

Diet and gut microbiome interactions in irritable bowel syndrome

Julien Tap
Stine Störsrud
Boris Le Nevé
Aurélie Cotillard
Nicolas Pons
Joël Doré
Lena Öhman
Hans Törnblom
Muriel Derrien
Magnus Simren

Video Byte

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Abstract

Irritable bowel syndrome (IBS) is one of the most common gastrointestinal disorders worldwide. IBS can have profound effects on quality of life, and treatment options are limited. While several studies have found associations between dietary habits and the gut microbiome in healthy individuals, studies in patients with IBS are limited. To better understand this relationship in IBS, researchers studied food diary data and sequenced gut microbiota in 149 individuals with IBS and 52 healthy controls. They found that individuals with IBS tended to show a higher intake of poorer quality food during main meals. Covariation between gut microbiota and diet corresponded with IBS symptom severity, exhaled gas, glycan metabolism, and meat/plant ratio, and IBS severity was associated with altered gut microbiota hydrogen production, with changes seen in enzymes involved in carbohydrate metabolism. While longitudinal studies are needed with larger patient cohorts, these results link IBS symptom severity to altered gut microbiota hydrogen production and carbohydrate metabolism, paving the way for the development of novel gene profiling techniques to optimize precision nutrition strategies for patients with IBS.