in psychological characteristics and body image, lead to the need for social isolation, an inability to carry out daily activities in education or professional duties, an inability to establish social and sexual contacts, and a further deterioration of psychological and physiological status. All of the above defines one of the most important characteristics of Inflammatory Bowel Disease – impaired quality of life, a concept that today is one of the key parameters for assessing the activity of these diseases, alongside exact parameters such as the assessment of clinical status, laboratory findings, or endoscopic findings.

 **Important to know:** Crohn's disease and ulcerative colitis arise as a result of a disturbed immune system response to intestinal content, in individuals who have a genetic predisposition to it. Instead of protecting the body, the immune system triggers a chronic inflammatory process in the intestinal wall. The exact cause is unknown, but it is believed that a combination of genetic factors, the composition of the gut microbiota, and environmental influences (diet, stress, infections) contributes to the onset of the disease. Crohn's disease can affect any part of the digestive tract, while ulcerative colitis is limited to the large intestine.

The practice of physical and recreational activity or engagement in sports is, for young people (particularly in the context of contemporary society and lifestyle), to a large extent a part of everyday life and, among other things, characterizes the quality of their lives. With the onset of Inflammatory Bowel Disease, along with all its characteristics and the resulting impairment of quality of life, this important segment of a favorable impact on psychological and physical well-being becomes significantly altered and diminished. The already mentioned organic consequences of these diseases are accompanied by reduced physical fitness, decreased muscle mass, chronic fatigue, decreased bone density, the already mentioned systemic nature of the disease, and sometimes also pathological conditions of the musculoskeletal system as part of the extraintestinal manifestations of the disease.

In addition to the fact that, in the approach to Inflammatory Bowel Disease, diagnosis is still often made too late today, and that treatment success, despite the use of new, effective therapeutic mechanisms and advanced therapies, is still unsatisfactory, in everyday practice sufficient attention is often not devoted to the parameters that reflect the patient's quality of life. For the patient, discussing with the physician the nature of symptoms, signs of bleeding, defining the severity of the disease, therapeutic options, and possible indications for surgical treatment is certainly more important, only after which come factors that, in a broader sense, affect quality of life, including the potential impact and possibilities of applying physical and sports activities in Inflammatory Bowel Disease (an exception being patients who engaged in sports or were active athletes before the onset of the disease). Lack of time, the burden of a large number of patients, and limited technical resources are the probable reasons for this, from the physician's point of

view. Despite the increasingly advanced activities of global associations of people with Inflammatory Bowel Disease aimed at raising awareness of all the important characteristics of these diseases and the factors related to patients' quality of life and their positioning in disease monitoring, data on physical activity and sport in Inflammatory Bowel Disease are still limited and scarce.

The aim of this manual is, among other things, to better explain this topic and bring it closer to patients, and to make up for the lack of information on the favorable impact of physical activity and sport on Inflammatory Bowel Disease.

🗨 **What affects quality of life?** Abdominal pain and episodes of elevated body temperature Loss of appetite and body weight Bowel movement disturbances (loose stools with traces of blood and mucus) Exhaustion and chronic fatigue Changes in body image Ability to carry out daily, educational, and professional activities Ability to establish social and sexual contacts Let this list serve as a reminder of what to discuss with your doctor at your next check-up!

Potential impact and effects of physical activity in Inflammatory Bowel Disease

Physical activity can be defined as any bodily movement produced by the action of skeletal muscles that results in energy expenditure. Physical activity is thus carried out even while sitting, performing professional activities, or sleeping. In a narrower sense, we will discuss physical activity that relates to exercise and sports activities – that is, planned, structured, and repeated physical activity carried out as part of training.

We have already mentioned that data on the impact and effects of physical activity in Inflammatory Bowel Disease are limited. Most controlled clinical studies, case-control studies, and meta-analyses on this topic have typically analyzed data from small groups of subjects, and the interpretation of results has been significantly influenced by characteristics of subjectivity, bias, and overestimation, i.e., individual parameters. Nevertheless, based on results from the professional literature, we can define the basic characteristics of the relationship between physical activity and Inflammatory Bowel Disease.

In the context of applying physical activity in Inflammatory Bowel Disease, two basic potential factors are considered – physical activity as a factor in the prevention of Inflammatory Bowel Disease or the prevention of disease flare-ups, and physical activity as a possible therapeutic factor in Inflammatory Bowel Disease.

According to data from randomized clinical and epidemiological studies, no statistically significant difference has been confirmed in the occurrence of Inflammatory Bowel Disease among patients who engaged in physical activity during childhood or in the 5-year period before diagnosis; however, it has been shown that the incidence is lower compared to the population that did not engage in physical activity (the data favor this finding in Crohn's disease, but not in ulcerative colitis). The preventive role can be explained by a theory in which physical activity, through its physiological mechanism, shifts the balance between pro-inflammatory and anti-

inflammatory cytokines, which brings about a change in the immune response in patients with Inflammatory Bowel Disease (1).

The therapeutic role of physical activity in Inflammatory Bowel Disease can be more clearly confirmed and demonstrated, defining it as a valuable addition to standard treatment, but not as a substitute for conventional forms of treatment (2).

The protective effect of physical activity has been confirmed in chronic diseases, cardiovascular disease, diabetes, and certain malignancies. In Inflammatory Bowel Disease, as chronic and immunologically mediated diseases, a favorable effect of physical activity can be expected through its influence on various immune system functions. Physical activity achieves these effects at different levels of organ and organ system function:

Impact on the microbiome and metabolic activity of the intestine – increased bacterial diversity, increased production of short-chain fatty acids (SCFAs), reduced lipopolysaccharide translocation, and prevention of TLR-4 receptor activation, one of the key receptors in immune regulation.

Impact on skeletal muscles and cross-talk mechanisms (communication with other organ systems mediated by myokines, inflammatory mediators released from muscle) – lipid and glucose metabolism, immune and anti-inflammatory activity, bone metabolism, cognitive function.

Impact on epigenetic modification – increased transcription of key regulatory, metabolic, and myogenic genes.

Impact on increased intestinal motility – intestinal mucosal immunity, epithelial barrier, tissue regeneration.

Impact on adipocytes (adipokines as immune mediators) – reduction of visceral fat, reduced production of the inflammatory cytokines TNF-alpha and IL-6.

Impact on cytokine activity – increased production of anti-inflammatory adipokines, decreased production of anti-inflammatory cytokines, improved energy balance and tissue metabolism (3).

The favorable impact of physical activity has also been confirmed by the results of studies conducted regarding its potential favorable therapeutic effect:

Impact of physical activity on Inflammatory Bowel Disease activity and serological inflammatory parameter values

The results of a prospective study showed a significant reduction in the risk of relapse and pronounced Crohn's disease activity over a 6-month period among patients who regularly engaged in physical activity (1,857 subjects) (1), while among patients in long-term remission who were not on medication therapy and engaged in physical activity daily, there was no increased incidence of relapse or disease flare-up (312 IBD patients) (4). In one study conducted among patients with ulcerative colitis (5), a favorable effect of moderate physical activity

(walking, measured by number of steps taken) on disease activity, as well as on the values of serological markers of disease activity, was confirmed.

It should be noted that many studies conducted have not confirmed a favorable therapeutic effect of physical activity in inflammatory bowel disease. This can be explained by possible limiting factors in the interpretation of results, such as the age at which physical activity is performed, patient characteristics, the intensity level of physical activity, the disease phase, the study design, and similar factors. Also, most studies conducted on this topic involved patients with mild to moderate disease activity, since patient compliance in those with more severe disease activity is hindered by symptom severity, chronic fatigue, and psychological factors (1).

Most studies conducted have not objectively demonstrated an effect of moderate physical activity on symptom worsening and inflammatory bowel disease activity, nor an increase in serological markers of inflammation (CRP, ESR, fecal calprotectin) (6). On the other hand, it should be emphasized that high-intensity physical activity can lead to a pro-inflammatory effect, reduced circulation in the digestive tract, and a consequent transient worsening of inflammatory bowel disease symptoms (1).

The impact of physical activity on quality of life and mental health in people with inflammatory bowel disease

Timely and adequate information on this topic plays a very important role in understanding the impact of physical activity on quality of life in patients with inflammatory bowel disease (according to available data, only a small percentage of IBD patients still engage in regular physical activity, and this is usually light to moderate) (1). The factors explaining this are mostly related to quality-of-life parameters such as chronic fatigue, pain, stress, anxiety, depression, and fear of urgency and frequent bowel movements (7). Physical activity leads to a feeling of increased energy, reduces muscle and joint pain, increases bone and muscle strength, and has a favorable effect on psychological factors (8). One study confirmed a statistically significant difference in quality-of-life improvement among patients with mild Crohn's disease who engaged in low-intensity physical activity (walking for 30 minutes a day, 3 times a week, for 3 months) compared with patients who were not physically active, confirming the importance of even mild physical activity (9). A mild improvement in anxiety and depression symptoms in IBD patients has been confirmed with physical activity of any intensity level, and it persists as long as physical activity is maintained (1).

It should also be noted that physical activity reduces the incidence of colorectal cancer by up to 50%, which is particularly significant in inflammatory bowel disease, as this cancer occurs more frequently in these patients than in the general population.

⚠ Zapamтите Povoljan utjecaj tjelesne aktivnosti na kvalitetu života: Smanjuje rizik od relapsa i pogoršanja aktivnosti bolesti Povoljno utječe na serološke markere aktivnosti bolesti Smanjuje kronični umor, bol u mišićima i zglobovima Povećava koštanu i mišićnu snagu Blago poboljšava simptome anksioznosti i depresije Smanjuje incidenciju kolorektalnog karcinoma i do 50% Već i aktivnost niskog intenziteta (npr. 30 minuta hodanja, 3 puta tjedno) značajno poboljšava kvalitetu života

Physical activity and specific situations in inflammatory bowel disease

Anemia

A large percentage of patients with inflammatory bowel disease also have anemic syndrome. Anemia in these diseases usually follows a chronic course, is present even during remission of the underlying disease, and is typically worse during relapse. The chronic course of anemia in inflammatory bowel disease is defined by its etiopathogenetic mechanism – anemia in inflammatory bowel disease is usually a combination of so-called anemia of chronic disease and iron deficiency anemia (reduced intake and absorption, chronic inflammation, and iron loss through bleeding). Because of the complex mechanism that causes and sustains anemia, an adequate assessment of its characteristics and severity is required in these diseases. This assessment is carried out at diagnosis, during regular follow-up visits, and in the event of disease worsening, and it is important for determining the appropriate approach to correcting anemia. In most cases, anemia in inflammatory bowel disease is corrected with parenteral iron supplementation, and in more severe cases with transfusion. Depending on its severity and the degree of iron deficiency, anemia may be accompanied by symptoms that generally reflect a decline in overall condition – malaise, fatigue, exercise intolerance (sometimes even with minimal exertion), a feeling of light-headedness, dizziness, rapid heartbeat, and anorexia.

Physical activity in the context of anemia associated with inflammatory bowel disease should be adjusted to the severity of the anemia, the degree of iron deficiency, the presence of anemic syndrome symptoms, and the activity level of the underlying disease. Light-to-moderate physical activity is recommended, with a possible increase in intensity depending on the potential recovery from anemia and resolution of symptoms.

Metabolic factors, malnutrition, and short bowel syndrome

As part of assessing disease activity, it is also necessary to assess the metabolic status of every patient with inflammatory bowel disease. As already mentioned, chronic inflammation and inadequate, unbalanced nutrition lead to a consequent disruption of metabolic pathways and impaired intake and utilization of micronutrients, vitamins, and minerals such as iron, zinc, selenium, and iodine. These trace elements are essential for basic chemical processes in the body, so their deficiency can further worsen and intensify the chronic inflammatory process and, consequently, the symptoms of inflammatory bowel disease (the importance of iron has already been discussed in the context of anemia). Periodic laboratory evaluation of these values and, where necessary, correction of deficiencies is recommended. Assessing the status and level of vitamin D as a micronutrient is of greater importance. So-called extraskeletal vitamin D (which does not play a dominant role in bone mineralization) plays an important role in immune function, affecting the proliferation and differentiation of immune cells, immunomodulation, and the microbiome, and a link between low vitamin D levels and the development of anemia of chronic disease has also been confirmed (10). The anti-inflammatory effect of vitamin D has also

been confirmed through the relationship between its concentration and the concentration of pro-inflammatory cytokines (during disease activity, higher levels of pro-inflammatory cytokines are associated with low vitamin D levels, whereas during relapse the relationship is reversed). For this reason, assessing serum vitamin D levels and providing appropriate correction and supplementation in every patient with inflammatory bowel disease is important for controlling inflammation.

Malnutrition is reflected not only in body weight but predominantly in overall muscle mass. The degeneration and reduction in the quality and strength of muscle mass is defined by the term sarcopenia, one of the main measures of malnutrition. This leads to the conclusion that malnutrition is one of the most severe limiting factors for engaging in physical and sports activities in inflammatory bowel disease. In addition to reduced appetite and nutrient intake, malnutrition is also influenced by disease severity and activity, psychological factors, pronounced inflammation, and nutrient loss due to impaired bowel emptying and pronounced catabolism, while muscle mass loss, i.e., sarcopenia, is also influenced by prolonged immobilization (due to repeated hospitalizations, e.g., bed rest) and the absence of even minimal physical activity. In clinical practice, the need to assess the degree of malnutrition in patients with inflammatory bowel disease is often overlooked, frequently explained away by the characteristics and severity of the disease itself. In this context, the importance of analyzing micronutrient status, vitamin D, protein status, the degree of associated anemia, and the degree of sarcopenia has already been mentioned, with the goal of optimizing the patient's nutrition and recovery strategy for malnutrition. As muscle mass and body weight gradually recover, individualized optimization of physical activity can be planned, taking into account possible associated limiting factors such as anemia, vitamin D deficiency, associated bone metabolism disorders, and similar factors.

Short Bowel Syndrome (SBS), a possible complication of Crohn's disease (a condition involving loss of functional bowel length that prevents adequate intake and absorption of nutrients in the small intestine), usually develops after repeated small bowel resections due to complications such as strictures, abscesses, or fistulas. It is accompanied by a persistent picture of severe malnutrition, the need for ongoing use of special nutritional formulations (parenteral or enteral nutrition), and, as such, is usually associated with an inability to engage in regular physical and sports activity.

An important factor to consider regarding physical activity in inflammatory bowel disease is bone metabolism. Metabolic bone disease (osteopenia, osteoporosis – reduced bone density) occurs in IBD patients with a prevalence of 2–15%, and the incidence of osteoporosis is twice as high compared with the healthy population (11). The susceptibility to pathological bone fractures in the IBD population is consequently 2–3 times higher than in the general population, regardless of age, and there is also an increased tendency toward the early onset of degenerative bone and joint disease. The development of metabolic bone disease is contributed to by vitamin D deficiency, which is necessary for bone mineralization, malnutrition, chronic inflammation, and, as the most important factor, prolonged and repeated use of corticosteroids (an adverse effect

of systemic steroids is increased bone density breakdown and resorption; any use of steroids requires vitamin D supplementation). For this reason, diagnostic screening to assess bone density is important in IBD patients, in order to enable an appropriate therapeutic approach, prevent pathological fractures, and assess the feasibility of physical activity depending on the severity of metabolic bone disease and any associated degenerative changes.

Phenotype of inflammatory bowel disease – complicated forms

Limiting factors for engaging in physical and sports activities in inflammatory bowel disease can include complicated forms of the disease or specific conditions following surgical treatment. Complicated Crohn's disease often manifests with fistulas (a pathological communication between the bowel and other hollow internal organs, such as the bladder, vagina, or an adjacent loop of small bowel or segment of large bowel, as well as between the bowel and the external environment, the abdominal wall, and the skin – so-called enterocutaneous fistulas). A special form is perianal disease, characterized by the presence of perianal fistulas as a severe form of the disease, due to their location, the nature of the symptoms, and the tendency to form purulent collections, i.e., abscesses. The fistulizing form of Crohn's disease significantly hinders the performance of sports and physical activities in a large percentage of cases, both because of pronounced disease activity and because of a marked decline in general condition and quality of life, but it can still be undertaken in such situations, depending on the individual characteristics of the patient. For example, in the presence of perianal disease, activities involving a seated position (e.g., cycling, due to an unfavorable mechanical effect) should be avoided, as should bathing and swimming in pools, lakes, or the sea, because of an increased risk of local infection. More extreme sports or more intense physical exertion are not recommended because of the possibility of worsening fistula activity. Postoperative conditions that may compromise physical activity include the presence of an ileostomy or colostomy, or a condition after colectomy with pouch formation – the unfavorable effect relates to the nature of symptoms and bowel emptying, as well as hygiene aspects. In such situations, physical activity can be adapted with appropriate interventions, e.g., mechanical protection of the stoma, use of antidiarrheal medication, and similar measures.

This section should also mention the possible presence of extraintestinal manifestations of Inflammatory Bowel Disease (IBD) that can affect physical activity. The most common extraintestinal manifestations involve the musculoskeletal system (sometimes overlapping as immune-mediated conditions), presenting as joint and muscle pain, a sense of joint stiffness, and occasionally joint inflammation. These manifestations usually accompany more severe forms of Inflammatory Bowel Disease and pronounced disease activity, and in addition to baseline therapy, they often require symptomatic treatment (analgesics, antirheumatics), which can relieve symptoms and improve the ability to engage in physical activity.

Fatigue

Fatigue is a significant and often underrecognized clinical problem in patients with Inflammatory Bowel Disease, accompanied by a marked resulting impairment of quality of life, work capacity, functioning, and the ability to engage in physical and sports activities. Fatigue is often patients' greatest concern, occurring in about 80% of patients with active disease, but also in half of patients who are in remission. Fatigue is a burdensome symptom involving a feeling of exhaustion and lack of energy, unrelated to physical exertion, which cannot be relieved by rest or sleep, unlike ordinary tiredness. In IBD, fatigue is linked to multiple factors – malnutrition, anemia of chronic disease and iron-deficiency anemia, the use of medications such as steroids, immunomodulators, and antidepressants, and micronutrient deficiencies. The greatest significance is attributed to disturbances at the level of the gut microbiota, i.e., dysbiosis. In Inflammatory Bowel Disease, dysbiosis disrupts the gut–brain axis, altering the permeability of the intestinal membrane and causing systemic effects of bacterial products and cytokines, predominantly on the brain. This gives rise to a picture of neuroinflammation and altered responses of the central and autonomic nervous systems, with resulting symptoms of fatigue. In light of the above, the compromised ability to engage in physical and sports activities should be addressed at multiple levels, potentially through dietary modification, correction of the microbiota, control of underlying disease activity, correction of anemia, supplementation with micronutrients and vitamins, and support for psychological function and quality of life.

IBD therapy and physical activity

Therapeutic modalities used in Inflammatory Bowel Disease do not have a major adverse effect on physical and sports activities. Certain medications, such as corticosteroids, can, as part of their side effects, lead to a feeling of fatigue, and their unfavorable impact on psychological factors and bone and muscle metabolism has already been mentioned. Immunomodulators, such as azathioprine or methotrexate, may have chronic side effects in the form of muscle or joint pain, or a decline in general condition and fatigue. Biologic and advanced therapies have no adverse effect on physical activity; however, when using these treatment modalities, attention should be paid to any contraindications, age, comorbidities that may affect physical activity, and any concomitant or symptomatic therapy.

Psychological factors

The characteristics of altered psychological factors in patients with Inflammatory Bowel Disease (the most commonly described being alexithymia, neuroticism, anxiety, and depression) can, on their own, affect motivation for physical and sports activities. In addition to the factors mentioned above, psychological factors are further worsened by chronic fatigue, disease activity, malnutrition, anemia, medication use and its side effects, disease complications, surgical treatment, and extraintestinal manifestations. In this context, among other things, a team-based

approach is needed, encompassing psychological and psychiatric support as well as adequate education on the beneficial effects of physical activity in Inflammatory Bowel Disease.

 Important to know:

The following conditions may represent a limiting factor for engaging in physical activity: Anemia
Malnutrition and metabolic disorders (including short bowel syndrome)
Complicated forms of disease (e.g., fistulas, strictures, stoma)
Pronounced fatigue and chronic tiredness
Side effects of therapy
Pronounced psychological factors (anxiety, depression)
If any of the above applies to you, seek medical advice so that you can safely introduce physical activity into your routine.

SUMMARY

Physical and sports activities in Inflammatory Bowel Disease are limited by the complex factors that characterize these diseases. Although this topic is often overlooked in clinical practice, it represents a very important aspect of patients' overall condition and quality of life. Alongside the well-known negative aspects of the disease that reduce physical activity (chronic fatigue, anemia, malnutrition, medication side effects, pronounced disease activity, complicated forms of disease, psychological factors), less attention is given to the beneficial effect of physical activity in chronic inflammatory diseases, which has been confirmed by well-documented metabolic and systemic effects on inflammation. Physical activity in Inflammatory Bowel Disease should be tailored to disease severity and activity (remission or relapse), age, comorbidities, treatment modalities, and metabolic or clinical complications. In this sense, we could outline some recommendations for physical activity – 150 minutes per week of moderate aerobic activity (walking, cycling, swimming), 2–3 strength training sessions per week, along with lighter forms of exercise such as stretching or relaxation exercises. Physical activity is not just sport – physical activity is also walking, relaxation, yoga – the level of activity should be determined according to the individual characteristics of each patient. This would also fulfill the first task facing gastroenterologists on this topic – education and motivation, as well as emphasizing the importance of physical activity as an essential aspect of quality of life. In the future, with more clinical and scientific research expected on this topic, physical and sports activities could also be regarded as an important therapeutic modality in the treatment of chronic Inflammatory Bowel Disease.

Gastroenterologists recommend:

Activity	Recommended frequency / duration
Moderate aerobic activity (walking, cycling, swimming)	150 minutes per week
Strength training	2–3 times per week
Lighter training (stretching, relaxation exercises)	As a supplement to aerobic training and strength training, according to individual ability
Daily activity (walking, relaxation, yoga)	Adjust the level to the individual characteristics of the patient

NUTRITION, HYDRATION AND SUPPLEMENTATION

A practical guide for people with inflammatory bowel disease who engage in physical activity.

1. Introduction

Regular physical activity is today one of the key factors in preserving health and quality of life. In people with Inflammatory Bowel Disease (IBD), which includes Crohn's disease and ulcerative colitis, appropriately dosed physical activity can help preserve muscle mass and improve cardiorespiratory fitness, bone health, and psychological well-being. Despite numerous proven benefits, a large number of people with IBD are still not sufficiently physically active.

The results of the BOOST survey showed that most respondents recognize the importance of physical activity, but there is a significant gap between this awareness and their actual level of activity. The most commonly cited barriers are pronounced tiredness, concern about access to toilets, a lack of expert advice on nutrition and exercise, and fear of worsening gastrointestinal symptoms. Most participants choose low- to moderate-intensity activities such as walking, cycling, or light exercise, which clearly points to the need for practical guidelines adapted to the everyday life of people with IBD.

Nutrition is one of the key factors for successfully engaging in physical activity in people with IBD. Adequate energy intake, proper meal planning, appropriate hydration, and an individually tailored choice of foods can help preserve nutritional status, reduce the risk of gastrointestinal issues during activity, and support more effective recovery after exercise.

The recommendations in this chapter are based on the current ESPEN guidelines¹ on clinical nutrition in inflammatory bowel disease, the principles of contemporary sports nutrition, and the results of the BOOST survey. Their aim is not to prescribe a single diet, but to offer practical guidance that will allow people with IBD to engage in physical activity more safely, with greater confidence and fewer limitations.

 **Key message:** Physical activity doesn't begin when you put on your sneakers or set out for a walk. It begins much earlier: with planning your nutrition, hydration, and recovery.

2. Energy, protein, and hydration needs

Energy, protein, and fluid needs are usually calculated based on body weight. However, the number on the scale alone often doesn't tell us enough about a person's actual nutritional status. If a person is malnourished or has excess body weight or obesity, the calculation should be based on an adjusted (corrected) body weight that is closer to the ideal, so that needs are neither overestimated nor underestimated.

¹References, at the end of this guide.

Why adjusted body weight? In people with excess body weight, calculating based on actual body weight overestimates real needs: fat tissue is metabolically less active than muscle tissue and burns significantly less energy. In malnourished individuals, calculating based on current, reduced body weight can underestimate the needs required to restore body weight and muscle mass. In both cases, individual assessment should be left to a nutritionist or dietitian.

In addition to body weight itself, regular monitoring of body composition using a bioelectrical impedance scale (BIA analysis) is recommended. This type of measurement provides insight into the proportion of muscle mass, fat tissue, and hydration status, and allows tracking of changes in these parameters in response to regular physical activity and adjusted nutrition. This information cannot be provided by a regular scale.

General recommendations

The following values represent a general starting-point recommendation that should be individually adjusted:

Parameter	Recommendation
Energy	30–35 kcal/kg body weight per day
Protein	1.2–1.5 g/kg body weight per day
Fluids	30 mL/kg body weight per day

It's important to emphasize that these are only starting-point values. A person with a higher proportion of muscle mass may have higher energy needs, since muscle tissue burns considerably more calories at rest than fat tissue. It is therefore useful to monitor body composition over a longer period, so that energy intake recommendations can be adjusted based on changes in body composition, not just changes in body weight on the scale.

Example calculation For a person weighing 65 kg: Energy $\approx$ 1,950–2,275 kcal/day Protein $\approx$ 78–97.5 g/day Fluids $\approx$ 1,950 mL/day *Excluding additional losses through sweating during exercise, which need to be replaced separately.

Energy

Eat regularly. Skipping meals to "protect" the gut most often leads to insufficient energy intake and increased fatigue.

Unintentional weight loss or persistent fatigue during exercise is a sign that you may need more, not less, energy.

During a disease flare-up, energy needs may increase even though appetite is often reduced. More frequent, smaller meals can help keep energy intake sufficient.

Protein

People with inflammatory bowel disease often have increased protein needs compared to the general population, particularly during disease flare-ups or when doing strength training. Protein intake is best distributed evenly throughout the day, rather than concentrated in a single meal.

Good sources: eggs, fish, poultry, lactose-free dairy products, well-cooked legumes, and legume-based products (if tolerated).

A simple goal: include a protein source in every meal and most snacks. This kind of distribution helps preserve and build muscle mass.

Hydration

For shorter, lighter workouts under normal conditions, water is generally sufficient.

For longer or more intense workouts, or if you have a stoma, frequent diarrhea, or active disease, additional salts and minerals are lost, so water alone isn't enough. An oral rehydration solution or electrolyte solution is a better choice than plain water or sweetened sports drinks.

A simple way to check your hydration status: pale yellow urine is a good sign; dark-colored urine means you should drink more fluids.

During more intense and prolonged activities, as well as in hot conditions, replenish fluids during the workout itself. Aim for approximately 200 mL every 20–30 minutes.

Vitamins and minerals to pay attention to

Inflammatory bowel disease can impair the absorption of certain nutrients, and physical activity further increases the need for them. The most important ones to monitor are:

Iron: low iron status can cause shortness of breath and rapid fatigue during exercise.

Vitamin D: important for bones and muscles; very often low in people with IBD, regardless of physical activity.

Vitamin B1: pay particular attention in cases of disease or surgery affecting the final part of the small intestine (terminal ileum).

Calcium and magnesium: for bone strength and muscle function; especially important with long-term corticosteroid use.

Sodium and potassium: lost through diarrhea or a stoma, and additionally through sweating during exercise.

Good to know The best approach is laboratory testing, not guessing. Before starting any vitamin or mineral supplement, talk to your doctor about getting the appropriate lab tests. Both too little and too much can have adverse effects.

How much energy do we burn during common activities?

Energy expenditure depends on body weight, intensity, and individual fitness level. The following values are approximate estimates for an average adult weighing around 65–70 kg:

Activity (60 min)	Approximate expenditure*	Note
Pilates (moderate intensity)	≈ 230–280 kcal	Higher intensity and more repetitions with resistance increase energy expenditure.
Yoga (hatha, a more relaxed practice)	≈ 170–210 kcal	More dynamic forms of yoga (vinyasa, power yoga) burn significantly more.
Brisk walking (5.5–6.5 km/h)	≈ 280–330 kcal	Expenditure increases with speed and terrain incline.
Nordic walking (with poles)	≈ 320–370 kcal	Using poles engages the upper body and increases expenditure.
Dancing (recreational, moderate pace)	≈ 300–370 kcal	Varies depending on the style and intensity of the dance.

**Approximate values for one hour of activity for a person weighing ≈ 65–70 kg; for higher body weight and/or greater intensity, expenditure is proportionally higher.*

How to replenish the calories and nutrients used?

For moderate-intensity workouts lasting up to an hour (such as Pilates, yoga, or walking), your next regular meal is usually enough to replenish the energy and fluids used, along with an extra glass of water.

For more intense or longer workouts, or if the workout was done on an empty stomach, a smaller snack combining carbohydrates and protein is recommended within 1–2 hours (e.g., lactose-free yogurt with fruit, or a meal with rice and a protein source).

Replenish fluids lost through sweating gradually over the following hours, not all at once. This is especially important if electrolyte losses due to the disease itself are also present.

3. Nutritional preparation for physical activity

Safe engagement in physical activity begins with good nutritional preparation. In people with IBD, properly planned nutrition serves a dual role: it provides the body with the energy needed for physical effort and helps reduce the risk of gastrointestinal issues.

The results of the BOOST survey showed that fatigue is precisely one of the most common reasons why people with IBD give up on regular physical activity. Although fatigue can result from the disease itself, the inflammatory process, or treatment, inadequate energy and nutrient intake

can further contribute to its development. Nutritional preparation is therefore an important part of planning any physical activity.

Current ESPEN guidelines emphasize that there is no universal diet that suits all people with IBD. Recommendations should be tailored to the course of the disease, nutritional status, the type of activity planned, and individual food tolerance.

🔍 Can I safely train today? Before starting your planned physical activity, ask yourself a few simple questions: Have I had enough food and fluids today? Do I feel rested, or am I experiencing significant fatigue? Am I sufficiently hydrated? Do I currently have significant gastrointestinal symptoms (pain, diarrhea, or an urgent need for a bowel movement)? Do I know where the nearest toilet is, in case I need it during the activity? If you answered YES to most of these questions: physical activity is more likely to be comfortable and safe. If you answered NO to several, consider postponing the activity or adjusting the intensity, and consult your doctor or dietitian if needed.

⚠ Remember When the body doesn't get enough energy and nutrients, physical activity becomes much harder than it should be. Inadequate nutrition can become a limiting factor that makes it difficult, or even impossible, for a person with IBD to remain physically active in the long term.

4. Recommendations for pre- and post-workout meals

The goal of pre- and post-workout nutrition is simple: to provide enough energy and support recovery without putting a strain on the digestive system. In practice, this means choosing meals lower in fiber and fat immediately before and after activity, while saving richer and more varied meals for the rest of the day.

Pre-workout meal

The goal of the pre-workout meal is to fuel the muscles with carbohydrates, along with good hydration and minimal risk of gastrointestinal discomfort. The food we choose should be:

- Rich in carbohydrates: the main fuel for muscles during activity.
- Low in fiber: especially if you have more pronounced digestive issues or tend to feel anxious before training.
- Easy to digest: avoid large meals rich in fat or protein, as they digest more slowly and can cause discomfort.
- Familiar and tried-and-tested: never introduce new foods or supplements right before training.

A larger meal is recommended 2–4 hours before the planned activity. If more time passes, a smaller snack can be added 30–60 minutes before exercising, according to individual tolerance.

Time before training	Goal	Example meal
2–4 hours	Main meal – energy loading	Rice with chicken and cooked vegetables; pasta with turkey; baked potato with fish
30–60 minutes	Small snack if needed	Banana; rice crackers; toast with a thin layer of spread; yogurt or kefir (if tolerated)
Immediately before	Avoid large meals	A few sips of water if needed

Examples of suitable pre-workout meals and snacks

Banana, on its own or with a little honey or nut butter

Rice crackers or protein crackers with a dairy spread or hummus

Lactose-free yogurt with cooked or peeled fruit

Overnight oats or chia pudding

A small portion of white rice or pasta

Fruit smoothie with banana and a lactose-free drink/yogurt

Practical tips Don't start training right after a large meal. Don't experiment with new foods on the day of the activity. Choose foods you've already tolerated well in the past. If you're planning to be away from home for an extended period, plan your meal in advance and bring an appropriate snack.

Post-workout meal

The body's recovery begins immediately after activity ends, and a properly planned meal is one of the most important steps in this process. In people with IBD, the post-workout meal is especially important because it helps replenish energy and fluids used, preserve muscle mass, and prepare the body for future activities.

It's ideal to eat a meal that combines carbohydrates and protein within 1–2 hours of finishing your workout. As a guideline, the meal should contain approximately 15–25 g of protein along with 50–60 g of carbohydrates, with the amounts adjusted for body weight and training intensity.

Nutritional need	Why is it important?	Example foods
Fluids	Replacing losses and maintaining hydration	Water or an electrolyte drink as needed
Carbohydrates	Replenishing energy stores (glycogen)	Rice, potatoes, pasta, bread, fruit
Protein	Recovery and preservation of muscle mass	Chicken, fish, eggs, lactose-free dairy products, tofu

Examples of suitable meals after training

Baked or boiled fish with potatoes and cooked vegetables

Chicken with rice and cooked carrot or zucchini

Omelet with toast or rusks

Smoothie with banana, lactose-free milk/yogurt, and a scoop of protein powder

Lactose-free yogurt with peeled fruit

Tortilla with eggs or tofu

Yogurt or kefir with oat flakes (if tolerated)

Practical tips Replace lost fluids immediately after finishing the activity. Don't skip the post-workout meal, even if the activity was moderate in intensity. Combine good sources of protein and carbohydrates for more efficient recovery. If you have no appetite after finishing the activity, start with a smaller, easily digestible meal or drink, and eat a larger meal once your appetite returns. If you notice pronounced fatigue, nausea, or worsening of symptoms after activity, adjust the intensity of your next training session and consult a doctor or dietitian.

During a flare-up If symptoms are more pronounced, priority goes to foods you know are safe for you, as this matters more than strictly following an "ideal" nutrition plan. During these periods, it's perfectly fine to temporarily stop training or reduce the intensity of activity to something gentler, then return to your usual routine once symptoms settle.

Golden rule Don't try new foods on the day of an important training session. Test anything new in advance, on days when your gut is "quiet." Keep a brief food and symptom diary. It's the easiest way to identify which foods around training work for you and which don't, as food tolerance varies from person to person.

5. Supplementation

A well-planned and varied diet is the foundation of nutritional support for people with Inflammatory Bowel Disease, including those who regularly engage in physical activity. Supplementation cannot replace a quality diet. It can complement it in situations where nutritional needs cannot be met through diet alone or when there is a clearly defined medical indication.

In people with IBD, decisions about supplement use should be made individually, taking into account disease course, nutritional status, laboratory findings, type of physical activity, and current therapy. Routine use of multiple supplements without professional advice is not recommended.

Vitamins and minerals

Some people with IBD may develop deficiencies in vitamins and minerals, particularly iron, vitamin B12, folic acid, vitamin D, and calcium. In these cases, supplementation may be warranted, but should be based on a laboratory-confirmed deficiency and a healthcare professional's recommendation.

Protein supplements

Protein supplements can be a practical solution for people who, due to reduced appetite or increased needs, are unable to obtain sufficient protein intake through everyday diet alone. Whey protein isolate (with a minimal lactose content) and plant-based protein powders (pea, rice, hemp protein) are generally well tolerated. Still, for most recreationally active people with IBD, adequate protein intake can be achieved through properly planned meals.

Electrolytes

In people with frequent diarrhea, a stoma, or heavy sweating during physical activity, special attention should be paid to fluid and electrolyte replacement. Rehydration needs depend on the duration and intensity of the activity as well as individual fluid losses. In these cases, an oral rehydration solution is a better choice than plain water or sweetened sports drinks.

Creatine

Creatine is one of the most researched sports supplements in the general population, but there is currently insufficient evidence to justify its routine use in people with IBD. It may be considered individually, after professional assessment, and it is advisable to avoid a high-dose loading phase and to ensure adequate hydration.

Supplement	When can it be useful?
Vitamin D	For laboratory-confirmed deficiency; a common finding in people with IBD
Vitamin B12	For confirmed deficiency or after resection of the terminal ileum
Iron	For confirmed iron deficiency or anemia; in line with guidelines and clinician assessment
Calcium	When dietary intake is insufficient or there is an increased risk of osteopenia (e.g., long-term glucocorticoid therapy)
Protein supplements	When sufficient intake cannot be achieved through diet; as a supplement, not a replacement for a complete diet
Electrolytes	For prolonged activity, diarrhea, increased stoma output, or heavy sweating
Creatine	Only after individual professional assessment; routine use is not recommended
Magnesium	For insufficient dietary intake, for muscle cramps; prefer organic chelated forms for better absorption, avoid forms like magnesium oxide due to potential laxative effect

Myth or fact?

MYTH: "If I have IBD, I need to take numerous supplements." FACT: Most people with IBD do not need a large number of supplements. The foundation of nutritional support is a well-planned and varied diet, while supplementation is introduced only when there is a clear medical indication or a laboratory-confirmed nutritional deficiency.

Practical recommendations for supplementation

Proper nutrition is the foundation of nutritional support: supplements are a complement, not a replacement.

Use vitamins and minerals only when there is a confirmed deficiency or medical indication.

Introduce sports supplements in consultation with a doctor and/or dietitian.

Choose products of verified quality and declared composition; favor those with independent certification (e.g., Informed-Sport, NSF Certified for Sport).

Avoid products of unknown composition or those promising quick and unrealistic results.

⚠ Remember: Supplements are not a substitute for quality nutrition. Their role is to make up for what the body is lacking, but only when there is a valid reason for this, confirmed by laboratory findings and professional assessment.

PART 2

RECIPES

Spelt porridge with strawberries and hazelnuts

Servings: 1 | Preparation: 15 minutes

 VEGETARIAN

 LACTOSE-FREE

 HIGH IN FIBER

 BREAKFAST

Warm spelt porridge is easy to digest and makes an ideal breakfast or meal 1–2 hours before moderate training. The carbohydrates from spelt provide steady energy that is released more slowly, without sharp spikes in blood sugar, while the strawberry topping adds antioxidants and natural fruity sweetness. Hazelnuts enrich this meal with healthy fats and a little protein that contribute to a feeling of fullness. It's all in one warm bowl that's ready in 15 minutes.

Ingredients	Preparation
• Spelt or buckwheat porridge 30 g • Almond milk 3 dl (300 mL) • Strawberries, chopped 150 g (1 cup) • Hazelnuts, chopped 30 g (15 pieces)	1. Cook the chopped strawberries in a small saucepan with a tablespoon of water for about 10 minutes over low heat. If desired, mash them with a fork or blend with a hand blender to a topping-like texture. Set aside. 2. In another saucepan, heat the almond milk. Add the porridge and cook, stirring, until the milk comes to a boil. 3. Remove from heat, transfer to a bowl, and let stand for 5 minutes; the porridge will thicken. 4. Top with the strawberry topping and sprinkle with chopped hazelnuts. Serve warm.

Nutritional values per serving (≈ 512 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
409 kcal	10 g	41 g	11 g	25 g	2 g	6 g	218 mg

💡 **BOOST tip:** You can prepare the porridge the evening before and store it in the fridge. In the morning, just warm it briefly with a spoonful of almond milk. The strawberry topping can be kept in the fridge for 2–3 days. For a meal 1–2 hours before training, this is an excellent choice: easy to digest, with enough carbohydrates for energy and no risk of bowel discomfort.

Servings: 1 | **Preparation:** 10 minutes

🥗 HIGH PROTEIN (18 g)	⚡ LOW CARB	⚡ QUICK TO PREPARE	🍳 BREAKFAST / DINNER
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With 18 g of protein and only 1 g of carbohydrates, the omelet with baby spinach is one of the quickest and easiest high-protein meals to prepare. Baby spinach is gentler on the gut than mature leafy spinach, and cooking makes it even more digestible. Parmesan adds calcium and intense flavor in small amounts. It's ideal for breakfast on training days, but also works as a light dinner after activity.

Ingredients	Preparation
• Medium-sized eggs 2 pcs (88 g) • Parmesan, grated 15 g • Olive oil 1 tablespoon (14 g) • Baby spinach, fresh 30 g	1. Beat the eggs well with a whisk. Season the mixture lightly with salt. 2. Pour the eggs into a wide pan with heated olive oil and reduce the heat to medium-low. 3. While the eggs are still runny, quickly spread the baby spinach over the surface so it wilts from the heat. 4. Cover the pan with a lid and let the omelet finish cooking for 2–3 minutes. 5. Transfer to a plate and sprinkle with grated parmesan. Serve immediately.

Nutritional values per serving (≈ 147 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
312 kcal	18 g	1 g	0 g	26 g	7 g	0 g	284 mg

💡 **BOOST tip:** The omelet is ready in 10 minutes. An ideal post-workout meal for when you don't have the time or energy for elaborate preparation. Since it's low in carbohydrates, for a more complete post-workout meal serve it with two slices of toast or a small potato – to replenish the glycogen used up during training.

Plant-Based Banana Shake with Protein

Servings: 1 | **Preparation:** 5 minutes

🌱 VEGAN	🌱 VEGAN	🌱 VEGAN	🌱 VEGAN
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This shake delivers 35 g of plant-based protein, 85 g of carbohydrates, and 19 g of fiber in a single glass, making it one of the most nutrient-dense meals in this guide. Hemp protein is an excellent source of omega-3 fatty acids and easily digestible protein. The combination of oat flakes and banana provides both fast and slow carbohydrates for lasting energy and glycogen replenishment after training.

Ingredients	Preparation
• Oat or millet flakes (soaked in hot water first, then drained) 60 g • Almond milk 250 g (1 cup) • Almonds 30 g • Cinnamon 1 teaspoon • Hemp protein 20 g • Chia seeds, ground 10 g (1 tablespoon) • Banana 118 g (1 medium)	1. Pour hot water over the oat or millet flakes, let stand for 5 minutes, then drain well. 2. Put all the ingredients in a blender: the drained flakes, almond milk, almonds, cinnamon, hemp protein, chia seeds, and banana. 3. Blend on high speed for 30–60 seconds until smooth and creamy. 4. Add a bit more almond milk if needed. Serve immediately.

Nutritional values per serving (≈ 491 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
685 kcal	35 g	85 g	18 g	26 g	2 g	19 g	187 mg

💡 **BOOST tip:** The high fiber content (19 g) makes this shake extremely filling, but it may be harder to digest during active disease. If you notice discomfort, reduce the chia seeds to 5 g and the flakes to 40 g for a lighter, lower-fiber version. The shake remains tasty and still a sufficient protein-rich meal.

Energy Smoothie

Servings: 1 | **Preparation:** 15 minutes

 HIGH PROTEIN	 ENERGY SOURCE	 QUICK PREP	 BEFORE OR AFTER TRAINING
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The BOOST energy smoothie is a practical meal that takes just a few minutes to prepare and can be an excellent choice before or after physical activity. The combination of kefir, banana, millet flakes, and whey protein provides quality protein and carbohydrates needed for energy and recovery. Thanks to its creamy texture, it is easy to consume, making it especially useful on days when appetite is reduced or when there isn't enough time to prepare a larger meal.

Ingredients	Preparation
• Kefir (3.2% milk fat) 250 mL • Banana 80 g • Millet flakes 30 g • Cinnamon a pinch (optional)	1. Pour the kefir over the millet flakes and let stand for 10–15 minutes to soften. 2. Slice the banana into rounds. 3. Place all ingredients in a blender and blend until you get a 4. Add a pinch of cinnamon, if desired. 5. Serve immediately after preparation.

Nutritional values per serving (≈ 380 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
328 kcal	12 g	47 g	–	10 g	0.4 g	2.8 g	103 mg

💡 **BOOST tip** If you're planning physical activity in the next 60–90 minutes, this smoothie makes a practical and easily digestible meal. After training, it can help replenish energy and protein, especially when it isn't possible to prepare a full meal right away.

Pumpkin and Fennel Soup

Servings: 2 | Preparation: 30 minutes

VEGAN

GLUTEN-FREE

LACTOSE-FREE

EASILY DIGESTIBLE

This creamy pumpkin and fennel soup is easy to digest and rich in beta-carotene as well as mild, well-tolerated fiber from cooked vegetables, which is especially beneficial for people with inflammatory bowel disease. Almond milk gives the soup its creaminess without dairy proteins or lactose, while fennel helps mildly reduce bloating. It is simple to prepare, and leftover portions can be stored in the refrigerator or frozen for later.

Ingredients	Preparation
• Olive oil 1 tablespoon • Fennel, fresh, finely chopped 70 g • Carrot, medium-sized 1 piece • Pumpkin, peeled and diced 300 g • Almond milk 150 mL • Ginger, fresh, grated 5 g • Salt to taste • Water as needed	1. In a tablespoon of olive oil, sauté the fennel until slightly wilted. 2. Add the carrot cut into rounds and sauté for another 10–15 minutes over low heat (you can also add a bit of celery root, if desired). 3. Add the diced pumpkin and sauté until slightly softened. 4. Pour the almond milk into the pot along with enough water to cover the ingredients. 5. Season with salt, add the grated ginger if desired, and cook for about another ten minutes, until the pumpkin is completely soft. Add more water during cooking if needed. 6. Finish the soup with an immersion blender or regular blender until smooth, then serve immediately.

Nutritional values per serving (≈ 293 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
110 kcal	3 g	12 g	7 g	7 g	1 g	3 g	76 mg

BOOST tip You can prepare the soup ahead of time and store it in the refrigerator for up to 3 days, or freeze it in individual portions for up to 2 months, just reheat briefly before serving. Thanks to its soft, smooth texture and mild composition, this soup is also a good choice during a flare-up, when easily digestible food is needed.

Velvety Roasted Pumpkin Cream Soup

Servings: 1 | Preparation: 35 minutes

EASILY DIGESTIBLE

CREAMY TEXTURE

SOURCE OF PROTEIN

LUNCH / DINNER

The BOOST velvety cream soup is a light and nourishing meal that combines thermally processed vegetables, quality protein, and healthy fats. Roasting the pumpkin develops a pleasant aroma and natural sweetness, while the addition of kefir and cream cheese contributes to the creamy texture and protein and calcium intake. Thanks to its smooth consistency and mild flavor, this soup can be a good choice for people with Inflammatory Bowel Disease (IBD), especially during periods when easily digestible meals are preferred.

Ingredients	Preparation
- Pumpkin 150 g - Kefir (3.2% milk fat) 200 mL - Cream cheese 20 g - Olive oil 5 mL - Fresh parsley 5 g - Salt 1 g	- Wash the pumpkin, peel it, remove the seeds, and cut into cubes. - Arrange the pumpkin on a baking tray lined with parchment paper, drizzle with olive oil, and bake in a preheated oven at 180 °C for about 25 minutes, or until completely soft. - Transfer the roasted pumpkin to a blender or a suitable container. - Add the cream cheese and kefir, then blend everything together until smooth and velvety. - Reheat briefly if needed, making sure the soup does not boil. - Serve garnished with finely chopped fresh parsley.

Nutritional values per serving (≈ 380 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
274 kcal	9 g	20 g	13 g	18 g	9 g	2 g	615 mg

💡 **BOOST tip** You can prepare the soup in advance and store it in the refrigerator for up to 24 hours. Before serving, gently reheat it while stirring occasionally, making sure it doesn't boil. For a complete meal, you can serve it with a slice of toasted bread or a few whole-grain crackers, if well tolerated.

Gluten-Free Tortilla with Smoked Tofu

Servings: 1 | **Preparation:** 10 minutes

 VEGGIE	 GLUTEN-FREE	 QUICK PREP	 LUNCH / SNACK
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The gluten-free tortilla with smoked tofu is a quick and compact meal. It's ready in 10 minutes and easy to take with you. Smoked tofu is rich in plant-based protein, while skyr yogurt adds protein with a distinctive flavor and no added fat. Carrot and red cabbage in small amounts add crunch and minerals, while lemon juice and mustard add freshness without heavy seasoning.

Ingredients	Preparation
- Carrot, grated or chopped 25 g - Red cabbage, chopped 20 g - Arugula 10 g - Skyr yogurt 50 g - Tarragon mustard ½ teaspoon (4 g) - Lemon juice 1 teaspoon - Gluten-free tortilla (small) 1 piece - Smoked tofu 50 g	- Cut the tofu into thin strips. - Finely chop the carrot and red cabbage. Mix them in a small bowl with the skyr, mustard, and lemon juice. - Briefly heat the tortilla in a dry pan or in the microwave (30 seconds) to make it more flexible. - Spread the vegetable and skyr mixture over the tortilla, then add the tofu strips and arugula. - Roll the tortilla up tightly and serve immediately (or wrap it in aluminum foil to take with you).

Nutritional values per serving (≈ 317 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
274 kcal	9 g	20 g	13 g	18 g	9 g	2 g	615 mg

 **BOOST tip** This is an ideal meal to take with you – wrap it in foil and bring it to training or on a trip. Preparation takes just 10 minutes, with no cooking. For a higher protein intake, add another 50 g of tofu or replace the tortilla with a protein tortilla.

Hake in a Paper Parcel with Vegetables

Servings: 1 | Preparation: 40 minutes

 HIGH PROTEIN (49 g)	 GLUTEN-FREE	 EASILY DIGESTIBLE	 PREPARE AHEAD
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With an impressive 49 g of protein per serving, hake in a paper parcel is one of the highest-protein recipes in this guide. The paper-baking technique (en papillote) locks in all the juices and nutrients, keeping the fish moist and tender while the vegetables become soft and easily digestible. Minimal fat, mild seasoning, and cooked vegetables make this meal excellent even on days when the gut is more sensitive.

Ingredients	Preparation
• Hake (fillet) 250 g • Zucchini, diced 1 cup (113 g) • Carrot, sliced 1 cup (128 g) • White potato, sliced ½ cup (75 g) • Olive oil 1 tablespoon (14 g) • Salt and pepper to taste	1. Preheat the oven to 200 °C. 2. Place the hake fillet on a large piece of parchment paper. Arrange the chopped vegetables (zucchini, carrot, potato) around it. 3. Season with salt and pepper, and drizzle with olive oil. 4. Wrap the paper tightly to form a sealed parcel – it's important that the juices don't leak out. 5. Place the parcel on a baking tray and bake for 25–30 minutes at 200 °C. 6. Carefully open the parcel (watch out for steam!) and serve immediately.

Nutritional values per serving (≈ 580 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
473 kcal	49 g	28 g	10 g	20 g	3 g	7 g	360 mg

 **BOOST tip** You can wrap the parcel in advance in the morning and store it in the refrigerator. In the evening, just put it in the oven. No pans to wash, no cooking on the stovetop. This is one of the easiest ways to prepare a complete meal. With 49 g of protein, this meal is especially valuable the day after intense strength training or longer aerobic activities.

Chicken with Quinoa and Vegetables

Servings: 1 | Preparation: 30 minutes

 HIGH PROTEIN (42 g)	 GLUTEN-FREE	 COMPLETE PROTEIN	 LUNCH / DINNER
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The combination of chicken and quinoa provides a complete amino acid profile. Quinoa is one of the few plant-based foods rich in essential amino acids, while chicken is an easily digestible source of protein. With 42 g of protein and 36 g of carbohydrates, this meal is ideal for muscle recovery after intense training. Curry and cumin not only enrich the flavor but also have mild anti-inflammatory effects.

Ingredients	Preparation
- Quinoa, raw 50 g - Olive oil 10 g - Chicken fillet (boneless white meat) 150 g - Carrot, diced 50 g - Zucchini, diced 50 g - Sour cream, 20% fat 50 g - Salt, pepper, curry powder, cumin to taste	- Rinse the quinoa under cold water. - In a deeper pot, sauté diced chicken fillet in olive oil for 3–4 minutes. - Add the quinoa, stir, and pour in 200 mL of water. Add the carrot and zucchini. - Season to taste (salt, pepper; optionally curry and cumin for a more aromatic flavor). - Cook over low heat for 20 minutes, or until the quinoa absorbs all the water and becomes fluffy. - Just before the end, add the sour cream, stir, and remove from heat.

Nutritional values per serving (≈ 360 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
550 kcal	42 g	36 g	8 g	28 g	10 g	5 g	188 mg

 **BOOST tip** If you prefer a milder flavor or have a sensitive gut, leave out the curry and cumin. The meal will still be tasty with just a minimal amount of seasoning (salt + olive oil). You can double this recipe and store it in the refrigerator for up to 2 days. It's a practical meal-prep option for active weeks.

Zucchini boats stuffed with turkey fillet and white rice

Number of servings: 1 | Preparation: 45 minutes

 HIGH PROTEIN (42 g)	 HIGH PROTEIN (42 g)	 HIGH PROTEIN (42 g)	 HIGH PROTEIN (42 g)
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BOOST zucchini boats are a complete main meal that combines high-quality protein, easily digestible carbohydrates, and cooked vegetables. Turkey fillet provides about 35 g of protein per serving, which helps preserve and restore muscle mass after physical activity. Cooked white rice is an easily digestible source of energy, while roasted zucchini gives the meal a soft texture and mild flavor, which are generally well tolerated by people with Inflammatory Bowel Disease (IBD) in remission.

Ingredients	Preparation
• Zucchini 200 g • Turkey fillet (ground) 80 g • White rice 40 g • Olive oil 10 mL • Parsley 5 g • Salt 1 g • Served with • Kefir or sour milk (2.8% fat) 180–200 mL	1. Wash and peel the zucchini, then cut it lengthwise into two equal halves. 2. Using a spoon, carefully scoop out the center along with the seeds to create “boats.” If needed, remove some of the softer flesh as well, making sure the zucchini walls remain firm enough for stuffing. 3. Cook the white rice in water until fully tender. 4. Briefly sauté the ground turkey fillet in olive oil, stirring constantly. 5. Add the cooked rice and mix well to combine the filling. 6. Fill the zucchini boats with the mixture. 7. Bake in a preheated oven at 180 °C for about 25–30 minutes, or until the zucchini is completely tender. 8. Before serving, sprinkle with finely chopped parsley. 9. Serve with a glass of kefir or sour milk.

Nutritional values per serving (≈ 515 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
514 kcal	35 g	41 g	–	23 g	6 g	9 g	91 mg

 **BOOST tip** You can prepare this meal in advance and store it in the refrigerator for up to 24 hours. Before serving, gently reheat it in the oven or microwave. Thanks to its good ratio of protein to carbohydrates, it's an excellent lunch choice after a walk, a workout, or other moderate physical activity.

Number of servings: 1 | Preparation: 45 minutes

 HIGH PROTEIN (41 g)	 GLUTEN-FREE	 WITH ROASTED PUMPKIN	 LUNCH / DINNER
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The Mediterranean BOOST pilaf is a nutritionally balanced meal that combines quality protein, complex carbohydrates, and cooked vegetables. Hake fillet provides about 41 g of easily digestible protein, while millet is a naturally gluten-free energy source rich in minerals. Roasted pumpkin adds a soft texture, natural sweetness, and beta-carotene content, making this meal a good choice for people with Inflammatory Bowel Disease (IBD) in remission or when disease symptoms are under control.

Ingredients	Preparation
• Hake fillet 150 g • Hulled millet 80 g • Pumpkin 100 g • Olive oil 10 mL • Fresh parsley 5 g • Salt 0.5 g • Served with • Kefir or sour milk (3.2% fat) 180–200 mL	1. Peel the pumpkin, remove the seeds, and cut it into cubes about 2 cm in size. 2. Arrange on a baking tray lined with parchment paper and bake in a preheated oven at 180 °C for about 25 minutes, until fully tender. 3. Rinse the millet well under running water, then cook according to the manufacturer's instructions until tender and all the liquid is absorbed. 4. Cut the hake fillet into larger pieces, brush with olive oil, and bake in the oven for 12–15 minutes, making sure it stays juicy. 5. Gently fold the roasted pumpkin into the cooked millet, then add the baked hake pieces so they keep their shape. 6. Sprinkle with finely chopped parsley and serve immediately. 7. If desired, serve with a glass of kefir or sour milk.

Nutritional values per serving (≈ 540 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
619 kcal	41 g	70 g	–	20 g	2 g	7 g	691 mg

💡 **BOOST tip** This meal is an excellent choice after moderate to intense physical activity, when you need to replenish energy stores and provide enough quality protein for the body's recovery. It is best consumed within one to two hours after finishing the activity.

Mediterranean plate with trout, potatoes, and roasted zucchini

Number of servings: 1 | **Preparation:** 35 minutes

 HIGH PROTEIN (36 g)	 SOURCE OF CARBOHYDRATES	 COOKED VEGETABLES	 LUNCH / DINNER
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The BOOST Mediterranean plate is a balanced main meal that combines quality protein, easily digestible carbohydrates, and cooked vegetables. Trout fillet provides about 36 g of high-value protein and is a natural source of omega-3 fatty acids, while cooked potatoes are an easily digestible source of energy. Roasted zucchini adds a mild flavor and soft texture, making this meal a good choice for people with Inflammatory Bowel Disease (IBD) in remission or when disease symptoms are under control.

Ingredients	Preparation
• Trout fillet 150 g • Potatoes 150 g • Zucchini 200 g • Olive oil 10 mL • Fresh parsley 5 g • Salt 1 g • Served with • Kefir or sour milk (3.2% fat) 180–200 mL	1. Wash the trout fillet, pat dry with a paper towel, and brush with olive oil. 2. Bake in a preheated oven at 180 °C for about 15–18 minutes, making sure the fish stays juicy. 3. Peel the potatoes, cut into larger pieces, and cook until fully tender. 4. Wash the zucchini, peel if desired, and cut into thick rounds or sticks. 5. Bake on parchment paper for about 20 minutes, until tender and lightly golden. 6. Arrange the cooked potatoes, roasted zucchini, and trout fillet on a plate. 7. Sprinkle with finely chopped parsley. 8. If desired, serve with a glass of kefir or sour milk.

Nutritional values per serving (≈ 690 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
469 kcal	36 g	41 g	–	18 g	5 g	8 g	97 mg

💡 **BOOST tip** This meal can be a great choice for lunch or dinner after recreational physical activity. Thanks to its simple preparation and mild ingredients, it fits easily into everyday eating habits and can also be prepared in advance for the next day.

Cake with fresh cheese, sour cherries, and semolina

Number of servings: 4 | **Preparation:** 10 min preparation + 45 min baking

🌿 VEGETARIAN	🥛 HIGH PROTEIN	🛡️ ANTI-INFLAMMATORY	🕒 MAKE-AHEAD
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This cake is not a typical dessert. The combination of low-fat cheese and eggs provides 8 g of protein per serving with only 166 kcal, making it an excellent protein-rich snack or dessert after a workout. Semolina provides carbohydrates to replenish energy, and sour cherries are rich in anthocyanins, which have an anti-inflammatory effect. One baking dish yields 4 servings, perfect for preparing ahead.

Ingredients	Preparation
• Low-fat fresh cheese 300 g • Light kefir or yogurt 150 g • Eggs 2 pcs (100 g) • Semolina 5 tbsp (165 g) • Vanilla extract 1 tsp • Butter (+ a little for the baking dish) 30 g • Thawed sour cherries or blueberries 150 g (1 cup) • Maple syrup or honey 30 g	1. Preheat the oven to 200 °C. Grease a cake pan or baking dish with a little butter. 2. Place all the ingredients (cheese, kefir, eggs, semolina, vanilla extract, butter, syrup) in a bowl and mix with a hand mixer until smooth. 3. Pour the mixture into the pan and evenly spread the cherries on top. 4. Bake for 10 minutes at 200 °C, then reduce the temperature to 180 °C and bake for another 30–35 minutes. 5. Remove from the oven and let cool in the pan for 30 minutes. Store in the refrigerator for up to 4 days.

Nutritional values per serving (≈ 113 g, 4 servings)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
166 kcal	8 g	22 g	6 g	5 g	3 g	1 g	101 mg

💡 **BOOST tip** This is a perfect meal-prep recipe. Bake it on Sunday and you'll have a ready-made post-workout snack for 3–4 days. Each serving offers a good ratio of protein to carbohydrates with minimal fat. For a higher protein intake (for example, after a more intense workout), serve one portion with a glass of kefir or a handful of nuts.

Banana, spelt, and blueberry muffins with cottage cheese cream

Number of servings: 1 | **Preparation:** 20 minutes + baking

🏠 SOURCE OF PROTEIN	🍌 WITH FRUIT	🌾 SPELT-BASED	🥄 SNACK
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BOOST muffins make a practical breakfast or snack for people with Inflammatory Bowel Disease (IBD) who want to stay physically active. Since they are oven-baked, without frying or large amounts of added fat, they can be prepared in advance, are easy to carry, and make a good choice before planned physical activity or as a snack during the day. The combination of banana, spelt, and cottage cheese provides energy, protein, and a pleasant, soft texture.

Ingredients	Preparation
• Muffins • Banana 100 g • Spelt flour 40 g • Egg whites 2 pcs • Lactose-free milk or rice drink 80 mL • Blueberries 40 g • Baking powder 2 g • Oil 5 mL • Cottage cheese cream • Fresh cheese (up to 5% fat) 50 g • Kefir 20 mL	1. Preheat the oven to 200 °C. Grease a cake pan or baking dish with a little butter. 2. Place all the ingredients (cheese, kefir, eggs, semolina, vanilla extract, butter, syrup) in a bowl and mix with a hand mixer until smooth. 3. Pour the mixture into the pan and evenly spread the cherries on top. 4. Bake for 10 minutes at 200 °C, then reduce the temperature to 180 °C and bake for another 30–35 minutes. 5. Remove from the oven and let cool in the pan for 30 minutes. Store in the refrigerator for up to 4 days.

Nutritional values per serving (≈ 340 g)

Energy	Protein	Carbohydrates	of which sugars	Fat	of which saturated fatty acids	Fiber	Sodium
166 kcal	8 g	22 g	6 g	5 g	3 g	1 g	101 mg

💡 **BOOST tip** You can prepare the muffins a day ahead and keep them in the refrigerator for up to two days, or freeze them in individual portions. This way, you always have a snack ready when you plan a walk, a workout, or a trip. For extra energy before longer physical activity, serve them with a glass of kefir or yogurt, if you tolerate them well.

Substitutions and modifications for all recipes

Every recipe can be adapted to what you tolerate, what you have at home, and what phase of the disease you are in. The table below collects the substitutions for all the recipes in one place.

Recipe	Substitutions and modifications
Spelt porridge with strawberries and hazelnuts	Spelt porridge → oat porridge, rice porridge, or gluten-free cornmeal porridge: similar texture, adjust to tolerance · Almond milk → oat milk or soy milk (higher protein content) · Strawberries → blueberries, raspberries, cooked pear, or apple · Hazelnuts → pumpkin or sunflower seeds for a nut-free version · Δ Note: During a flare-up, cook the strawberries longer until fully softened, or replace them with fruit puree.
Omelet with baby spinach	Parmesan → feta cheese (milder, less salty), nutritional yeast (plant-based), or young goat cheese · Baby spinach → arugula, lamb's lettuce, or young Swiss chard: all are gentle on the gut when briefly cooked · 2 whole eggs → 1 whole egg + 2 egg whites for less fat and cholesterol · Δ Note: During a flare-up, avoid raw lettuce leaves: all spinach must be cooked. Parmesan is a hard cheese with low lactose content and is usually well tolerated.
Plant-Based Banana Shake with Protein	Hemp protein → whey protein isolate (animal-based, higher biological value) or pea protein · Almond milk → soy milk (higher protein content) or coconut milk (creamier) · Banana → mango or papaya for a tropical variation with less starch · Oat flakes → millet flakes (gluten-free) or rice flakes for a fully gluten-free version · Δ Note: The high fiber content (19 g) may be uncomfortable during a flare-up: reduce the portion to $\frac{1}{2}$ or temporarily omit the chia seeds.
Energy Smoothie	Kefir → buttermilk, yogurt, or lactose-free kefir: choose based on individual tolerance. · Millet flakes → oat or rice flakes: a suitable alternative with a similar energy value. · Banana → ripe pear or peach: choose the fruit that is best tolerated or available in season. · Δ Note: For individuals with active disease or pronounced digestive sensitivity, it is recommended to use a well-ripened banana and lactose-free fermented dairy products if intolerance is present. The smoothie is best consumed immediately after preparation to retain optimal texture and nutritional value.
Pumpkin and Fennel Soup	Fennel → celery root or leek, if fennel is not available or is poorly tolerated · Pumpkin → carrot, sweet potato, zucchini, cauliflower – as variations on the theme · Almond milk → oat or coconut milk: lactose-free, mild flavor · Fresh ginger → omit or halve the amount if it causes discomfort · Olive oil → add after cooking instead of sautéing, for a milder flavor and to preserve nutrients
Velvety Roasted Pumpkin Cream Soup	Pumpkin → sweet potato or carrot: provide a similarly creamy texture and mild natural sweetness. · Kefir → buttermilk, yogurt, or lactose-free kefir: choose based on individual tolerance. · Cream cheese → fresh soft cheese or lactose-free cream cheese: provide a similarly creamy texture with a slightly different flavor. · Olive oil → rapeseed oil: a quality alternative rich in unsaturated fatty acids. · Δ Note: During an active phase of the disease, it is recommended that the pumpkin be thoroughly cooked and the soup completely smooth, without any larger pieces. For individuals with lactose intolerance, lactose-free kefir and cream cheese can be used.
Gluten-Free Tortilla with Smoked Tofu	Smoked tofu → grilled chicken, canned tuna (in water), or a boiled egg: for somewhat more protein of animal origin · Skyr → lactose-free Greek yogurt: a very similar nutritional profile · Arugula → lamb's lettuce or baby spinach (milder); during a flare-up, replace with cooked carrot or zucchini · Red cabbage → grated carrot is a milder, more easily digestible option for a sensitive gut · Δ Note: Raw cabbage may be less well tolerated by some patients or during a flare-up: replace it with cooked vegetables or omit it temporarily.
Hake in a Paper Parcel with Vegetables	Hake → sea bass, cod, or red mullet for a similar taste; salmon or tuna for a higher omega-3 fatty acid content · Zucchini and carrot → sweet potato for more beta-carotene, or broccoli and cauliflower (cooked, not raw) · White potato → sweet potato: higher fiber and vitamin A content · Δ Note: Raw vegetables in the parcel become soft during baking and are generally well tolerated. Avoid seasonings that don't personally agree with you.
Chicken with Quinoa and Vegetables	Chicken fillet → turkey (similar protein profile) or extra-firm tofu for a plant-based version · Sour cream → coconut milk / oat "cream" for a lactose-free plant-based version; lactose-free Greek yogurt for a creamier texture · Quinoa → white rice or buckwheat: gluten-free, similar function as a carbohydrate base · Δ Note: Sour cream contains lactose: for individuals sensitive to lactose, replace it with a lactose-free version or coconut milk.
Zucchini boats stuffed with turkey fillet and white rice	Turkey fillet → chicken fillet or lean ground chicken: provide a similar amount of quality protein. · White rice → millet or white couscous: adjust the choice to individual tolerance. · Kefir or sour milk → yogurt or a lactose-free fermented milk drink: a suitable alternative for those who tolerate lactose poorly. · Parsley → dill or finely chopped chives: add freshness of flavor with minimal nutritional differences. · Δ Note: During the active phase of the disease, it is recommended that the zucchini be well cooked, and that seasoning be used in moderation, in line with individual tolerance. In people with lactose intolerance, kefir or sour milk can be replaced with suitable lactose-free fermented dairy products.
Mediterranean millet pilaf with hake fillet and roasted pumpkin	Hake fillet → trout, cod, or sea bass: quality sources of easily digestible protein. · Millet → white rice or quinoa: adjust the choice to individual tolerance and dietary habits. · Pumpkin → sweet potato or carrot: provide a similarly soft texture and mild flavor once cooked. · Kefir or sour milk → yogurt or a lactose-free fermented milk drink: a suitable alternative for those who tolerate lactose poorly. · Δ Note: In people with active disease, it is recommended that all foods be well cooked. Millet is naturally gluten-free, but products labeled gluten-free are advised if strict adherence to a gluten-free diet is required. Adjust the amount of seasoning to individual tolerance.

Mediterranean plate with trout, potatoes, and roasted zucchini	Trout fillet → hake, zander, or sea bass: quality sources of easily digestible protein. · Potatoes → white rice, millet, or sweet potato: adjust the choice to individual tolerance and energy needs. · Zucchini → pumpkin or carrot: cooked vegetables with a mild flavor that give a similar texture. · Kefir or sour milk → yogurt or a lactose-free fermented milk drink: a suitable alternative for those who tolerate lactose poorly. · ⚠ Note: Prepare the fish by baking or boiling, without breading or deep-frying. During the active phase of the disease, it is recommended that vegetables be well cooked, and the amount of seasoning adjusted to individual tolerance.
Cake with fresh cheese, sour cherries, and semolina	Sour cherries → blueberries, raspberries, or sweet cherries: all rich in anthocyanins · Light kefir → lactose-free yogurt for a version suitable for people with lactose intolerance · Maple syrup → honey or erythritol for less sugar · Butter → coconut oil for a version without dairy protein · ⚠ Note: Kefir and cheese contain small amounts of lactose. People with intolerance may do better with lactose-free versions. During a flare-up, sour cherries may be less well tolerated: replace them with blueberries or leave them out.
Banana, spelt, and blueberry muffins with cottage cheese cream	Spelt flour → oat or rice flour: choose according to individual tolerance and dietary habits. · Blueberries → strawberries, raspberries, or blackberries: use seasonal fruit or whichever is best tolerated. · Fresh cheese → fresh cheese or skyr: quality protein sources with a similar creamy texture. · Lactose-free milk → oat drink or lactose-free milk: adjust the choice to individual tolerance.

Proposed 7-day meal plan for an active person with IBD

The meal plan is designed for a person with Inflammatory Bowel Disease (IBD) who is moderately physically active, with a target energy value of approximately 2000–2300 kcal and a protein intake of approximately 80–90 g per day. The stated kcal and protein values per day are rough estimates for meal-planning purposes; a more precise calculation requires individually adjusting food quantities and meals. On days when high-protein BOOST dishes are included, daily intake may reach up to 100 g of protein, which is welcome on days of more intense activity. The goal is for most people's weekly average to fall within the specified range, although some will need less, and others more, energy and protein per day.

Meals labeled "BOOST recipe" are worked out in detail (ingredients, preparation, nutritional values, substitution suggestions, and notes for the flare-up phase) in the main part of the guide. Everyday meals with just a few ingredients (bread with spread, porridges, purees, simple soups, etc.) are listed without a specific recipe, with an approximate quantity of ingredients.

Each lunch combines a light, heat-processed soup or stew as an introduction to the meal with a more substantial main course, which is a well-established practice in IBD, as it prepares the digestive system and contributes to hydration. Fermented dairy products (kefir, skyr, sour milk) are regularly included in the meal plan as a side dish or snack because of their good tolerability and probiotic effect. In case of lactose intolerance, replace them with lactose-free versions, as indicated in certain BOOST recipes. During a disease flare-up, adjust the texture and fiber content according to the instructions in the BOOST recipes, and consult your physician and nutritionist.

Meal	Monday	Tuesday	Wednesday
BREAKFAST	White bread (60 g) with fresh cheese spread (40 g) + Omelet with baby spinach BOOST recipe + Ginger tea	Spelt semolina with strawberries and hazelnuts BOOST recipe + Kefir (200 mL)	Polenta with fresh cheese and sour milk <i>150 g cooked polenta, 50 g fresh cheese, 100 mL sour milk</i>
SNACK 1	Tapioca pudding with blueberries <i>20 g tapioca, 100 mL plant-based drink, 15 g maple syrup, 20 g fresh blueberries</i>	Homemade protein bar with turmeric and dates <i>40 g bar + 1 small banana (100 g)</i>	Spelt buns (2 pcs, = 60 g) with tea
LUNCH	Cream of celery soup <i>70 g celery root, 50 g potato, 20 g carrot, 200 mL water/broth, 3 mL olive oil</i> + Mediterranean millet pilaf with hake fillet and roasted pumpkin BOOST recipe + Kefir (180 mL)	Cream of red lentil and carrot soup <i>300 mL, 40 g red lentils, carrot potato, broth</i> + Zucchini boats stuffed with turkey fillet and white rice BOOST recipe	Velvety cream of roasted pumpkin soup BOOST recipe + Chicken with quinoa and vegetables BOOST recipe
SNACK 2	Baked apple mousse with oats and cinnamon <i>170 g baked apple, 20 g oats, 60 g Greek yogurt, 10 g honey, cinnamon</i>	Skyr yogurt with apple puree <i>150 g skyr yogurt, 50 g apple puree</i>	Baked apple mousse with oats and cinnamon <i>170 g baked apple, 20 g oats, 60 g Greek yogurt, 10 g honey, cinnamon</i>
DINNER	Cauliflower puree with fresh cheese and roasted carrot <i>200 g cauliflower puree, 40 g fresh cheese, 100 g roasted carrot, a little olive oil</i>	Baked salmon with buckwheat and boiled carrot <i>100 g salmon, 100 g cooked buckwheat, 80 g boiled carrot, a little olive oil</i>	Baked macaroni and cheese (light version) <i>150 g cooked buckwheat macaroni, 30 g grated cheese, a little sour cream</i>

Meal	Thursday	Friday	Saturday	Sunday
BREAKFAST	Banana, spelt, and blueberry muffins with cottage cheese cream <i>BOOST recipe</i>	Millet porridge with banana and cinnamon <i>250 mL lactose-free milk, 40 g millet flakes, 1 banana</i>	Chia pudding with almond milk, banana, and cinnamon <i>200 mL almond milk, 20 g chia seeds, 1 banana, cinnamon, gluten-free option, prepare the night before</i>	Plant Based Banana Shake with protein <i>BOOST recipe</i>
SNACK 1	Kefir (200 mL) and rice crackers (2 pcs)	Energy smoothie <i>BOOST recipe</i>	Gluten-free tortilla with smoked tofu <i>BOOST recipe</i>	Apricot spread with rice crackers and ginger tea <i>100 g spread, 2 rice crackers</i>
LUNCH	Pumpkin soup with fennel <i>BOOST recipe</i> + Hake baked in parchment paper with vegetables <i>BOOST recipe</i>	Cream of vegetable soup <i>300 mL, carrot, potato, zucchini</i> + Mediterranean plate with trout, potato, and roasted zucchini <i>BOOST recipe</i>	Clear vegetable soup <i>200 mL</i> + Mild lean beef goulash with potato <i>120 g lean beef, 200 g potato, mild ground paprika</i>	Cream of pumpkin soup <i>300 mL</i> + Baked eggs with roasted carrot and cauliflower <i>3 eggs, 100 g roasted carrot, 100 g roasted cauliflower, a little olive oil</i>
SNACK 2	Apple puree with cinnamon and raisins <i>150 g</i>	Skyr yogurt with apple puree <i>150 g skyr yogurt, 100 g apple puree</i>	Fresh cheese cake with sour cherries and semolina <i>BOOST recipe</i>	Apple puree with cinnamon <i>150 g</i>
DINNER	Sweet potato puree with roasted carrot, Swiss chard, and fresh cheese <i>150 g sweet potato puree, 80 g roasted carrot, 80 g cooked Swiss chard, 30 g fresh cheese</i>	Orzotto, pearl barley risotto with turkey and carrot <i>100 g turkey, 100 g cooked pearl barley, 80 g carrot</i>	Hake with mashed potato and carrot <i>120 g hake, 200 g mashed potato, 80 g carrot</i>	Turkey steak with roasted pumpkin and carrot <i>120 g turkey, 150 g roasted pumpkin, 80 g roasted carrot, a little olive oil</i>

SHOPPING LIST FOR THE ENTIRE WEEK

This shopping list combines all the ingredients needed for all 7 days of the meal plan (BOOST recipes and everyday meals), grouped by category. Quantities are approximate and rounded for easier shopping. For ingredients bought in packages (e.g., bananas, apples, pasta), round up according to the available packaging. Spices and basic foods you likely already have at home (salt, pepper, cinnamon, olive oil) are listed for the sake of completeness.

Meat, fish, and eggs

Chicken fillet / breast	150 g	Trout (fillet)	150 g
Turkey fillet (ground and steak)	≈ 300 g	Salmon (fillet)	100 g
Lean beef (for goulash)	120 g	Eggs	7 pcs + 2 egg whites
Hake (fillet)	≈ 520 g		

Dairy products and plant-based alternatives

Kefir (2.8–3.2% fat)	≈ 1.4 L	Grated cheese (for baking)	30 g
Skyr yogurt	300 g	Parmesan	15 g
Greek yogurt	120 g	Fresh cheese	50 g
Sour milk	100 mL	Butter	30 g
Sour cream (20%)	80 g	Almond milk	900 mL
Cream cheese	20 g	Lactose-free milk / drink (or rice drink)	≈ 330 mL
Fresh/young cheese	≈ 180 g		

Fruit

Bananas	6–7 pcs	Raisins	20 g
Apples	≈ 700 g (4–5 pcs)	Lemon	1 pc
Strawberries	150 g	Dried apricots	100 g
Blueberries (fresh or frozen)	210 g		

Vegetables

Pumpkin	≈ 700 g	Fennel	70 g
Carrot	≈ 900 g	Celery root	70 g
Zucchini	≈ 460 g	Red cabbage	20 g
Potato	≈ 800 g	Arugula	10 g
Sweet potato	150 g	Baby spinach	30 g
Cauliflower	300 g	Fresh parsley	1 bunch (≈ 20 g)
Swiss chard	80 g	Fresh ginger	≈ 10 g + ginger tea (bags)
Radishes	20 g		

Grains, pasta, and flakes

Spelt semolina (or buckwheat semolina)	30 g	Oat flakes	140 g
Regular (wheat) semolina	165 g	Rice crackers	4 pcs
Corn grits (polenta)	≈ 50 g	Almonds	30 g
White rice	40 g	Hazelnuts	30 g
Buckwheat	100 g	Chia seeds	30 g
Pearl barley	100 g	Protein powder (hemp)	20 g
Red lentils	40 g	Spelt flour	≈ 100 g
Millet (whole grain)	80 g	Baking powder	1 packet
Millet flakes	30 g	Gluten-free tortilla	1 pc
Millet flakes	40 g	Smoked tofu	50 g
Quinoa	50 g	White bread	60 g
Pasta (macaroni)	75 g	Dates	15 g

Other items and spices

Olive oil	≈ 150 mL	Turmeric	pinch
Honey	40 g	Curry and cumin	to taste
Maple syrup	45 g	Vanilla extract	1 teaspoon
Tarragon mustard	4 g	Mild ground paprika	to taste
Lemon juice	1 teaspoon	Salt and pepper	to taste
Cinnamon	small bottle		

PSYCHOLOGICAL ASPECTS OF SPORT IN INFLAMMATORY BOWEL DISEASE

The impact of IBD on psychological well-being and quality of life

Living with IBD involves much more than physical symptoms. Chronic disease is a persistent source of stress and burden. It carries a range of emotional, social, and practical challenges that reach deeply into everyday life. Research shows that patients more often experience elevated levels of stress and anxiety, lowered mood, and impaired quality of life and relationship with their own body.

Elevated stress levels

Psychological and physical processes are intertwined and influence one another. Prolonged stress can adversely affect the immune system and inflammatory processes, while the disease itself increases sensitivity to stress – creating a vicious circle in which the disease intensifies stress, and stress makes it harder to cope with the disease. Alongside treatment and disease control, it is therefore essential to take care of psychological well-being and develop effective stress-coping strategies.

Increased anxiety

Characteristic features include fear of the sudden onset of symptoms, heightened focus on bodily sensations, and a sense of insecurity and loss of control. Many patients become preoccupied with questions such as: "What if I won't have access to a bathroom?" or "What if the disease flares up again?" Over time, a person may become intensely focused on monitoring their bodily symptoms, anxiously watching their own body and fearing their own physical sensations. They tend to become passive and avoid physical activity out of fear of unpleasant sensations.

This state of constant vigilance further increases tension and distress, and reinforces the perception of the body as a source of discomfort and danger.

Low mood

The disease brings certain limitations and losses, which naturally affects mood, sense of fulfillment, and achievement. Sometimes it becomes necessary to adjust plans, give up certain activities, or invest considerable energy in caring for one's own health. A person may have less energy and withdraw from activities that were once important to them and brought them satisfaction. It is entirely natural for patients to experience moments of sadness, discouragement, dissatisfaction, or helplessness. Symptoms of physical fatigue are often intertwined with psychological aspects – a decline in motivation, lack of drive, and a sense of failure.

Disturbed body image

We are both physical and psychological beings – we experience the body as the foundation of our own identity, through which we perceive reality, express ourselves, and establish relationships with others and the world. For many patients, the body becomes associated with pain, discomfort, uncertainty, and loss of control. Some feel as though their body has "betrayed" them, or that they can no longer fully trust it – they feel uncomfortable in their own skin. They experience the body solely as a source of threat: anxiously monitoring sensations or "disconnecting" from it, suppressing even positive bodily experiences in order to protect themselves from pain and discomfort. That is why it is important to gradually give yourself the opportunity for new, pleasant, and stimulating bodily experiences – and in doing so, restore a sense of safety, vitality, trust, and connection with your own body.

Reduced quality of life

Due to symptoms, fatigue, worry, or fear of unpleasant situations, people with IBD sometimes withdraw from social, sporting, and recreational activities. Such reduced participation can lead to isolation, diminished life satisfaction, and the loss of activities that once brought a sense of achievement and connection. Withdrawal deprives us of new opportunities, contacts, deepening relationships, as well as learning and sharing that would enrich our lives.

Physical activity can help with all of these challenges

Regular physical activity helps reduce stress and distress, improves mood, strengthens the sense of vitality and trust in one's own body, and enhances quality of life. This is precisely why physical activity represents an important part of comprehensive healthcare for people living with IBD.

○ Ako ste ikada osjetili povišenu razinu stresa i napetosti, anksioznost ili strah od iznenadne pojave simptoma, pad raspoloženja i osjećaja ispunjenosti, nezadovoljstvo ili otuđenost od vlastitog tijela, osjećaj da vam je opala kvaliteta života — znajte da su to faze kroz koje prolazi većina oboljelih od Crohnove bolesti i ulceroznog kolitisa. Razumijevanje te činjenice može vam pomoći da se, umjesto osjećaja krivnje, usredotočite na strategije koje vam mogu pomoći da prebrodite krize.

Movement – concrete psychological benefits

Research consistently shows that moderate physical activity in people with IBD produces measurable and significant psychological effects. Physically more active individuals show fewer symptoms of anxiety and depression, as well as a better quality of life. This is not an abstract benefit – it involves concrete mechanisms taking place in the body and brain.

Reduction of stress and anxiety

Improvement of mood and quality of life

A recent meta-analysis of 21 studies showed that structured physical activity significantly improves mood and quality of life in people with IBD. Even a daily walk of about twenty minutes acts as a natural antidepressant. During physical activity, the secretion of endorphins, serotonin, and other neurochemicals associated with feelings of pleasure and psychological well-being increases – and the effects come not only from increased energy and vitality, but also from a sense of control and achievement, contact with others, and greater engagement with life.

Restoring trust in the body

Emotional regulation

Physical movement, especially rhythmic and mindful movement (dance, yoga, walking), activates the parasympathetic nervous system – the one that tells us we are safe. This is especially important for people with IBD, who often live in a chronic state of vigilance and alertness due to the unpredictability of their symptoms.

Help with fatigue

Fatigue is one of the most common and burdensome symptoms of IBD, and it is complex because, alongside the physical component, it also has a psychological one. Psychological

fatigue is a state of mental and emotional exhaustion caused by prolonged stress, anxiety, and emotional strain. This overload of the nervous system and the long-term activation of survival mechanisms significantly depletes cognitive and emotional resources. Patients may feel a lack of energy even for everyday activities, difficulty concentrating, slower thinking, "brain fog," and a reduced capacity for planning and decision-making. Although it may seem at first glance that physical activity would further increase exhaustion, research shows the opposite - even moderate activity reduces the feeling of fatigue in the long run and increases energy and functioning.

Sleep quality

People with IBD often have disrupted sleep, and poor sleep increases fatigue, anxiety, and "brain fog." Regular physical activity is one of the most researched and effective ways to improve sleep quality - without medication and without side effects.

Social connection

Group activities - a yoga class, group walking, an online dance community - provide a sense of belonging that is therapeutic in itself. Social isolation, common in chronic diseases, directly worsens depression and anxiety.

Sense of control

When the disease is so unpredictable, engaging in physical activity becomes one of the few spaces in which a person decides for themselves - what they will do, how intensely, and for how long. This is psychologically extremely important: a sense of one's own agency reduces anxiety and increases motivation.

 **It is important to emphasize** Benefits come even from very small amounts of activity. Fifteen to twenty minutes of light movement three times a week may be enough to notice changes in mood and stress levels. The starting point is not what matters - what matters is that there is one.

With chronic disease, it is easy to fall into a pattern:

Symptom → fear → avoidance → less activity → decline in self-confidence, mood, and energy → even more avoidance and fear

Physical activity can help break this cycle:

Small activity → positive experience → more trust, self-confidence, and energy, better sleep → more activity → greater quality of life

With small initial activities, we can break negative loops and set positive ones in motion.

Specific effects of individual activities

Yoga – returning to the body without pressure

Yoga is perhaps the most natural introduction to physical activity for people with IBD, because it starts from a place that is the exact opposite of competition. There is no measure of success, no expectations from others, no deadlines. There is only the body on the mat and the breath guiding the movement.

The psychological mechanisms of yoga are particularly relevant for IBD. Deep diaphragmatic breathing, central to yoga, directly activates the vagus nerve and calms the sympathetic nervous system. This is not a metaphor – it is physiology. For a person living in a chronic state of anxiety and physiological alertness, yoga literally changes the body's stress chemistry.

Dance and rhythm – emotional processing through movement

Dance is one of the most personal forms of bodily expression – and that is precisely why it has particular psychological power. Unlike many sports, it requires no equipment, no special space, and no partner. It can take place in the living room, in half a minute of free time, at exactly the level of intensity the body can handle that day.

Research in the field of dance movement therapy shows that dance directly influences emotional regulation, reduces symptoms of depression and anxiety, and helps integrate bodily experience in people with chronic diseases. The psychological mechanism is partly cognitive (focusing on movement interrupts rumination), partly physiological (rhythm and music activate the dopaminergic system), and partly social (dancing with others builds a sense of community).

Sound and rhythm have privileged access to our nervous system. Percussive rhythm, such as drumming, tapping and knocking, is one of the oldest methods of regulating emotional states in human communities. Modern neuroscience confirms what various cultures have known for millennia: rhythm synchronises brain activity, reduces stress and creates a sense of community.

For people with IBD, working with percussion or the rhythm of the body is particularly valuable. It provides an outlet for frustration and pent-up energy without physical exertion that could be excessive. Rhythm is predictable – and predictability soothes the anxiety that lives within an unpredictable disease. And, perhaps most importantly: the body becomes a source of sound, not just a source of symptoms.

△ Remember Recreational sports do not have to mean going to the gym for an intense workout. Small, everyday movements are also enough, for example: Stretching in bed right after waking up Standing on one leg while brushing your teeth Gently rocking in a chair while watching a show or reading A few deep breaths with a long exhale, at any point during the day A short five-minute walk, without a destination and without counting steps Dancing or tapping along to a song while making breakfast

Psychological barriers and how to overcome them

Fear of the disease worsening

After more difficult phases of the disease, we may start to experience our own body as vulnerable and fragile, and subconsciously develop the belief that exertion is dangerous. Research, however, shows that moderate physical activity is safe for most people with IBD and is associated with a better quality of life. Consult your doctor to clarify any concerns and find out what level of activity is appropriate for your current condition.

Lack of information and clear recommendations

The lack of clear guidelines on what activities to do, how much, and how, gives rise to a sense of apprehension and uncertainty. Being informed reduces distress and provides a sense of security and control.

Fatigue

Fatigue is a significant barrier for most patients, and understandably so – it is an inherent symptom of IBD. However, fatigue is sometimes largely psychological in nature, resulting from mental and emotional exhaustion caused by the stress and demands of the disease. Although it may seem like we have no energy for activities, a short walk or gentle exercise can sometimes actually energize and refresh us. Regular, moderate exercise increases energy in the long term and helps with chronic fatigue. Try a light activity and observe how your body feels – whether a sense of alertness and the desire to continue returns.

Deeply ingrained habits

We are largely creatures of habit, with established patterns of daily functioning – including when it comes to our level of physical activity. Most people, not just those who are ill, want to be more active, but find it hard to establish regular exercise habits – simply because it's effortful. Our brain doesn't like the effort that building new habits requires. Established habits run almost automatically, below the cognitive and emotional radar, while establishing new habits means overcoming the inertia of the old ones.

It helps to attach new habits to existing ones: I go to work every day, so now I'll go by bike or on foot. I have a friend who goes to the gym – I'll join him right after class. Sometimes small self-commitment tricks work too: even when we "don't feel like it," we pay in advance for a month of Zumba – and then we "have to" go so our investment doesn't go to waste.

Set external reminders: let an alarm mark your workout time. Reduce the number of obstacles – keep your sneakers and workout clothes packed and ready. Arrange with a friend to play a game of table tennis at a set weekly time, and once the habit takes hold, Tuesday from 6 to 8 pm

becomes yours. Mark your workout days on a calendar – we tend to want to keep a streak going, and we don't like it when the "streak" is broken.

Movement in everyday life – small movements, big impact

Not all days are the same. Sometimes illness, fatigue, or "brain fog" is so intense that the very thought of "exercising" feels out of reach. For days like these, there are micro-activities – forms of movement so small that they're almost impossible to refuse, yet real enough to send the body and brain a signal: "I'm still here. I'm still moving."

Stretching in bed: right after waking, while still lying down, stretch your arms and legs. Hold for ten seconds. Done.

Standing on one leg while brushing your teeth: trains balance and proprioception.

Gently rocking in a chair while watching a show or reading.

Five deep breaths with emphasis on a long exhale – at any point during the day.

A short five-minute walk – no destination, no counting steps, just moving.

Dancing or tapping along to one song while making breakfast.

Each of these micro-steps matters not only physiologically but also psychologically: it preserves the narrative that you are a person who moves, even on hard days. And the narrative we carry about ourselves strongly influences what we'll decide to do tomorrow.

Shame and body insecurity

The feeling of being exposed or clumsy is understandable, but instead of focusing on appearance or hitting "records," focus on the benefits of the process itself: reduced stress, better mood, more energy, enjoyable time spent with others, and simply enjoying the activity.

Self-motivation

We are more motivated when:

we have clear values and know why movement is worthwhile for our psycho-physical health and life as a whole – movement indirectly helps in the recovery process, disease control, and relapse prevention

we feel autonomy – that we choose and act out of free will

we feel competence and achievement – developing skills and a sense of mastery intrinsically motivate us

we recognize and celebrate small wins – feel free to share them, since sharing reinforces and creates commitment

we plan and carry out meaningful activities – this restores a sense of control and self-confidence

we nurture optimism – we look at the situation realistically, staying calm and focused on what we can control

we choose rhythmic activities – neuroscience shows that repetitive, rhythmic activities stimulate reward centers and create a sense of pleasure

we develop a growth mindset – it's not about talent but about practice and persistence; grit and a growth mindset contribute to commitment to goals

we see positive examples set by others – "If they can do it, so can I"

we nurture small joys – research shows that happiness comes from a series of small positive experiences; find enjoyment in physical activity every day – with a favorite song, a walk with a friend, or tossing a frisbee while hanging out.

"I never have motivation to exercise – I just go exercise, and then the motivation shows up."

Movement is not a privilege of healthy bodies. It is the right of every body – in the form that suits it, at the pace it can afford, in a way that respects it.

For a person with IBD, engaging in movement is not proof that the disease isn't serious. It is proof that the person is more than their disease – that there is a part of them that decides, moves, and finds joy, even within the space bounded by symptoms.

There is no perfect activity. What matters is finding a form of movement that suits you: yoga that lasts five minutes, two minutes of free dancing in the living room, tapping a rhythm on your knees, a short walk to the corner. These are all forms of the same message – the body is here, the body is working, the body deserves attention and care.

The best activity is the one you can fit into your life regularly and sustainably. Every small step builds the narrative – and over time, that narrative becomes the identity of a person who takes care of themselves.

GENERAL RECOMMENDATIONS AND PRECAUTIONS BEFORE ENGAGING IN SPORTS

Before starting any of these activities, consult your gastroenterologist or treating physician, especially if the disease is currently active or if you have had surgery (bowel resection, stoma, hernia surgery, etc.).

Ask specifically about your limitations and about movements you should avoid. Some of the activities presented can also be used in their most basic form for recovery after prolonged hospital treatment and muscle atrophy, but only with mandatory consultation with a physician, to clarify any potential limitations.

This guide is an introduction to some of the sports activities you can incorporate into your routine.

Physical activity can help you better listen to your body, and if you're just starting out, it's important to remember that you can adapt any form of training to yourself and your current needs.

The goal is for engaging in sports to become a new, healthy life habit that helps you feel better, not an additional burden.

For more serious engagement in any of the presented forms of recreation, contact a qualified instructor² and inform them about your health condition.

- Wear comfortable clothing and footwear suited to the activity you are doing.
- Avoid a heavy meal right before training – a light meal 1–3 hours beforehand is the best choice.
- Make sure you stay well hydrated before, during, and after activity.
- If you're planning an activity away from home, check restroom access in advance³.
- During a flare-up (active phase) of the disease, reduce the intensity of activity or temporarily postpone/stop it.
- People with anemia, pronounced fatigue, or malnutrition should be especially careful and consult a doctor before starting.
- Drink fluids regularly, especially if you have frequent diarrhea or a stoma.
- Listen to your body: if you feel fatigue, dizziness, pain, or a worsening of symptoms, reduce the intensity or take a break.

² Annex – Competitive sport with IBD, at the end of this guide, for anyone thinking of moving beyond recreational activity into regular competition.

³ Contacts, at the end of this guide: the patient associations of Serbia, Croatia and Italy, the international umbrella body, and emergency numbers.

INTRODUCING THE SPORTS

The pages that follow present the ten sports selected within the BOOST project⁴, and then a few further activities for anyone who wants something different. Each sport is described in the same way: a short description, the benefits for people with IBD, how to prepare, and how to start, step by step.

Alongside each sport you will also find a traffic light. It is there so that you can decide for yourself, before a session, which version of the activity suits you today. The decision is yours, and you don't have to justify it to anyone.

Your traffic light: green, orange, red

Symptoms in IBD change from week to week, sometimes within a single day. A plan that only has two settings, training or not training, will not fit that. The traffic light gives you three.

Before an activity, ask yourself the questions below and choose the colour that fits. The colour is not a judgement of how well you are doing; it is information about today. It can change during a session, and you may switch to a lower level at any point.

Level	Ask yourself	What it means for today
GREEN – a good period	Are my symptoms mild or absent? Did I sleep and eat reasonably well? Do I feel rested rather than exhausted? Have I had no new symptoms in the past few days?	You can do the full version of the activity, and work on building up duration and strength over time.
ORANGE – symptoms present	Do I have abdominal pain, more frequent bowel movements, or noticeable fatigue? Am I tired in a way that rest does not fix? Am I unsure how far I am from a toilet?	Do the lighter version: shorter, slower, closer to home, with more breaks. Movement still helps. The aim today is to maintain, not to progress.
RED – a difficult phase or right after surgery	Am I in an active flare? Have I recently had surgery, or do I have a new stoma? Am I dizzy, feverish, or is there blood in my stool? Has my doctor told me to avoid loading the abdomen?	No effort that loads the abdominal wall. Breathing, gentle mobility and relaxation are the activity today. If a symptom is new, contact your doctor before you exercise at all.

⁴Annex – Competitive sport with IBD, at the end of this guide, for anyone thinking of moving beyond recreational activity into regular competition.

💡 How to use the traffic light

- Ask yourself once, before you start, always in the same words: green, orange or red today?
- Answer honestly. It is a self-report, not a negotiation, and nobody is checking.
- The level can change in the middle of a session. If you start green and drop to orange, simply switch.
- Red is never zero. At red there is always a version such as breathing, gentle mobility, being present with the group.

If you train with an instructor, they may ask you the same question at the start of the session. The colour is the whole answer; you do not owe anyone an explanation beyond it.

Checklist for your appointment with the doctor

Physical activity is rarely the first thing discussed in a consultation, and "may I exercise?" usually gets a general answer. The questions below are the ones that produce answers you can actually use. Take this list with you.

What to ask	Why it matters
Are there movements or positions I should avoid at the moment, in particular loading the abdomen, deep twisting, impact and jumping?	This is the single question that shapes which exercises are suitable for you, in any sport.
Is there a limit on the intensity or duration of aerobic activity I should respect right now?	It converts a general "take it easy" into something you can plan a session around.
Is there anything in my current condition or therapy such as anaemia, bone density, a recent operation, or a stoma that my instructor should take into account?	It tells you what to pass on to an instructor, without having to share your diagnosis.
If I have a restriction, how long does it last, and when should we review it?	Restrictions after surgery are time-limited. Without a review date they tend to become permanent by default.
What are the signs that I should stop and contact you?	It gives you a clear line between "an ordinary hard day" and "this needs a doctor".
Would a written note help me, one sentence on what to avoid and for how long?	A sentence in writing is easier to hand to an instructor than a conversation remembered under stress.

⚠ **Kako razumjeti ono što vam liječnik kaže**

- **"Fit for recreational physical activity"** – clearance for moderate, non-competitive activity. It does not authorise maximal effort or competition. Ask specifically about loading the abdomen and about impact.
- **"Avoid strenuous exercise"** – avoid high-intensity, maximal and exhausting effort. It does not mean avoid movement. Aerobic activity at a pace where you can still talk remains available to you.
- **"No abdominal loading for X weeks"** – a time-limited restriction after surgery. Leave out all direct abdominal work, planks, heavy lifting and hanging, and note the date when it should be reviewed.
- **"In remission, no restrictions"** – you are clinically stable. Fatigue may still be present, so keep using the traffic light.

If you receive a discharge letter you cannot interpret, do not guess. Ask your doctor for one sentence answering: what should I avoid, and for how long?

The ten BOOST sports

SPORT CLIMBING

Brief description:

Sport climbing is practised on an indoor wall or on a prepared outdoor route, with a rope and a partner who belays you. You move upward by solving a sequence of holds, at your own pace, with a rest whenever you need one.

In Italy, Serbia and Croatia the activity is organised through climbing clubs and centres, and in the BOOST programme it is delivered in an inclusive, adapted and wellness form, without high-impact competition.

Benefits for people with IBD:

- Builds awareness of your body in an unusual position in space, which improves balance and control.
- Develops problem-solving through movement – each route is a puzzle you solve at your own speed.
- Strengthens grip and the endurance strength of the trunk.
- Restores trust in the body through small, visible successes: a route you have completed is unambiguous proof that your body can.
- Teaches you to manage tension in a protected setting, where the rope holds you and a partner is watching.
- Belaying, reading the route and supporting a partner are full participation, so you can take part on days with less energy.

Preparation before starting:

- Consult your gastroenterologist first, especially if you have reduced bone density, anaemia, a stoma or a recent operation.
- Choose a club with a bathroom close to the wall and check the arrangements before your first session.
- Tell the instructor which movements you need to avoid – you do not need to explain the diagnosis.
- Wear comfortable clothing without a waistband that presses on the abdomen or a stoma.
- Eat a light meal one to three hours beforehand, and bring water.

How to start – step by step:

Step 1 – Try a beginner session Book an introductory session with an instructor. You will climb on a top rope, which means the rope is above you the whole time.

- Ask for easy vertical or slabby routes with large holds.

Step 2 – Learn the basics Work on footwork, hip position and reading the route before you think about difficulty.

- Learn belaying – it is a skill in its own right and a full role in the group.

Step 3 – Build up gradually Increase the number of routes rather than their difficulty, and take long rests between them.

- Keep a log of completed routes rather than of attempts.

Step 4 – Adapt to the day On lower-energy days, climb fewer routes, stay on the top rope, and avoid overhangs and holding your breath.

- If you have reduced bone density, prefer top-rope climbing to bouldering, because falls are the main risk.

Step 5 – Listen to your body If you feel dizziness, pain or symptoms worsening, come down and rest. Ground-level work still counts as a session.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full sessions on easy to moderate routes, increasing the number of routes over time. Technique work on footwork, hip positioning and reading the route. Low bouldering with mats, avoiding dynamic moves and drop landings.
ORANGE – symptoms present	Top rope only, on vertical or slabby routes with large holds, at an effort where you can still talk. Fewer routes, long rests. Belaying, reading the route and supporting a partner count as full participation. Avoid overhangs, lock-offs and holding your breath.
RED – a difficult phase or right after surgery	No climbing on the wall, no hanging and no loading of the abdominal wall. Take part from the ground: balance work on low beams or floor tape, hand and forearm mobility, knot practice, belay theory, breathing and relaxation with the group.

NORDIC WALKING

Brief description:

Nordic walking is walking with poles, which engages the arms and the upper body and takes some of the load off the legs. It is done outdoors, on trails or in a park, at a pace you choose.

In Italy, Serbia and Croatia it is organised through athletics and mountaineering associations, in a recreational and wellness form rather than a competitive one.

Benefits for people with IBD:

- Develops the alternating coordination of arms and legs.
- Improves aerobic endurance at an intensity you can keep up while talking.
- Improves posture.
- The poles unload the joints of the legs, which is useful if you have joint pain or reduced bone density.
- It is done outdoors, in daylight and often in company, which helps mood and sleep.
- The intensity is easy to reduce: you can stop pushing with the arms and simply walk.

Preparation before starting:

- Consult your doctor before you start, particularly if you have anaemia, joint pain or reduced bone density.
- Get poles of the right length and comfortable footwear for the surface you will walk on.
- Plan the route in advance: a loop is better than a straight line out and back, because you are never far from the start.

- Check in advance where the toilets, cafés or shelters are along the route.
- Take water, and on longer routes an electrolyte drink, especially if you have frequent diarrhoea or a stoma.

How to start – step by step:

Step 1 – Learn the technique Take one or two sessions with an instructor to learn how to plant and push the pole.

- Start on flat ground with an even surface.

Step 2 – Start short Walk 15–20 minutes at a natural pace, twice a week, with pauses whenever you want them.

- Choose a pace at which you can speak in full sentences.

Step 3 – Extend the duration before the intensity Lengthen the walk before you make it faster or hillier.

- Add the active push of the poles only when the duration feels comfortable.

Step 4 – Go into nature Move to trails of medium length once flat routes are easy.

- Keep planning loops, and always have a shorter alternative.

Step 5 – Adapt to the day On low-energy days keep the poles for support and stability only, walk on the flat, and cut the session short without hesitation.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full technique with an active push of the pole and the hand opening behind the pelvis. Medium to long routes in nature.
ORANGE – symptoms present	Walk at a natural pace and reduce the push of the arms so you do not tire early. Flat routes with even ground only, short sessions with frequent easy-walking pauses.
RED – a difficult phase or right after surgery	Use the poles only as support and for stability, without pushing off. Very short sessions on flat, sheltered ground, with attention to posture and mobility.

HIKING

Brief description:

Walking on (mostly) natural terrain of varying slope and length – from easy walks to more demanding mountain hikes. It can also be practiced in urban settings. This is an activity that easily adapts to your body's current condition.

Benefits for people with IBD:

- Low intensity, with the ability to adjust the pace and length of the hike
- Reduces stress and promotes the release of endorphins (the "happiness hormone"), which may positively affect inflammatory processes
- Improves cardiovascular fitness without excessive strain on the joints
- Spending time in nature is associated with better mental health and sleep quality
- A flexible activity – it can be done alone, with friends, or in an organized group

Preparation before starting:

- Choosing appropriate footwear and clothing (layered clothing, waterproof shoes)
- Planning a route with known access to restrooms or natural shelters
- Preparing a sufficient amount of water and easily digestible food/snacks

How to get started – step by step:

- Step 1 (Week 1–2): Start with longer, flat walks in local parks (30–45 minutes) to build basic endurance.
- 🧠 *Design suggestion: illustrate the step-by-step process as a trail the person is walking along, with each section of the trail illustrated to match the difficulty of that level.*
- Step 2 (Week 3–4): Move on to maintained fitness trails with gentle uphill and downhill sections. Test walking with a light backpack.
- Step 3 (Week 5+): Join a local hiking club and take part in their outings. Choose hikes marked as "easy" and be sure to inform the guide about your health condition.
- Note: Avoid longer hikes during an active flare-up. Always have a backup route with the option of turning back early.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full tours on varied terrain with moderate ascent, medium-long duration, carrying a light personal pack. Progression by duration first, then by ascent.
ORANGE – symptoms present	Flat or gently undulating local routes of 30–45 minutes on regular ground, organised as short loops. Frequent stops presented as group stops. No pack weight beyond water; turnaround point agreed before departure.
RED – a difficult phase or right after surgery	Very short level walk on a paved or protected path close to facilities, or accompanying the group to a viewpoint reached by vehicle. No ascent, no pack, no distance from a toilet beyond what the participant has agreed.

SILAT SUFFIAN BELA DIRI (MARTIAL ART)

Brief description:

Silat Suffian Bela Diri is a traditional martial art practised for self-defence and for the quality of movement, not for sports combat. The work is on structure, balance and fluid movement rather than on strikes and strength.

In Italy, Serbia and Croatia it is delivered through clubs and associations dedicated to traditional martial arts, in a non-competitive form.

Benefits for people with IBD:

- Teaches control of your centre of gravity through fluid movement.
- Improves eye-hand coordination.
- Teaches you to use the skeleton efficiently, so that less muscular effort is needed for the same movement.
- Practice is possible seated or with support, so there is a version for almost any day.
- The pace is set by precision rather than by speed, which suits days with less energy.
- Working in pairs brings contact with other people without competitive pressure.

Preparation before starting:

- Talk to your doctor first, especially if you have a stoma, a recent abdominal operation, or perianal disease.
- Choose a club that works in the traditional, non-competitive form.
- Tell the instructor which movements to avoid, and – if you have a stoma – tell your training partner yourself that contact with the abdomen is excluded.
- Wear clothing that does not press on the abdomen.
- Avoid a heavy meal in the two to three hours before training.

How to start – step by step:

Step 1 – Start with footwork Learn the geometry of movement: how you step, turn and change level.

- There is no contact at this stage.

Step 2 – Add work in pairs Practise deflections and basic joint levers with a partner, slowly and cooperatively.

- Tell your partner what you need before you begin.

Step 3 – Work on structure, not force Aim for precision and correct alignment rather than speed.

- Never hold your breath during effort.

Step 4 – Adapt to the day On lower-energy days work at very low speed, without any impact or sudden acceleration.

- Avoid deep bending and sudden twisting of the spine.

Step 5 – Keep the seated version In a difficult phase, work on body axis and grounding while seated, with the arms only.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Learning the geometry of movement (footwork) and changes of level at a normal pace. Cooperative work in pairs on deflections and basic joint levers.
ORANGE – symptoms present	Work on the mechanics of the movement only, very slowly, with no impact and no sudden acceleration. Avoid techniques that require deep bending or sudden twisting of the spine.
RED – a difficult phase or right after surgery	Work only on the axis of the body and the sense of grounding; this can be done seated or with firm support. Deflections are broken down and practised with the arms only. No throws, no levers and no physical pressure, either applied or received.

FITNESS AND MOBILITY (FUNCTIONAL TRAINING)

Brief description:

Perhaps one of the most common recreational activities: people most often associate it with the gym, but, as with yoga, there is plenty of online content and it can be practiced entirely at home. Every session should focus on building strength and mobility so that we have a functional body – hence the name itself: functional training. The exercises can be adapted to fully match individual needs and abilities.

Benefits for people with IBD:

- Builds and preserves muscle mass, which is lost during flare-ups, long hospital stays, and corticosteroid therapy
- Improves everyday functioning: carrying loads, climbing stairs, getting up from the floor
- Mobility work protects the joints and reduces stiffness in the back, hips, and shoulders
- In its most basic form, with a doctor's approval, it can help with recovery after a long hospital stay and muscle atrophy
- It is fully adjustable: intensity, volume, and duration can be adapted to the energy you have on a given day
- It can be practiced at home, without going to the gym, and initially with almost no equipment

- Improves mood and sleep quality

Preparation before starting:

- If you have had abdominal surgery, ask your doctor about restrictions on lifting weights and loading the abdominal wall.
- Equipment: apart from comfortable clothing and a yoga mat, nothing else is needed at the start
- Later on, you can acquire: a set of adjustable-weight dumbbells, *a kettlebell*, and resistance bands of varying intensity, as well as sports sneakers for the gym if you wish to train outside the home
- Choose the time of day when your energy is best and train then

How to get started – step by step:

- The simplest approach is to start with two full-body sessions per week. Later on, you can move to four sessions: two focused on the upper body and two on the lower body. Below is a description of the exercises you will most often encounter in these sessions – you may have heard of some of them:
- **Warm-up (5 minutes):** simple mobility exercises:
 - joint circles (ankles, knees, hips, shoulders, wrists, neck)
 - *cat-cow* borrowed from yoga
 - *jumping jacks*
 - band pass-overs above the head with arms extended and spread apart, or, if you don't have a band, circular arm movements from the shoulders with arms extended, gradually increasing and decreasing the size of the circle
- **Main part (about 20 minutes, full body):**
 - Below, the exercises are organized by body part, with suggested breathing and number of repetitions. For one full-body session, choose one exercise from each group and do two sets, with 30-45 seconds of rest between sets, so the session lasts about 20 minutes. Exercises within the same group are different variations that engage slightly different muscles, so rotate them from session to session to keep your training varied. As you progress, add a third set and shorten the rest periods. Perform all movements slowly and in a controlled manner.

Group	Exercise	Breathing	Repetitions
Legs and glutes	Squat	Inhale as you lower, exhale as you rise.	10-12, two sets
	Glute bridge / hip raise	Exhale as you lift your hips, inhale as you lower them.	12, two sets
	Clamshell	Exhale as you lift your knee, inhale as you lower it.	12 per side, two sets on each side
Calf and ankle	Calf raise	Exhale as you rise, inhale as you lower.	15, two sets
	Ankle flexion and extension (with circles)	Breathe calmly and evenly.	10 flexions and extensions, then 5 circles in each direction, with each foot
Arms	Biceps curl	Exhale as you lift, inhale as you lower.	12, two sets
	Hammer curl	Exhale as you lift, inhale as you lower.	12, two sets
	Overhead triceps extension	Inhale as you lower behind your head, exhale as you extend your arms.	12, two sets
	Wall push-up	Inhale as you lean toward the wall, exhale as you push away.	10, two sets
Core / abs	Classic crunch	Exhale as you rise, inhale as you lower.	12, two sets
	Dead bug	Exhale as you extend your arm and leg, inhale as you return.	8-10 per side, two sets
	Russian twist	Exhale with each rotation, breathe evenly.	10 per side (20 total), two sets
	Knee plank	Breathe evenly, and never hold your breath.	Hold for 20-30 seconds, twice

Example of one full-body session: squat → calf raise → glute bridge → biceps curl → overhead triceps extension → classic crunch → knee plank. Two sets of each exercise, with short rests, fills about 20 minutes. Next time, swap in different variations (e.g., hammer curl, wall push-up, dead bug, clamshell) to engage other muscles as well.

Stretching (5-10 minutes):

Stretch the muscle groups you worked, without bouncing, holding each stretch calmly while breathing. Hold each stretch for 20-30 seconds, breathing deeply.

Front thigh stretch (*quadriceps stretch*)

Back of thigh stretch (*hamstring stretch*)

Glute stretch (*figure-four / glute stretch*)

Arm and chest stretch (*chest **& biceps stretch*)

Triceps stretch (*overhead triceps stretch*)

Abdominal and back stretch (*cobra / child's pose*)

Progression: first extend the duration (the main part gradually grows to 30–40 minutes), then increase the number of repetitions and sets, and only after that add load. Leave at least one day of rest between sessions that work the same muscle groups.

Note: This plan is just a suggestion of what one session might look like, and should be used as inspiration. During an active flare-up, reduce training to mobility work and gentle stretching. After abdominal surgery, avoid crunches, planks, and lifting heavier weights until your doctor approves it – start with breathing exercises and gentle mobility work. Mild muscle soreness (muscle inflammation) is normal; joint pain is not. All of the exercises listed above can also be performed at the gym, with additional weight/resistance loading, with prior approval from your gastroenterologist.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full-body sessions two to four times per week: 5 minutes mobility warm-up, about 20–40 minutes main part with two to three sets per exercise, 5–10 minutes stretching. Load progressed by approximately 5–10% per week, never to muscular failure.
ORANGE – symptoms present	Session reduced to mobility, bodyweight movement and gentle stretching. Elimination of exercises that significantly increase intra-abdominal pressure, of maximal effort in apnea and of the Valsalva manoeuvre. One set instead of two; longer rests; the session may be halved without being considered incomplete.
RED – a difficult phase or right after surgery	Breathing and gentle passive mobility only, seated or supine. No abdominal exercises, no planks, no lifting. Circling of ankles, wrists, shoulders and neck; supported hip and thoracic mobility; long-exhale breathing.

LAUGHTER YOGA

Brief description:

Laughter yoga combines simple laughter exercises with yogic breathing and relaxation, in a group. Laughter is started deliberately, as an exercise, and usually becomes genuine through contact with the group.

In Italy, Serbia and Croatia it is delivered as a wellness and stress-management activity through associations and local clubs.

Benefits for people with IBD:

- Reduces stress levels through the body's own hormonal regulation.
- Increases the oxygenation of the body through deep yogic breathing.
- Brings a group together and helps with the isolation that a chronic illness can bring.
- Requires no fitness, no equipment and no previous experience.
- Almost all of it can be done seated.
- A broad smile counts exactly as much as loud laughter, so there is a version for every day.

Preparation before starting:

- If you have had recent abdominal surgery or an abdominal hernia, ask your doctor first, because sustained belly laughter is a real contraction of the abdominal muscles.
- Wear comfortable clothing with nothing pressing on the abdomen.
- Find a group that runs the session as a wellness activity.
- Sit near the door if that makes you more comfortable.
- Have water within reach.

How to start – step by step:

Step 1 – Attend one session as an observer You may take part as much or as little as you want. Watching and breathing along is participation.

Step 2 – Join the breathing part Start with the breathing exercises and the light clapping, which cost almost nothing in energy.

Step 3 – Add the laughter exercises Take them at the intensity that suits you. If belly laughter is uncomfortable, use the amplified smile instead.

Step 4 – Stay for the relaxation The guided relaxation at the end is where most of the effect on stress happens. Do not skip it.

Step 5 – Adapt to the day On difficult days do the seated version, avoid holding your breath, and never force the abdominal muscles.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	The full session: rhythmic warm-up with clapping, laughter exercises and the guided relaxation at the end.
ORANGE – symptoms present	A modified session with less moving around the room. In the breathing exercises, do not hold your breath for long, so that pressure in the abdomen does not rise. If belly laughter is uncomfortable, an amplified smile does the same work.
RED – a difficult phase or right after surgery	Relaxation only, entirely seated or in whatever position is most comfortable. No forced contraction of the abdomen. Keep the breathing and the light clapping.

YOGA

Brief description:

Yoga is a practice that combines body postures, breathing techniques, and relaxation. There are various types of yoga, ranging from gentle and restorative to physically very demanding, and every posture can be modified, so the practice can be adapted to any level, from complete beginner to advanced practitioner.

To start doing yoga, you don't need any prior experience with sports. To begin, you can practice yoga for just 10–15 minutes a day, in the morning or before bed, as a way to relax.

Many cities have a large number of yoga studios, so if this type of physical activity interests you, look into the studio closest to you!

Benefits for people with IBD:

- Proven to improve both physical condition and mental health
- Working on proper breathing techniques calms the nervous system, which is important both for mental health and for the body's metabolic and digestive functions
- Strengthens the body, increases flexibility, balance, and body awareness
- Intensity is easily adjusted: a gentle, restorative practice is possible even on days when you have little energy
- In its most basic form, with a doctor's approval, it can help restore muscle mass after prolonged hospital treatment and muscle atrophy
- Requires little space, little equipment, and just 10–15 minutes a day
- Accessible to everyone: a large number of excellent instructors are available online, while group classes in a studio provide additional motivation and expert guidance

Preparation before starting:

- If you have had abdominal surgery (resection, stoma), certain postures, strong engagement of the abdominal wall, and deeper twists may need to be modified or avoided during the recovery and rehabilitation phase.
- Clothing: any comfortable clothing you can move easily in; you practice barefoot, on a yoga mat
- Props (straps and blocks) are useful later on, to help perform more advanced postures, but are not needed at the start
- A quiet space where no one will disturb you.
- If you're joining a studio, tell the instructor about your condition. Instructors generally know how to adapt exercises to different needs and abilities, so you should never hesitate to ask for advice
- **Breathing: the foundation of the practice**
- Most yoga sessions begin with breathing exercises, since throughout the practice we synchronize breath and movement. If you're a beginner, it's best to start with alternate nostril breathing or deep abdominal breathing.

How to start – step by step:

Step 1 (first weeks):

- Start with about 3 minutes of breathing exercises, then do some gentle mobility work:
- slow circular head movements to one side and then the other
- stretching the left and right side of the body while seated (one hand rests on the floor, while the other stretches overhead)
- Then move on to a sequence consisting of the following poses:
- **Cat-Cow** (*cat-cow*)
- **Downward-Facing Dog** (*downward-facing dog*)
- For beginners, keep your knees bent, and you may lift your heels off the mat.
- **Low Lunge** (*low lunge*)
- **Knee plank (knee plank)**
- **Return to downward-facing dog** (*downward-facing dog*)
- Repeat the sequence, this time leading with the other leg. Hold each position for 2 inhales and 2 exhales, and repeat the whole sequence 3 times on each side.
- We finish the practice by first moving into **child's pose**, and then lying down on our back.

Step 2:

- Keep the same structure and increase the intensity:
- downward-facing dog (*downward-facing dog*) with straightened knees

- from low lunge (*low lunge*) move into **warrior 1**
- from plank, lower down to the floor and lift your chest into **sphinx pose**, resting on your forearms

Step 3 (next level):

- Full *downward-facing dog*, full *plank*, transition from warrior 1 into **warrior 2**. From here the practice can develop in different directions.
- Throughout the practice: protect your joints and muscles, keep your abdominal wall slightly engaged, feel your connection with the mat, and always stay aware of where your body is.
- *Note: This sequence is just a suggestion of what one yoga session might look like, and should be used as inspiration. During an active phase of the disease, avoid intense styles (power yoga, hot yoga) and strong abdominal exercises, and stick to breathing, gentle stretching, and restorative poses. After abdominal surgery, do not put strain on the abdominal wall until your doctor approves it.*

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Complete practice: breathing, standing sequences, balance postures, gentle backbends and twists, closing relaxation. Progressive strengthening of the abdominal wall is permitted when there is no surgical restriction.
ORANGE – symptoms present	Restorative practice only. Elimination of intense styles (power, hot), strong abdominal work, deep twists and inversions. Long holds with props, seated and supine mobility, extended exhale breathing. Duration reduced; the mat is never left before the closing relaxation.
RED – a difficult phase or right after surgery	Entirely supported practice: supine or seated, with bolsters, blocks and a wall. Breathing with a long, unforced exhale; passive mobility of the extremities; guided body scan. No abdominal engagement, no breath retention, no prone positions pressing on the abdomen.

BIODANZA

Brief description:

Biodanza is a system of affective-motor integration based on movement to music and practiced in a group. It combines rhythmic walking, dances of activation and coordination, exercises of expression, and dances of deep relaxation. There are no steps to learn and no performance to give.

In Italy, Serbia and Croatia it is delivered through associations and certified schools, as an activity for wellbeing rather than a competitive discipline.

Benefits for people with IBD:

- Connects movement and emotion, and supports the body's own self-regulation.
- Reduces chronic stress by working on the autonomic nervous system.
- Releases muscular tension in the abdomen and pelvis, where tension often accumulates in IBD.
- Improves quality of life through the sense of closeness in the group.
- The final relaxation dances shift the body into its calming, parasympathetic state.
- It can be done seated, and taking part with the gaze alone is a full form of participation.

Preparation before starting:

- Ask your doctor about limitations, especially after abdominal surgery.
- Find a group led by a trained facilitator.
- Wear comfortable clothing you can move in freely, with nothing tight around the abdomen.
- Physical contact in Biodanza is always optional – you may decline any contact without giving a reason.
- Choose a place in the room near the door if that helps you feel at ease.

How to start – step by step:

Step 1 – Come to one session You are not expected to know anything. There are no steps to memorise.

Step 2 – Start with the walking Rhythmic walks at the beginning are the easiest part, which promotes motor integration.

Step 3 – Add expression Join the dances of coordination and creative expression at whatever amplitude suits you.

Step 4 – Stay for the closing dances The deep relaxation dances at the end are where the calming and harmonising effect is strongest.

Step 5 – Adapt to the day On lower-energy days move slowly and fluidly. Avoid any activities that could suddenly increase your heart rate and, if necessary, participate while seated with maximum self-regulation.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	The full session: rhythmic walks, dances of activation and coordination, exercises of creative expression, and the deep relaxation dances at the end.
ORANGE – symptoms present	Leave out anything requiring running, jumping or a sharp rise in heart rate. Move slowly and fluidly, with attention on awareness of the body, muscular relaxation and light contact with others.
RED – a difficult phase or right after surgery	Self-care and gentle emotional stimulation only, entirely seated. No sudden movements, no twisting of the trunk and no bending at the abdomen. Fluid movement of the hands, arms and shoulders, breathing with the music, and connection with the group through the gaze.

TABLE TENNIS

Brief description:

Table tennis is a dynamic sport played individually or in pairs, based on reaction speed, coordination of movement, and concentration. Unlike many other sports, the intensity of play can easily be adjusted to an individual's physical readiness, which makes it suitable for people with Crohn's disease or ulcerative colitis, including those who have a stoma. It can be played recreationally or competitively, indoors, all year round.

Benefits for people with IBD:

- Moderate physical activity that does not place excessive strain on the body or significant pressure on the abdominal wall.
- Improves fitness and endurance without prolonged, exhausting exertion.
- Reduces stress and anxiety, which can negatively affect the course of the disease.
- Encourages socializing and social interaction, which positively affects mental health.
- Allows a return to an active lifestyle with a low risk of injury or physical contact with other players (which is especially important for people with a stoma).
- Develops coordination, balance, and concentration.
- Can help maintain a healthy body weight and an overall sense of vitality.
- The intensity of play can easily be adapted to periods of remission or active disease.

How to get started – step by step:

Step 1 – Learn the basics

- Get a racket and a few balls.
- Learn the basic racket grip and basic strokes.

Step 2 – Easy recreational start

- Play for 15–20 minutes, once or twice a week.
- Focus on technique, not on the score.

Step 3 – Gradually increase your activity

- Extend the duration of play to 30–60 minutes.
- Include light warm-up exercises before playing and stretching afterward.

Step 4 – Join a group or club

- Playing with other people increases motivation and encourages regular exercise.
- Most clubs offer recreational sessions suitable for all ages.

Step 5 – Listen to your body

- If you feel fatigue, dizziness, pain, or a worsening of disease symptoms, reduce the intensity or take a break.

Special notes:

- Table tennis does not require prolonged running or strong impact on the joints, which makes it suitable for people who, in addition to IBD, also experience joint pain.
- The most important thing is that the activity be enjoyable, regular, and adapted to the current health condition. Exercise should be stopped if pain, pronounced fatigue, or other symptoms occur.

Message for people living with IBD

- Table tennis can be an excellent choice for maintaining physical activity, socializing, and reducing stress. By adapting the intensity to their own abilities, most people with IBD can safely and successfully incorporate it into their daily lives. It is a sport that people with a stoma can also enjoy.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full recreational play, singles or doubles, 30–60 minutes with light warm-up and closing stretch. Introduction of tactical and technical progression; club or league play for the social component.
ORANGE – symptoms present	Short rallies with cooperative rather than competitive intent, 15–20 minutes, focusing on technique rather than winning. Doubles preferred, so the load is shared. Reduce lateral lunging and rapid direction changes.
RED – a difficult phase or right after surgery	Seated or standing-supported play against a partner feeding predictable balls, or multiball at a table edge with no lateral movement. Very short duration. Alternatively, participation through scoring, coaching or ball feeding.

SWIMMING

Brief description:

A water-based activity that engages the whole body with minimal strain on the joints. Suitable for all ages and fitness levels.

Benefits for people with IBD:

- Complete relief of joint load thanks to the buoyancy of water
- Engages a large number of muscle groups and improves cardiovascular fitness
- Water has a calming, relaxing effect and can reduce stress levels
- Suitable for people with IBD-associated arthritis, as it does not put strain on the joints
- Flexible – can be adapted to any level of intensity and duration

Preparation before starting:

- Checking your skin before entering the pool if you are taking certain medications (photosensitivity, irritation)
- Choosing a pool with accessible, clean toilets nearby
- A light meal before swimming to avoid discomfort in the water.

How to start – step by step:

- Start with short pool sessions (15–20 minutes) at an easy pace
- Combine swimming with rest at the pool's edge as needed
- Gradually introduce different swimming strokes for even muscle engagement
- Increase session duration by 5 minutes every 1–2 weeks

- Monitor your skin's and gut's reaction to chlorinated water
- Incorporate swimming 2–3 times a week as a regular routine
- Note: Chlorinated water can cause skin or gut irritation in some people – pay attention to your body's reactions and, if necessary, consider pools with alternative purification systems.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Sessions of two to three times per week, with varied strokes for balanced muscle engagement, session length increased by about five minutes every one to two weeks.
ORANGE – symptoms present	Ten to fifteen minutes at an easy pace, breaststroke or backstroke, with rest at the pool edge whenever needed. Lane choice closest to the exit. No sets, no timing, no distance targets.
RED – a difficult phase or right after surgery	No swimming. Optionally, and only with medical clearance, walking in a shallow warm pool for a few minutes with a handrail available. Otherwise dry-land breathing and mobility.

Further activities

The activities below are not part of the ten sports selected within the BOOST project, but they are presented in the same way, for anyone who wants to try something different.

RHYTHM AND PERCUSSION

Brief description:

Rhythm and percussion is group music-making on drums and other percussion instruments, or with body percussion. No musical training is needed: the group holds a shared pulse and everyone contributes to it.

In Italy, Serbia and Croatia it is delivered through cultural associations and wellness programmes.

Benefits for people with IBD:

- Synchronises your own rhythm with that of the group.
- Regulates the autonomic nervous system through a predictable, repeated stimulus.
- Releases tension and frustration without significant physical load.
- Gives the body back to you as a source of expression rather than of symptoms.
- Builds connection with other people without words.
- It works fully in a seated position, so a difficult day does not exclude you.

Preparation before starting:

- No medical clearance beyond the general recommendations is usually needed, but ask your doctor if you have recently had abdominal surgery.
- Find a group that works in a recreational, non-performance format.
- Sit where you can leave the room easily if you need to.
- Bring water; a longer session in a warm room is thirsty work.
- If loud sound is difficult for you, ask about the volume and about a quieter instrument.

How to start – step by step:

Step 1 – Start by listening

In your first session, follow the pulse of the group before you play anything.

Step 2 – Play a simple pattern

Keep one simple, repeated pattern. Precision matters more than complexity.

Step 3 – Join the group patterns

Add call-and-response and simple layered rhythms as you get comfortable.

Step 4 – Add movement if you want it

Standing play and stepping to the pulse are options, not requirements.

Step 5 – Adapt to the day

On difficult days play seated, at low volume, with light hand percussion on your thigh or a small drum on a stand. Holding the pulse for the group is one of the most important roles there is.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	The full session: standing rhythmic warm-up with body percussion, playing together with gradually layered rhythms, call-and-response improvisation, and closing group synchronisation. Standing play and stepping to the pulse are included.
ORANGE – symptoms present	Play seated throughout, at reduced volume and for a shorter time. Slower tempos and simple, predictable patterns. Leave out large arm movements and stepping sequences. Take frequent pauses; you can drop to listening and rejoin at any point.
RED – a difficult phase or right after surgery	Minimal-effort playing, entirely seated and supported. Light hand percussion on the thigh, a table, or a small frame drum on a stand. No sustained lifting of the arms, no twisting of the trunk, no forced breathing. Focus on listening, following the group pulse, and letting the breath slow to the rhythm.

POLE DANCE (POLE SPORT)

Brief description:

A somewhat more exotic activity that trains the whole body and is becoming increasingly popular. There are several types of pole dance, and here we present pole sport, its athletic, fitness-oriented form. Although one might think you already need to be trained and strong to try pole, that's not true: you start from zero, from the floor, and several sessions will pass before you even begin climbing the pole.

Benefits for people with IBD:

- Trains the whole body, with particular emphasis on strengthening the abdominal muscles and upper body
- Strengthens grip, joint stability, and small stabilizing muscles
- Excellent anti-stress therapy: during training you can focus solely on what you're doing with your body, making this activity a genuine escape from everyday life stress
- It also trains spatial awareness – for perhaps the first time, you'll have to think about exactly where your body is in space and in relation to the pole
- No two sessions are alike, ideal for anyone who loves a challenge and finds the gym boring
- Progress is visible and motivating, and studios have a strong sense of community

Preparation before starting:

- Training puts strain on the abdominal wall, so if you've had surgery, ask your doctor about limitations regarding grip, hanging, and abdominal exercises.
- Starting attire: a sports T-shirt, leggings, or shorts
- As training progresses, less and less clothing will be needed, down to sports shorts for men, or sports shorts and a sports top for women. Skin contact with the pole is what keeps you on it
- We train barefoot
- All training equipment is available at the center where training takes place, so apart from personal sportswear, nothing else needs to be brought to a session
- Groups are small, and exercises are tailored to the individual.

How to get started – step by step:

- The pace depends on the studio's program, and here is what the first sessions look like:
- Every session starts with a warm-up that combines the principles of yoga, Pilates, and fitness. At the beginning, a lot of time is devoted to strengthening the abdominal muscles and grip, as this is the foundation for everything that follows.
- The first sessions involve floor work: basic movements and floor transitions, proper posture and correct grips, as well as learning certain spinning styles around the pole

- Climbing comes later, once your grip and abdominal wall are ready. No one hangs upside down in the first few weeks – inverted elements come only after several months of building strength, and only once the instructor judges you are ready
- At home you can support your progress with conditioning exercises: exercises to strengthen the joints, improve grip strength, and strengthen the abdominal muscles
- *Note: The downside is that it can only be practiced in a studio, because of the pole. During an active flare-up, skip the session or take part only in the warm-up and conditioning portion. After abdominal surgery, there should be no climbing, hanging, or intensive abdominal work until your surgeon approves it.*

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Complete session: warm-up combining yoga, pilates and fitness principles; floor work; spins; climbing, once grip and abdominal wall are ready. Inverted elements only after several months of building strength, and only when the instructor judges the participant ready.
ORANGE – symptoms present	Warm-up and conditioning section only, at reduced load. Floor work and low-height spins with both feet available to the floor. No climbing, no hanging, no inverted work, no maximal grip holds. Sessions shortened, with long rests.
RED – a difficult phase or right after surgery	No pole contact. Participation through seated and supported mobility of wrists, shoulders and thoracic spine, and through observation and technical study. No grip loading, no hanging, no abdominal work of any kind.

RUNNING AND TRAIL RUNNING

Brief description:

Running on asphalt, park paths, or natural (trail) terrain, with the option to adjust intensity – from easy jogging to interval training.

Benefits for people with IBD:

- Moderate aerobic training is associated with a reduction in systemic inflammation
- Reduces stress and promotes the release of endorphins, which may positively affect inflammatory processes
- Strengthens the immune system and improves overall endurance
- Contributes to a better mood and reduced anxiety
- Requires no special equipment – easy to fit into your daily routine

Preparation before starting:

- Choosing quality footwear suited to the terrain (road vs. trail)

How to get started – step by step:

- Step 1 (Week 1-2): Use a combination of walking and running – e.g., 1 minute of easy running, 2 minutes of walking. 20 minutes total.
- Step 2 (Week 3-4): Gradually increase your running time and decrease your walking time (e.g., 3 minutes of running, 1 minute of walking), extending the total time to 30 minutes.
- Step 3 (Week 5+): Try to run continuously for 20-30 minutes at an easy pace (one at which you can still hold a conversation). Only after that, introduce trail (dirt/forest) paths, which are softer and gentler on the joints.
- Note: Intense running during an active flare-up is not recommended. Listen to your body – pain or cramping is a signal to slow down or take a break.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Continuous running of 20–30 minutes at a conversational pace on familiar routes, progressing to softer trail surfaces. Intervals only after continuous endurance is established, and never to maximal effort.
ORANGE – symptoms present	Run-walk method only – for example one minute of light jogging and two minutes of walking, for a total of about 20 minutes. Flat, familiar loop close to a toilet. No intervals, no pace targets, no distance targets.
RED – a difficult phase or right after surgery	No running. Walking at a comfortable pace for a few minutes, or complete rest with mobility and breathing work. Impact loading is excluded entirely.

CYCLING / STATIONARY BIKE

Brief description:

Aerobic activity outdoors or indoors, with easily adjustable intensity and resistance. Riding outdoors provides an experience of the surroundings and enjoyment of the outdoors, while a stationary bike allows complete control over training conditions.

Benefits for people with IBD:

- Low impact on the joints with a strong cardiovascular effect
- The indoor version allows training without worrying about toilet access
- Moderate cycling stimulates circulation and may help reduce general inflammation in the body
- Duration and intensity can be easily adjusted according to how you feel each day
- Suitable for all fitness levels, with the option of training in a group or alone

Preparation before starting:

- Adjusting the seat and handlebars to avoid pressure on the abdomen
- Checking whether your current condition allows for prolonged sitting in a bent-forward position

How to start – step by step:

- Start with 10–15 minutes of easy riding on a stationary bike
- Gradually increase duration before increasing resistance/intensity
- Introduce outdoor riding on flat, familiar routes
- Monitor how your abdomen responds to the bent-forward position and adjust the bike setup as needed
- Add shorter, higher-power intervals only once you have built basic endurance
- Keep a ride log (duration, terrain, symptoms)
- Note: Longer rides in a bent-forward position can increase abdominal pressure – take breaks and adjust your body position if you feel discomfort.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Outdoor rides on flat, familiar routes with toilet access planned; duration extended before resistance. Short higher-power intervals only once basic endurance is established. Ride log kept (duration, terrain, symptoms).
ORANGE – symptoms present	Stationary bike only, in an upright position with the handlebars raised to reduce forward lean and abdominal compression. Low resistance, 10–15 minutes, with the option to stop at any point.
RED – a difficult phase or right after surgery	No cycling. The seated position, saddle pressure and forward lean are all excluded. Replace with supine or seated passive leg mobility and breathing work.

KARATE (Martial Art)

Brief description:

A martial art and one of the fundamental sports that combines technique, discipline, and mental and physical preparation, with clearly defined levels of progression adaptable to individual abilities.

Benefits for people with IBD:

- Structured training strengthens muscles and coordination and develops breathing technique
- Meditative elements (kime – focused power and concentration at the moment a technique is executed, breath control) contribute to stress reduction
- The gradual belt-ranking system allows the pace to be adapted to individual ability
- Builds self-confidence and a sense of control over the body, which is especially important with chronic disease
- Group training provides community support and a sense of belonging

Preparation before starting:

- Talking to the instructor about your health condition before enrolling
- Checking with your doctor whether contact training is allowed or whether it is better to start with non-contact technique
- Wearing comfortable clothing/a gi that does not press on the abdomen

How to start – step by step:

- Enroll in a beginner course focused on basic technique (kihon)
- Inform the instructor about your IBD diagnosis so intensity can be adjusted

- Focus on kata (forms performed against an imaginary opponent), which combine technique and endurance
- Monitor how your body responds to more intense parts of training
- With approval from your doctor and instructor, gradually introduce contact exercises
- Note: During an active phase of the disease, avoid contact training and intense strikes to the abdominal area. Always inform the instructor of your current health condition.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	Full beginner programme: kihon (basic technique) and kata, with endurance and conditioning segments. Controlled contact exercises introduced gradually, and only with the agreement of both the gastroenterologist and the instructor.
ORANGE – symptoms present	Kihon and kata only, at reduced speed and with shallower stances. No contact of any kind, no kumite, no impact. Session shortened, with the technical rather than the conditioning content retained.
RED – a difficult phase or right after surgery	Seated or standing-supported technical study: hand technique, breathing, kime without contraction of the abdominal wall. No stances, no impact, no partner work.

BOWLING

Brief description:

A recreational sport played indoors that combines physical activity with socializing and a relaxed atmosphere.

Benefits for people with IBD:

- Low physical intensity with moderate activation of the arm, leg, and core muscles
- Short bursts of activity with breaks between throws are well suited for people with fluctuating energy levels
- A strong social component – reduces the sense of isolation that is common with chronic disease
- Played in a controlled, indoor environment with easily accessible toilets
- Adaptable to all ages and fitness levels

Preparation before starting:

- Checking restroom availability at the venue before booking a time slot
- Appropriate footwear (special bowling shoes are usually rented on-site)
- A lighter meal/snack before playing if the game is planned after a meal

- A brief warm-up of the arms and shoulders before starting

How to get started – step by step:

- Book a shorter session (1 game) to see how your body responds
- Learn the basic throwing technique from an instructor or a more experienced player
- Take breaks between games if needed
- Gradually incorporate playing with a group or in a league for the social component
- Monitor your energy level during play and shorten the session if needed
- Include bowling as a regular recreational activity once a week
- Note: Although it is low-intensity, repeated throwing can strain the shoulders and back – pay attention to technique and don't overdo the number of games in a single day.

Your traffic light for this sport:

Level	What this sport looks like today
GREEN – a good period	One or two full games, with a warm-up of arms and shoulders beforehand. Progression to group or league play for the social component. Regular weekly session.
ORANGE – symptoms present	One short game with the lightest comfortable ball, seated between throws, with the option to end early without finishing the frame. Technique rather than score.
RED – a difficult phase or right after surgery	Participation without throwing: keeping score, coaching, or simply being present with the group. A small number of very light throws only if the participant wishes.

ANNEX – COMPETITIVE SPORT WITH IBD

Recreational activity and competitive sport place very different physical and mental demands on the body. This annex is for anyone who wants to move beyond the recreational level into regular competition, and to do so safely.

Before making a decision

- A competitive approach makes sense only once the disease has been stable (in remission) for an extended period (usually at least 3–6 months, with the gastroenterologist's approval).
- Talk openly with your medical team about your ambitions and the planned scope of training/competition.
- Realistically assess your current energy level, sleep quality, and stress tolerance – competitive sport adds an additional physiological and psychological burden.

Building a medical and professional team

- Gastroenterologist – regular monitoring of inflammation markers, adjusting therapy according to load
- Sports physician or exercise physiologist – assessment of cardiovascular and metabolic capacity
- Nutritionist specialized in sports nutrition and IBD – planning calorie and micronutrient intake (iron, B12, vitamin D) and nutrition strategies before/during/after competition
- Coach/sports professional who understands the specifics of chronic disease when planning training load

Training planning (periodization)

- Training should be planned in cycles with clearly defined periods of load and recovery (periodization), rather than a linear increase in intensity
- Introduce "deload" weeks regularly, even when feeling well, to prevent cumulative overload of the immune system
- Monitor objective indicators (heart rate variability, sleep quality, subjective perception of exertion) to detect overtraining early

Nutrition and supplementation

- Energy needs in competitors with IBD may be higher, but also more sensitive to meal composition – an individualized nutrition plan is essential
- Introduce any supplement (iron, protein, electrolytes, etc.) only after consulting a physician/nutritionist, as some may affect symptoms or interact with therapy
- Nutrition strategies for long competitions (e.g., ultra trail) need to be tested in advance during training, never for the first time during competition

Travel and competitions away from home

- Plan for the availability of therapy (sufficient medication supplies, storage at the appropriate temperature) and access to healthcare at the destination
- Carry medical documentation and, if applicable, a therapy certificate for customs/airline checks
- If competing under a system subject to anti-doping rules, check in advance whether the therapy requires a Therapeutic Use Exemption (TUE) from the relevant anti-doping organization

Recognizing warning signs

- Prolonged fatigue that does not resolve with rest, changes in bowel frequency, blood in the stool, unexplained weight loss, or a rise in body temperature are signals to immediately pause training/competition and consult a physician
- Keep a simple diary of symptoms and training load to detect patterns early

Mental preparation

- Competitive pressure and fear of a "flare-up" before an important competition are common. Talking to a sports psychologist can help build realistic expectations.
- Define a "Plan B" in advance, in case symptoms prevent participation. This reduces anxiety and allows you to focus on preparation.

Key message

Competitive sport with IBD is possible, and many athletes do it successfully, but it requires a team of specialists, patience, and a willingness to adjust plans depending on the state of the disease. The goal is not to "train despite the disease" but to train in harmony with it.

CONTACTS

The organisations below are the patient associations of the three BOOST partner countries, together with the European umbrella body. Contact details change; before publishing or distributing this guide, verify each entry against the organisation's current website.

Serbia

Organisation	UKUKS – Udruženje obolelih od Kronove bolesti i ulceroznog kolitisa Srbije "Ljiljan Đaković" (Association of Patients with Crohn's Disease and Ulcerative Colitis of Serbia)
Website	https://ukuks.org
Role in BOOST	National IBD patient association; project partner and route to participants across Serbia.
Notes	Operates UKUKS corners in IBD centres, patient panels with physicians, a membership card scheme and a patient forum.

Organisation	PK Tara – mountaineering club, Bajina Bašta (BOOST project partner)
Role in BOOST	Sports partner delivering outdoor and adapted activities.
Related body	PSS – Planinarski savez Srbije (Mountaineering Association of Serbia), the national federation under which hiking, Nordic walking and sport climbing are organised.

Croatia

Organisation	HUCUK – Hrvatsko udruženje za Crohnovu bolest i ulcerozni kolitis (Croatian Crohn's and Ulcerative Colitis Association)
Address	Ulica kralja Zvonimira 20, 10000 Zagreb, Croatia
Telephone	+385 1 3764 059 · mobile +385 95 8165 447
E-mail	mail@hucuk.hr
Website	https://hucuk.hr
Notes	Founded in 2000; volunteer-based. Runs a sports section and art workshops, publishes patient brochures, and operates the "Ne mogu čekati!" ("I can't wait!") card scheme for urgent toilet access. Regional branches include RUCUK in Rijeka.

Italy

Organisation	IL CASSETTO DEI SOGNI ASD-ETS (CDS) – BOOST project partner
Address	Via Mario Vellani Marchi n. 80 – 41124 Modena (MO) – Italy
Telephone	+39 348 8731476
E-mail	info@cassettodeisogni.it
Website	https://cassettodeisogni.it
Role in BOOST	Italian sports and wellness partner. Founded in 2014, CDS uses sport, physical activity, and holistic movement disciplines as primary tools for social inclusion, health, and well-being. It offers adapted outdoor, indoor, and expressive activities – including martial arts (SSBD), Nordic walking, functional training, Laughter Yoga, Biodanza, and rhythmic-music workshops – tailored to meet the specific physical, psychological, and social needs of vulnerable groups and people living with chronic conditions. .
Related body	UISP (Unione Italiana SPort per tutti) – Italian Sport for All Association

Organisation	A.M.I.C.I. Italia ETS – Associazione Nazionale per le Malattie Infiammatorie Croniche dell'Intestino
Address	Via G. Bruschetti 16, 20125 Milano, Italy
Telephone	+39 02 8341 3346
Website	https://amiciitalia.eu
Notes	National association with regional sections across Italy, supported by committees of specialist physicians. Maintains a directory of specialised IBD centres, and campaigns for public toilet access for people with IBD.

International level

Organisation	IFCCA – International Federation of Crohn's and Ulcerative Colitis Associations
Website	https://www.ifcca-ibd.org/
Notes	Umbrella body of national IBD patient associations. Maintains the directory of member associations – the fastest way to find the national association of a country a participant is travelling to.

Emergency numbers

Country	Emergency	Ambulance
Serbia	112	194
Croatia	112	194
Italy	112	118
European Union (all states)	112	112

Local contacts: to be completed by each delivering organisation

Before this guide is handed to instructors in a specific club or region, complete and attach the following:

- Name and telephone of the local coordinator of the programme
- Name and telephone of the nearest IBD centre or gastroenterology department
- Address and access details of each venue used, including toilet arrangements
- The local emergency number and the address to give an ambulance for each venue
- The name of the association contact person for participant referrals

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