Probiotic formulation for ulcerative colitis and pouchitis [1]

Ecologic® 825 formulation inside

Ecologic® 825 is a multispecies probiotic formulation specifically developed to extend remission time in ulcerative colitis and pouchitis patients. The bacterial strains of Ecologic® 825 have been specifically selected for their capacity to (figure 1):

1. inhibit various pathogens associated with IBD (C. difficile, E. coli) (level 1)
2. improve barrier function (level 2)
3. induce the production of anti-inflammatory cytokines (level 3)

The selected strain combination from the Ecologic® Barrier formulation:

- *Bifidobacterium bifidum* W23
- *Bifidobacterium lactis* W51
- *Bifidobacterium lactis* W52
- *Lactobacillus acidophilus* W22
- *Lactobacillus casei* W56
- *Lactobacillus paracasei* W20
- *Lactobacillus plantarum* W62
- *Lactobacillus salivarius* W24
- *Lactococcus lactis* W19

Probiotic formulation for prolongation of remission time

Inflammatory Bowel Disease (IBD) is the umbrella name for ulcerative colitis, pouchitis and Crohn’s disease. All three diseases in the IBD group are characterized by flare-ups and remission. IBD affects
over 1.2 million people in the USA and 2.2 million in Europe (2004)\(^1\). These numbers are expected to show an absolute growth of 7% between 2005-2025\(^2\). Probiotics can be used to induce and prolong remission time (figure 2).

The intestinal mucosal barrier has evolved to maintain a delicate balance between absorbing essential nutrients while preventing the entry to harmful contents. Disruption of this barrier has been implicated as an important pathogenic factor in IBD, which results in an overactive immune system, thus leading to mucosal inflammation\(^3\). Several studies have been conducted to measure the effects of probiotics on IBD patients. Overall, probiotics seem to have most effect on patients with ulcerative colitis or pouchitis. The effects of probiotics were shown to be highly dependent on the type of bacterial strains used\(^4\). Research has shown that probiotics have strain-specific effects and that multispecies probiotics are more effective than mono-strain probiotics\(^5\). For each application of probiotics, the right combination of strains must be selected.

![Figure 2: IBD is characterised by periods of inflammation (flare-up) and no inflammation (remission). Ecologic® 825 is used to prolong the remission time in IBD patients.](image)

**Clinical support**

Several in vitro studies and animal models have shown the effect of Ecologic® 825 in improving the barrier function\(^6\)\(^7\).

In a randomized double-blind placebo-controlled trial the effects of Ecologic® 825 were studied in pouchitis patients. The results show that supplementation with Ecologic® 825 restored the increased gut permeability in patients with chronic pouchitis\(^8\).

Another clinical study in overweight subjects showed that 8 weeks of supplementation of Ecologic® 825 decreases markers of gut permeability (zonulin, alpha-1-antitrypsin and hsCRP) and thereby positively influences the epithelial barrier function of those patients\(^9\). In addition, Ecologic® 825 has been tested in an open pilot study with 60 patients suffering from ulcerative colitis and Crohn’s disease. Patients used the product for two months and were asked to fill in a questionnaire. This pilot study showed that Ecologic® 825 has a beneficial effect on patients with IBD. This effect is seen in UC patients where 77% experienced benefit from the usage of Ecologic® 825. In addition 59% of CD patients felt better after using it for 2 months\(^10\). Furthermore, Ecologic® 825 has been tested in an open label study with 14 patients with health problems related to intestinal barrier dysfunction. This study showed that Ecologic® 825 improves parameters of barrier function.
Figur 3 a: Effects of Ecologic® 825 after two months of usage in patients with *ulcerative colitis*, using questionnaires or ‘self-reported’.

Ecologic®825 publications

- Lutgendorff F. et al. Defending the barrier. Effects of probiotics on endogenous defense mechanisms. Chapter 9: Role of mast cells and PPAR-: Effects of probiotics on chronic stress-induced intestinal permeability in rats Linköping University and University Medical Centre; 2009.
- Mulder L. Ecologic® 825 - A multispecies probiotic food supplement for IBD. Nutrafoods 2008;7(2/3).

Figure 3 b: Effects of Ecologic® 825 after two months of usage in patients with *Crohn’s disease*. 
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 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

2. Gegevens van het Rijksinstituut voor Volksgezondheid en Milieu (RIVM).
6. Lutgendorff F. et al. Defending the barrier. Effects of probiotics on endogenous defense mechanisms. Hst. 9: Role of mast cells and PPAR-γ: Effects of probiotics on chronic stress-induced intestinal permeability in rats Linköping University and University Medical Centre; 2009.

Formulation ingredients

Bacterial strains

- Bifidobacterium bifidum W23
- Bifidobacterium lactis W51
- Bifidobacterium lactis W52
- Lactobacillus acidophilus W22
- Lactobacillus casei W56
- Lactobacillus paracasei W20
- Lactobacillus plantarum W62
- Lactobacillus salivarius W24
- Lactococcus lactis W19

**Usage**

**Dosage**

Dosage used in studies: 5 grams, twice daily

**Daily CFU**

**Dissolve in**

100ml luke water or dairy

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