

New data demonstrates potential role of probiotic supplementation in adults with major depressive disorder

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A new study published 14 June in *JAMA Psychiatry* has found evidence that supplementing the diet with a probiotic blend containing 14 strains of bacteria can help individuals who are being treated for major depressive disorder with antidepressants. The research, led by the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) at King's College London and in partnership with ADM Protexin, part of ADM, demonstrated the potential of probiotic supplementation to support improvements in multiple depression and anxiety scores over an eight-week period.

The [pilot study](#) is one of the first trials in a Western population to show both good tolerability of probiotics and positive effects on mental health in adults with [depression](#) currently taking antidepressants. According to the researchers leading the study, the results provide a strong basis to further investigate the benefits of this probiotic food supplement for supporting mood and mental health in a larger trial.

There is increasing evidence that the [gut microbiota](#) (the vast and dynamic community of microorganisms inhabiting the gut) has a role to play in the regulation of mood. The study was a double-blind, randomized placebo-controlled study, designed as an initial exploration of whether improving gut health through the use of probiotics—supplements containing beneficial bacteria—could act as a new pathway for supporting mood and mental health.

In this pilot trial, 49 adults with diagnosed [major depressive disorder](#) and with an incomplete response to prescription antidepressants were provided with a widely available, proprietary 14 strain blend probiotic supplement or an identical placebo (24 receiving the probiotic). Over the course of eight weeks, both groups demonstrated improvement in their symptoms, but greater improvements were seen in the [probiotic](#) group from week four onwards. Meaningful reported improvements were seen, measured against gold standard rating scales for depression and anxiety.

Professor James Stone, the study's senior investigator who began the work at King's IoPPN and is now at Brighton and Sussex Medical School said, "Non- or partial response to antidepressants is a huge problem and this study is an important first step in exploring the therapeutic potential of probiotics as a treatment for depression. We found that probiotics were an acceptable and tolerable supplement in people already taking antidepressant medications. This now paves the way for studies looking at whether we see these beneficial effects of probiotics on depression and anxiety in larger populations of patients."

Dr. Viktoriya Nikolova, the study's first author from King's IoPPN said, "The gut-brain axis is a truly fascinating and rapidly evolving area of microbiome research. The findings of this pilot study are an important step forward in our understanding of the role of probiotics in mood and mental health."

Dr. Richard Day, VP of Medical Affairs at ADM said, "According to the World Health Organization, an estimated 5% of adults suffer from depression, with a significant number failing to respond completely to standard treatment options. This trial is one of the few [clinical studies](#) to assess the benefits of supplementing the diet with probiotics alongside standard of care antidepressant medication. These exciting results add to our understanding of the link between the gut microbiome and [mental health](#)."

More information: Acceptability, tolerability, and estimates of putative treatment effects of probiotics as adjunctive treatment in patients with depression: a randomized clinical trial, *JAMA Psychiatry* (2023). [DOI: 10.1001/jamapsychiatry.2023.1817](https://doi.org/10.1001/jamapsychiatry.2023.1817)

Provided by King's College London

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