



NeuRA

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SCHIZOPHRENIA Factsheet

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What is the parietal lobe?

The parietal cortex is located posterior to the frontal lobe. It is structurally divided into the superior, middle and inferior gyri. The most anterior portion of the parietal lobe forms the post-central gyrus, the somatosensory cortex. Posterior to this are the parietal association regions and the visual regions of the posterior parietal cortex involved in visuospatial processing.

What is the evidence for changes in the parietal lobe?

Structural changes

Moderate quality evidence suggests grey matter reductions in the left inferior parietal gyrus in people with schizophrenia and bilateral post-central gyrus in people with chronic or first-episode schizophrenia compared to controls. Moderate to low quality evidence suggests reductions in white matter integrity in the parietal lobe, including temporo-parietal and parieto-occipital regions. High quality evidence suggests greater reductions over time in parietal white matter in people with schizophrenia than in controls.

Functional changes

Moderate quality evidence suggests reduced functional activation of the right inferior parietal lobe in people with schizophrenia during episodic memory encoding and executive functioning tasks. Regions of the inferior parietal cortex and precuneus show increased activity during executive functioning tasks. Moderate to low quality evidence suggests abnormal activity (mostly increased) in the parietal cortex of first-degree relatives of people with schizophrenia during cognitive control, working memory and language processing tasks. Moderate to low quality evidence shows decreased N-acetyl aspartate levels in parietal cortex grey matter in people with schizophrenia.

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 schizophrenia 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/donate/schizophrenia.