

BIPOLAR DISORDERS Factsheet

What is complex I and complex IV?

The electron transport chain involves a series of complexes that transfer electrons from donors to acceptors via reduction-oxidation reactions. Complex I is the first and largest enzyme in the electron transport chain, while complex IV is the last enzyme in the chain. Both these complexes have been found to be altered in psychiatric disorders. The remaining complexes have been studied to a lesser degree.

What is the evidence for complex I and IV alterations in people with bipolar disorder?

Moderate quality evidence suggests small to medium-sized effects of lower complex I levels in bipolar disorder in subunits NDUFS1 in the cerebellum, striatum, and frontal cortex, with complex 1 subunit NDUFS7 also reduced in the frontal cortex. There were no significant changes in complex IV levels.

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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.

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**.

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