

Narrative Review Evaluating Systematic Reviews Assessing the Effect of Probiotic Interventions on Depressive Symptoms

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Abstract : Depression is one of the most prevalent mental illnesses and is often associated with various other medical disorders. In this review, we aim to evaluate existing systematic reviews that investigate the use of probiotics as a treatment for depressive symptoms. Five online databases were searched for relevant studies up to December 2017. Systematic reviews that included randomized controlled trials assessing the efficacy of probiotics in the treatment of depressive symptoms were included. Seven systematic reviews met the inclusion criteria. Three of these reviews conducted meta-analyses, out of which, two found probiotics to significantly improve depressive symptoms in the sample population. Two meta-analyses conducted subgroup analysis based on health status, and both found probiotics to significantly decrease depressive symptoms in patients with major depressive disorder, but only one review found it to significantly decrease in healthy patients. Another subgroup analysis was conducted based on age, and found probiotics to produce significant effects on subjects under the age of 60, but close to no effect on patients over the age of 65. Out of the four reviews that conducted qualitative analysis, three reviews concluded that probiotics have the potential to be used as a treatment. Due to the differences in clinical trials, a definitive effect of probiotics on depressive symptoms cannot be concluded. Nonetheless, probiotics seem to produce a significant therapeutic effect for subjects with pre-existing depressive symptoms. Further studies are warranted for definitive conclusions.

Keywords : depression, gut-brain axis, gut microbiota, probiotic, psychobiotic

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