

## Prebiotics may help ease anxiety

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A study published in *Psychopharmacology* shows that a prebiotic, trans-galactooligosaccharide may help reduce anxiety and stress in healthy subjects. In the study, 45 subjects received either one of two prebiotics (fructooligosaccharides [FOS] or Bimuno-galactooligosaccharides [B-GOS]) or a placebo for 3 weeks.

The salivary cortisol awakening response (CAR) was sampled before and after prebiotic/placebo administration to assess hypothalamic-pituitary-adrenal (HPA) axis activity. The HPA axis is often dysregulated in individuals suffering from depression and anxiety impacting affective and memory processing as well as having strong directional links with the gut microbiome. On the final day of treatment participants completed a computerized task battery assessing the processing of emotionally salient information.

The researchers found that the consumption of B-GOS produced a decrease in both waking cortisol levels and attentional vigilance towards negative versus positive information. The results suggest that B-GOS may have an anxiolytic effect and reduce stress reactivity in healthy subjects. The study also demonstrates that manipulation of the gut microbiota with B-GOS may alter HPA axis reactivity and processing.

The study revealed decreased attentional vigilance to negative versus positive information after B-GOS treatment, compared to placebo and FOS treatment. Increased processing of negative material is seen as a core functional marker of anxiety and depression and can be modulated by antidepressant/anxiolytic medication. No effects were found after administration of a FOS prebiotic.

Further trials are planned to study the effects of B-GOS on individuals suffering from anxiety, stress, or depression.