

**NeuRA**

Discover. Conquer. Cure.

BIPOLAR DISORDERS LIBRARY



Image: ©Nelos - stock.adobe.com

BIPOLAR DISORDER Factsheet

September 2021

What is attention and how is it measured?

Selective attention is the ability to focus on relevant stimuli and ignore irrelevant stimuli. Sustained attention is the ability to maintain a consistent focus. Selective and sustained attention involve 'alerting' (achieving and maintaining an alert state); 'orienting' (directing attention); and 'executive control' (choosing suitable responses). Several tasks have been developed to assess attention performance. The most common tasks include the Continuous Performance Test (CPT) that uses both visual and auditory stimuli and requires participants to respond to targets and ignore distractors. The Trail Making Test (TMT), requires participants to connect, in order, letters and/or numbers as quickly as possible. The Stroop Colour Word Test (SCWT), presents colour names printed in an ink congruent to the colour name (e.g. blue), or incongruent to the colour name (e.g. blue). Participants are asked to either read the word or name the ink colour. Any impairment in attention disrupts other cognitive functions. Information processing, for example, requires selective attention to retrieve relevant information, and dismiss irrelevant information. Working memory requires sustained attention in order to maintain concentration on information temporarily being stored. Therefore, tasks that have been developed to measure attention also measure other cognitive constructs.

What is the evidence on attention in people with bipolar disorder?

Moderate to high quality evidence suggests a medium-sized effect of poorer attention in people with bipolar disorder compared to controls, with no significant changes over time (3-5 years). The effect was similar in people with bipolar I or bipolar II disorder, in people with first-episode bipolar disorder, and in elderly patients who were matched to controls for age and education. The effect was not significant in children with bipolar disorder who were matched to controls for age (mean age 13 years) and IQ (mean IQ score 104).

High quality evidence suggests a small association between poorer attention and poorer general functioning in people with bipolar disorder.

Moderate quality evidence suggests people with first-episode bipolar disorder showed a medium-sized effect of better performance on some attention tasks (TMT-A and B) compared to people with first-episode schizophrenia. However, high quality evidence showed no differences in attention between people with bipolar disorder and a history of psychotic symptoms and people with bipolar disorder and no history of psychotic symptoms.

Moderate quality evidence found no differences in attention between people with bipolar disorder and people with major depression, in both euthymic and depression phases.

In people of any age with a first-degree relative with bipolar disorder, moderate to high quality evidence found no differences in attention compared to controls, or compared to first-degree relatives of people with schizophrenia. However, in youth aged 10 to 25 years with a first-degree relative with bipolar disorder, there was a small to medium-sized effect of poorer attention compared to controls.

For more information see the technical table

**NeuRA**

Discover. Conquer. Cure.

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.

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.