



Letter to the Editor

Probiotics in the treatment of depression[☆]

Probióticos en el tratamiento de la depresión



Dear Editor,

Recently, gut probiotics were reported to play an important role in two-way communication between the gut and the brain, in such a way that they may be essential for individuals with depression. This represents a challenge for health in general, since depression is a metabolic brain disorder. Studies in recent years have proposed using antibiotics to prevent and mitigate depression.¹

A study by Miyaoka et al.² conducted in Japan evaluated the effects of the probiotic *Clostridium butyricum* MIYAIRI 588 (CBM588) combined with antidepressants. Forty patients treated with antidepressants were randomised to adjuvant treatment with CBM588 (n=20) or the control group (n=20). The former group received CBM588 (60 mg/day) in combination with antidepressants (fluvoxamine, paroxetine, escitalopram, duloxetine and sertraline), and the latter received the same antidepressants plus placebo. The results showed that CBM588 in combination with antidepressants was well tolerated in the treatment of major depression.

A review by Park et al.³ showed emerging evidence indicating that alteration of the composition of the gut microbiota through supplementation with probiotics may be a viable supplementary treatment option for people with major depressive disorder. Taken together, the results of this review pointed to probiotics as a potentially beneficial but seldom-studied antidepressant treatment intervention.

A study by Slykerman et al.⁴ in New Zealand was a randomised, double-blind, placebo-controlled trial of the effects of the probiotic *Lactobacillus rhamnosus* HN001 (HN001) on postpartum mood in 423 women. These women were randomised to placebo (n=211) or HN001 (n=212) to be taken daily from enrolment up to six months after childbirth. Women who received HN001 had significantly lower scores for depression and anxiety in the postpartum period. The authors concluded

that this probiotic may be useful for preventing or treating postpartum depression and anxiety symptoms.

A study by Akkasheh et al.⁵ in Iran analysed the effects of probiotic intake on depression and metabolic status in patients with major depressive disorder. Forty patients were included in this randomised, double-blind, placebo-controlled clinical trial. Patients were randomised to two groups — probiotic supplements (n=20) or placebo (n=20) — for eight weeks. The probiotic capsule consisted of three viable and lyophilised strains: *Lactobacillus acidophilus*, *L. casei* and *Bifidobacterium bifidum*. According to the results, the Beck's Depression Inventory scores of patients who received probiotics decreased significantly compared to patients who received placebo.

The results of these studies conducted in various countries in recent years confirm the potential of probiotics in preventing and treating depression.

However, although the evidence reviewed seems to indicate that very promising results of this treatment can be expected, given the small numbers of studies in humans, more research is needed to issue general recommendations on this treatment.

Health professionals and scientists must make a priority of further investigating this treatment and evaluating its effects in larger numbers of patients, examining its long-term effects and analysing its synergistic effects with other types of treatment, since up to 300 million people with depression around the world could benefit from with this treatment, and health professionals, for their part, would be able to offer more up-to-date and higher-quality treatments.

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DOI of original article: <https://doi.org/10.1016/j.rcp.2020.05.004>.

[☆] Please cite this article as: Martínez Pizarro S. Probióticos en el tratamiento de la depresión. *Rev Colomb Psiquiat*. 2022;51:6-7.

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2530-3120/

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<https://doi.org/10.1016/j.rcpeng.2020.05.004>