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BIPOLAR DISORDERS Factsheet

September 2021

What are neurological soft signs (NSS)?

NSS are neurological abnormalities that can be identified by clinical examination using valid and reliable testing measures. They are referred to as 'soft' because they are not related to a localised pathological lesion and are not thought to be part of a well-defined neurological syndrome.

Categories of NSS are varied but they are commonly grouped into three categories: integrative sensory functioning, motor coordination, and complex motor sequencing. Integrative sensory functioning can include deficits in bilateral extinction (difficulty perceiving stimuli when presented to both hemispheres simultaneously), impaired audio-visual integration, agraphesthesia (inability to recognise by touch letters and numbers drawn on the skin) and astereognosis (inability to identify an object by touch without visual input). Motor coordination involves general coordination, intention tremor, finger thumb opposition, balance, and gait. Motor sequencing measures complex motor tasks, such as repetitive alternating hand positions, i.e. fist-edge-palm test where subjects place their hand in three different positions sequentially: a fist resting horizontally, a palm resting vertically, and a palm resting horizontally. Abnormalities in eye movements and developmental reflexes may also be apparent.

What is the evidence for NSS?

Moderate quality evidence suggests a large effect of more NSS in people with bipolar disorder than controls. This effect remained large in subgroup analyses of NSS task (sensory integration, motor coordination or motor sequencing), bipolar disorder type I and euthymia patients. There were no moderating effects of age, sex, duration of illness, age of onset, or antipsychotic use.

Moderate to high quality evidence suggests a small to medium-sized effect of less NSS in people with bipolar disorder compared to people with schizophrenia. Subgroup analyses showed only motor coordination scores were significantly lower in bipolar disorder. There were also no significant differences between people with bipolar disorder with psychotic symptoms, and people with schizophrenia. There were no moderating effects of age, sex, duration of illness or age of onset.

For more information see the technical table



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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.

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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