

## Gut-brain connection: How the microbiome affects our susceptibility to Alzheimer's disease — and how we think

A growing body of evidence indicates that the gut microbiome plays an essential function in gastrointestinal health and in metabolic processes such as glucose processing, immune responses, inflammation, bone health, and central and peripheral neurotransmission.

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The assembly and balance of gut microbiota begin in infancy through exposure to maternal microbiomes and continues to develop throughout the individual's life, modified by factors such as diet. In addition, [recent research has highlighted](#) the involvement of gut microbiota in brain homeostasis, with studies in neurophysiology, neurochemistry, and neuropsychiatry reporting the role of gut microbiome disruption in brain disease pathogenesis.

Changes in gut microbiota composition have been associated with a range of diseases and disorders, such as asthma, diabetes, autoimmune disorders, Parkinson's disease, depression, autism spectrum disorders, and Alzheimer's disease. Enriched diets that modulate gut microbiota have shown positive results in obesity and diabetes patients.

Exposure to common peptides between humans and gut microbes is thought to increase the risk of neurodegenerative diseases such as Alzheimer's in individuals with a genetic predisposition to the disease.

[\*\*This is an excerpt. Read the full article here\*\*](#)