

Role of Physical Activity in Inflammatory Bowel Disease (IBD) Patients

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DESCRIPTION

Young adults with childhood-onset Inflammatory Bowel Disease (IBD) are more likely to have altered body composition characteristics, such as low Bone Mineral Density (BMD), low skeletal muscle mass, and a high body fat percentage. In healthy people, physical activity plays a critical role in the development and maintenance of various body composition features. However, just a little amount of research has been done on the link between physical activity, BMD, and body composition components in individuals with IBD. Despite the presence of chronic inflammation, physical activity had favourable benefits on BMD, leg lean mass, and fat mass, in paediatric and adult patients with IBD.

Inflammatory Bowel Disease (IBD) might make it difficult to engage in physical activity. Only around a fifth of adult IBD patients reported getting a lot of exercise on a regular basis, while a third said they were sedentary. A physical activity prevalence survey found that around two-fifths of healthy people who were extensively involved in physical exercise had a greater level of activity. Furthermore, children with IBD appear to be less physically active than healthy peers of the same age. This is concerning because it is assumed that regular physical activity in childhood is the foundation for developing health-promoting exercise habits in early adulthood.

Dual X-ray Absorptiometry (DXA) is commonly used to determine BMD and body composition (lean mass and fat mass). Skeletal muscle mass is calculated by multiplying the appendicular lean mass (the weight of lean mass in both arms and legs) by the participant's height squared, yielding the skeletal muscle index (SMI, kg/m²). The percentage fat of total body weight is used to estimate representative fat mass in individuals with IBD (fat percent).

Surprisingly, the connections between an individual's level of physical activity and their SMI and Fat percent results were stronger than those for BMD. This reduced link between physical activity and BMD could be due to the fact that the majority of the bone mineralization process occurs during adolescence. However, there was no link between spine BMD and physical activity, presumably because training has different effects on BMD in the axial and appendicular skeletons. Young adults with childhood-onset IBD have the potential to enhance their BMD beyond the traditional predicted time for peak bone mass, implying a longer time window for bone mass optimization in early adulthood. Physical activity in early adulthood is crucial for guys to achieve optimal bone mass.

The proportion of young adult IBD patients who exercised on a regular basis was lower than that of controls, at around 60% vs. 70%. After accounting for the difference in gender distribution between the diagnostic and control groups, the disparity remained. A slightly older cohort of people with IBD (mean age 42 years; range 19-87 years) engaged in even less physical activity, with only one-third of patients being physically active. These lines of evidence, taken together, suggest that younger adults with IBD move more than older patients, a trend that has also been observed in healthy people.

Patients who engage in physical activity in late adolescence are more likely to continue doing so in early adulthood. Physical activity during childhood has also been linked to enhanced bone mineralization and structure in maturity. To summarize, pediatricians have a window of opportunity to encourage patients to participate in sports during their teens in order to build a longer engagement with physical activity. In early adulthood, a diagnosis of childhood-onset IBD is related with lower BMD and body composition. Despite this, patients who exercise frequently have the ability to achieve BMD and body composition values comparable to healthy controls.

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