



# NeuRA

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## BIPOLAR DISORDERS Factsheet

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### What is gut microbiota?

The microbiome involves a dynamic community of microorganisms that inhabits the human body, and changes in response to intrinsic and extrinsic factors. The microbiome community includes bacteria, archaea, microbial eukaryotes, fungi, and viruses, and so it is critical in maintaining healthy physiology. Disruption to the microbiome has been shown to have a pivotal role across a range of medical conditions including inflammatory bowel disease, metabolic diseases, cancer and chronic pulmonary diseases.

Studies are now investigating how the microbiome can influence the brain, in particular gut microbiota. The mechanisms by which intestinal microorganisms could be linked to emotional and cognitive functions of the brain are not fully understood, but they are thought to include the vagus nerve, gut hormone signaling, the immune system, tryptophan metabolism, and microbial metabolites such as short-chain fatty acids.

### What is the evidence for changes in gut microbiota in people with bipolar disorder?

Moderate to low quality evidence suggests decreased fractional representation of *Faecalibacterium* when compared to controls, and reduced gut biodiversity in medicated vs. non-medicated patients.

For more information see the technical table

## HOW YOUR SUPPORT HELPS

We are able to make significant advances due to the generosity of countless people. Your donation allows us to continue to work towards transforming lives. For information on how you can support our research, phone **1300 888 019** or make a secure donation at [neura.edu.au](http://neura.edu.au).



### NeuRA

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*NeuRA (Neuroscience Research Australia) is one of the largest independent medical and clinical research institutes in Australia and an international leader in neurological research.*

*Diseases of the brain and nervous system pose the greatest health, economic and social burden of any disease group because they are chronic, debilitating and have no known cures.*

*Medical research is the cornerstone of efforts to advance the health and wellbeing of families and the community. Our dedicated scientists are focussed on transforming their research into significant and practical benefits for all patients.*

*While we hope you find this information useful, it is always important to discuss any questions about bipolar disorder or its treatment with your doctor or other health care provider.*