

Publication

Favorable impact of long-term exercise on disease symptoms in pediatric patients with inflammatory bowel disease

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Evidence is growing that both short- and long-term physical exercise have the potential to positively impact on the physiological system related to inflammatory indices, though, such patterns are unknown for pediatric patients with Inflammatory Bowel Disease (IBD). The aim of the present intervention study was to investigate the influence of a single bout and chronic moderate-intensity exercise on IBD-related inflammatory indices and exercise capacity among pediatric individuals with IBD and healthy controls.; Twenty-one pediatric patients with IBD, split into a "remission-group" (IBD-RE; n = 14) and an "active disease group" (IBD-AD; n = 7), were compared to 23 age matched healthy controls (HC). All participants completed a single bout of exercise at baseline and an 8-week exercise intervention. Before and after the single bout of exercise IBD-related inflammatory indices (erythrocyte sedimentation rate (ESR), albumin, C-reactive protein (CRP), cortisol, hemoglobin, hematocrit, thrombocytes and leukocytes) were assessed.; At baseline, after a single bout of exercise, inflammation (albumin, hemoglobin, erythrocytes, hematocrit and leukocytes) increased in all three groups IBD-AD, IBD-RE and HC. CRP and thrombocytes were only elevated in IBD-AD and IBD-RE, compared to HC. After a longer-term exercise intervention, ESR, CRP and thrombocytes significantly decreased in all groups. The longer-term exercise intervention did not decrease acute immunopathologic responses after a single bout of exercise, compared to baseline.; Whereas a single bout of exercise increases albumin, erythrocytes and leukocytes, longer-term moderate-intensity exercise reduced inflammatory markers in pediatric patients with IBD. Children and teenagers with IBD should be encouraged to engage in regular moderate-intensity exercise activities, as such activities may contribute to inflammation suppression and improved disease management.

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