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Abstract
Title: The probiotic bacterial strain *Lactobacillus plantarum* 299v and its effect on abdominal pain in IBS – a systematic review

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Background: In Sweden an estimate of 12.5% of the population suffers from irritable bowel syndrome (IBS). IBS is characterized by abdominal pain or discomfort with either diarrhoea, constipation or a combination. The aetiology of IBS is unknown and there is no curative treatment present. Although, there are evidence-based interventions for symptom relief. Previous studies have shown that supplementation with probiotics may have a symptom alleviating effect, yet it remains unknown which probiotic culture is most effective. In this systematic review a single bacterial strain’s ability to ease the severity of abdominal pain in patients with IBS was studied.

Objective: To investigate whether there is enough scientific evidence to recommend *Lactobacillus plantarum* 299v in order to relieve abdominal pain in patients with IBS.

Search strategy: Systematic searches were made in PubMed and Scopus. Keywords used were "irritable bowel syndrome", "IBS", "lactobacillus plantarum" and "DSM". In Scopus the keywords “randomized controlled trial”, “RCT”, “human” and “articles” were added.

Selection criteria: RCTs, adults >18 years old, participants diagnosed with IBS who were otherwise healthy, studies where the severity of abdominal pain was measured and with an intervention during minimum four weeks.

Data collection and analysis: Four original articles were analysed. They were quality examined by an SBU template for quality review of randomized controlled trials. The total evidence was later weighed together with a Gothenburg University template constructed to help grading randomized controlled trials.

Main results: There is currently low (++) evidence that lactobacillus plantarum 299v relieves the severity of abdominal pain in patients with IBS.

Conclusions: The evidence for recommending the probiotic in order to relieve the severity of abdominal pain in patients with IBS is low. More, larger and longer studies in the research area are required.

Keywords: Irritable bowel syndrome, IBS, probiotics, lactobacillus plantarum 299v, abdominal pain