

HFMA Bulletin

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Gut feelings: how food affects mood

Depression is a common and debilitating mental health disorder. In Britain it's estimated that almost 10% of adults suffer from some form of depression in any given year, with incidence rising to 20% at the height of the pandemic in 2020. The economic burden of depression in England alone amounts to £7.5 billion a year.

Sufferers frequently experience low mood, tiredness, difficulty concentrating and sleeping, feelings of worthlessness and guilt, and an inability to enjoy activities that are normally pleasurable. It can cause the affected person great distress and stop them from functioning properly. There are a variety of treatment options available, ranging from talking therapies to medication; despite this, a significant number of people are sub-optimally treated. Nutritional psychiatry is an exciting new area of research that looks at the effect diet has on mood, with particular interest in the role of the gut microbiome. This opens a number of potential new options in addition to, or as an alternative to, conventional treatments.

The microbiota-gut-brain axis describes the two-way communication between gut bacteria and the brain through nervous, immune and endocrine pathways. Though research is ongoing, it's thought that the gut can affect mood through a number of mechanisms; it's believed to directly affect the levels of mood-regulating neurotransmitters such as serotonin, (the happy hormone). The microbiome has also been shown to affect the cortisol-

hypothalamic-pituitary-adrenal axis – important for the stress response. Furthermore, the gut has its own nervous system, linked directly with the brain through the vagus nerve.

Increasingly, the scientific world is coming to view the human being as a superorganism, composed of the human self and its partner microbiota, both needing to be considered together to better understand mental health.

Hippocrates famously said "Let food be thy medicine." Researchers today propose a modified version: "Let food for your microbes be thy brain medicine." In as little as 48 hours, the food that we consume can affect the composition, diversity and health of our gut microbiome. One targeted way of modulating the gut microbiome is through direct ingestion of specific probiotics and prebiotic supplements.

There is a growing body of evidence describing the potential impact of probiotics in various disease areas, including mental health. The number of studies published on the microbiome has increased dramatically over the past four years, reflecting burgeoning interest in the area from a scientific, medical and consumer perspective.

Alongside lifestyle factors, supplementation with probiotics can be a safe, effective way to contribute to the health and diversity of your gut microbiome. Increasingly, scientific evidence is showing that this can have interesting impacts beyond the gut, including on outcomes like mood, opening up fascinating new avenues for microbiome research.

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