

P8



Lactiplantibacillus plantarum P8

The “feel good” probiotic

Stress is a psychological and physical response to emotionally challenging experiences, but can also be triggered by routine everyday life events, such as traffic jams and tight work deadlines.

Strong or prolonged bouts of stress can compromise our well-being and trigger anxiety and if left untreated and sustained, can lead to more serious conditions including depression.

It is estimated that about **264 million individuals worldwide experience anxiety disorder** ^[1] and 35% of adults feel stressed ^[2]

The gut microbiota has a key role in our mental health through its impact on the “gut-brain axis”: a dynamic and bi-directional system of communication involved in many physiological and pathological conditions including glucose homeostasis, obesity, satiety, gastrointestinal and inflammatory disorders.

Probiotic consumption as a therapy or adjuvant in the treatment of stress and anxiety is of increasing interest thanks to its ability to modulate of specific pathways of the gut-brain axis.

P8 has been proven to decrease stress and anxiety, to maintain a healthy inflammatory tone and to improve cognitive and memory functions.

Hypoallergenic

Vegetarian

Gluten free

Kosher

Halal

GMO free

Genome Sequenced

Gastric resistant

CultureScience



microbiome

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P8 alleviates stress and anxiety

Correlation analysis has revealed that high levels of pro-inflammatory cytokines are associated with high levels of stress and anxiety.

These two psychological traits are in turn related to cognitive and memory deficiency. P8 ability to alleviate stress and anxiety symptoms and improve cognitive and memory capacity, seems to be correlated with the activation of an anti-inflammatory response, in particular through the reduction of IFN- γ and TNF- α , two of the main biomarkers of inflammation [4].

Moreover, P8 showed a positive modulatory effect on the gut microbiota and of neuroactive potential-related pathways [5]:

- *Bifidobacterium adolescentis*, *Bifidobacterium longum*, and *Faecalibacterium prausnitzii*, positively correlate with brain health and with regulatory and protective effects on neurological diseases, were found increased by P8 supplementation.
- Predicted levels of vitamin K2 synthesis, short-chain fatty acids (SCFAs), GABA, cholate, arachidonic acid, and C18:0 sphingomyelin increased significantly after probiotic treatment with P8.

Thus, the balancing effect of P8 on the intestinal microbiota may activate intestinal and circulating immune pathways of the host, and consequently improve its mood and brain function.

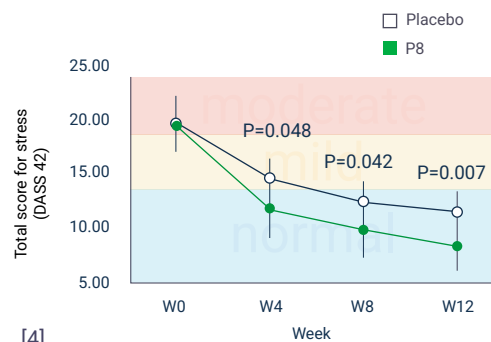
The impact of P8 on adults

103
adults

20 Bn
CFU/day

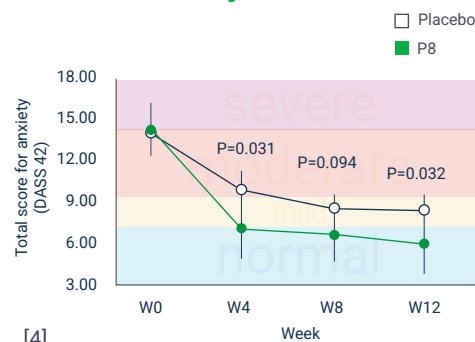
Randomized, double blinded,
placebo-controlled

Reduction in stress



[4]

Reduction in anxiety



[4]

Improved mental functions



All

Social emotional cognition
Memory
Verbal learning



Woman

Encoding
Memory
Interpretation of social information
Basic attention



Men

Verbal memory functions
Mental focus

[5]

P8 facts

- P8 has been extensively studied, with more than 25 publications
- P8 has remained detectable in faecal samples 17 weeks after ceasing consumption [6]
- P8's mechanism of action is via anti-inflammatory effects, gut microbiota and neuroactive pathways modulation
- P8 supplementation has been shown to alleviate stress and anxiety symptoms and enhances memory

[1] <https://www.who.int/news-room/fact-sheets/detail/depression> | [2] <https://time.com/5577626/americans-stressed-out-gallup-poll/> | [3] Lyte JM, Front Endocrinol (Lausanne) 29, 9-796 (2019) | [4] Lew LC, et al., Clin Nutr. 38(5), 2053-2064 (2019) | [5] Ma T, et al., Neurobiol Stress 12(14), 14100294 (2021) | [6] Song Y, et al., Front Microbiol 9, 893 (2018)



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