Probiotic formulation for reduction of depressive sensitivity

Ecologic® BARRIER formulation inside

Ecologic® BARRIER is a multispecies probiotic formulation. The bacterial strains have been selected for their capacity to strengthen the intestinal barrier and reduce low grade inflammation\[1\] (figure 1).

For this, the strains were screened on their capacity to:

- improve barrier function in vitro
- inhibit mast cell activation
- stimulate IL-10 production
- break down LPS.

The selected strain combination from the Ecologic® Barrier formulation:

- *Bifidobacterium bifidum* W23
- *Bifidobacterium lactis* W52
- *Lactobacillus acidophilus* W37
- *Lactobacillus brevis* W63
- *Lactobacillus casei* W56
- *Lactobacillus salivarius* W24
- *Lactococcus lactis* W19
- *Lactococcus lactis* W58
Probiotic formulation for reduction of depressive sensitivity

Mental disorders, depression in particular, are becoming a global epidemic. Worldwide, more than 350 million people of all ages suffer from depression. A variety of lifestyle and environmental changes may be responsible for the increased prevalence of mental disorders. One specific area of interest is the relationship between the intestinal microbiota and mental health (figure 1).

The gut microbiota is essential for human health by protecting against pathogens and digesting food. However, the influence of the microbiota extends beyond the gastro-intestinal (GI) tract, playing an important role in the bidirectional communication between the GI tract and the central nervous system (CNS). This connection is also called the gut-brain axis. The high co-morbidity between psychiatric disorders with GI conditions such as irritable bowel syndrome and inflammatory bowel disease supports the evidence of the existence of this axis.

The intestinal barrier appears to play an important role in the communication between the gut and the brain. Impaired barrier function negatively influences hormones, immune cells and bacterial metabolites that affect the gut-brain axis.

Research has shown that probiotics can positively influence the gut microbiota and intestinal barrier function. This raises the question whether probiotics can influence brain functioning as well. Recent studies have demonstrated the ability of probiotics to influence the gut-brain axis and by this brain functioning.

Clinical support

Two studies with Ecologic® BARRIER have been performed related to depression both indicating a positive effect. In the first study, performed at Aarhus University, Denmark, healthy rats were given...
Ecologic® BARRIER or placebo for 8 weeks. After this period the animals performed a forced swim test, a typical screening for depressive-like behavior in rodents. The more depressed rats are, the less they move.

The group of animals that consumed Ecologic® Barrier moved significantly more compared to the placebo group (figure 3).

In the second study, a randomized, placebo-controlled human trial performed at Leiden University, the Netherlands, 40 students were given Ecologic® Barrier or placebo for 4 weeks. Before and after the intervention a validated questionnaire, the Leiden Index of Depression Sensitivity that measures cognitive reactivity in response to sad mood, was filled out. At baseline there were no differences between the two groups, but after 4 weeks the sensitivity to depression score was significantly decreased in the Ecologic® Barrier group compared to the placebo group (figure 4). The most pronounced decreases were found in the categories aggression and rumination. These positive results have led to a follow-up study in an elderly population. Multiple studies are currently planned or ongoing that further investigate the effect of Ecologic® BARRIER on a variety of mental disorders in diverse populations. The results indicate that supplementation with Ecologic® Barrier can influence the gut-brain axis and contribute to alleviating mental distress.
Publications on Ecologic® Barrier

- Steenbergen et al. A randomized controlled trial to test the effect of multispecies probiotics on cognitive reactivity to sad mood. Brain Behav Immun 2015;48:258-64.

Safety insurance

The use of oral probiotics has been well researched in many different (incl. vulnerable) patient populations, including infants, elderly people and immunocompromised patients. The general conclusion is that there are no safety risks for the studied bacterial strains in the dosages that were used in the studies. Caution is recommended in a number of highly vulnerable patient populations, such as oncology patients with severe leukopenia or mucositis. Probiotics use in acute pancreatitis is contraindicated. Read More about Safety... [2]

World Wide availability

The research formulations of Ecologic® are not sold as consumer products. However our worldwide business partners [3] offer a selection of the formulations their own branded product(s). Thus the specific bacterial compositions can be found in different products around the world.

References

Formulation ingredients

Bacterial strains

- Bifidobacterium bifidum W23
- Bifidobacterium lactis W52
- Lactobacillus acidophilus W37
- Lactobacillus brevis W63
- Lactobacillus casei W56
- Lactobacillus salivarius W24
- Lactococcus lactis W19
- Lactococcus lactis W58

Usage

Dosage

Dosage used in studies: 2 grams per day

Daily CFU

Dissolve in

luke water or dairy

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https://www.ecologicinside.info/probiotic-formulation-reduction-depressive-sensitivity

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