

Microbiota modulation with prebiotic chicory root fibre shows mood improvement

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A new study, conducted by Jackson et al, demonstrates that the intake of the prebiotic dietary fibre oligofructose alone, or in combination with the human milk oligosaccharide 2â??fucosyllactose, promotes a significant increase in Bifidobacteria in the gut and can result in substantial improvements in mood in healthy adults with mild to moderate feelings of anxiety and depression.

Two out of three consumers across the globe already see the importance of their gut on mood, saying that their digestive health influences their mental well-being and stress levels. Thanks to the gut-brain axis, important mood parameters can be influenced via microbiota modulation. With mental health disorders such as anxiety and depression an increasing burden to the health systems globally, using a diet approach that positively influences microbiota using gut-friendly food is an attractive proposition for decreasing public health costs and supporting healthy living.

The study, which ran over five weeks (1-week run-in and 4 weeks intervention), aimed to look at the effect of the chicory root fibre oligofructose and the human milk oligosaccharide 2â??fucosyllactose on intestinal colonisation and their ability to reduce anxiety and depression. The 92 subjects chosen for the study were healthy and had mild to moderate levels of anxiety and depression. Using a randomised, double-blind, placebo-controlled, parallel-designed methodology, the subjects were split into four groups of 23 and given either 8g of oligofructose plus 2g of maltodextrin per day, 8g of oligofructose plus 2g of 2â??fucosyllactose per day, 2g of 2â??fucosyllactose plus 8g of maltodextrin per day, or 10g of maltodextrin per day.

The results showed that at the end of the four-week intervention period, those participants taking the prebiotic oligofructose on its own, or in combination with 2â??fucosyllactose, experienced significant increases in beneficial gut bacteria, including Bifidobacterium, Bacteroides, Roseburia and Faecalibacterium prausnitzii, compared to the control group.

Additionally, those taking oligofructose on its own or in combination with 2- α -fucosyllactose also significantly outperformed the control group in improvements in several mood state parameters.

BENEO's prebiotic chicory root fibre, Orafit Oligofructose, is natural, non-GMO and clean label. Chicory root fibres are derived from the plant via a gentle hot water extraction method, unlike some synthetic fibres. Due to their technical properties, chicory root fibres can be used in a wide range of food and beverage applications including baby food, according to national legislation. As the only proven plant-based prebiotics, inulin and oligofructose support a healthy gut microbiota and selectively promote the growth of beneficial microorganisms, such as Bifidobacteria, in the gut. They are the preferred food for those good microorganisms and thus help them to selectively multiply and grow in numbers. Due to the increased bacterial metabolism in the large intestine, regularity is also improved.