**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 specific brain area, or part of a defined syndrome. Categories of NSS are commonly grouped into three categories; integrative sensory functioning, motor coordination, and complex motor sequencing. Integrative sensory functioning includes impairments in sensory perception such as audio-visual integration or tactile recognition. Motor coordination involves general coordination, balance and gait. Complex motor sequencing involves complex motor tasks, such as repetitive alternating hand positions.

**What is the evidence for neurological soft signs?**

Moderate quality evidence suggests medium to large effects of increased NSS in people with schizophrenia or first-episode psychosis, compared to people without schizophrenia or compared to first-degree relatives of people with schizophrenia. There is a smaller and less widespread effect when comparing people with a first-degree relative with schizophrenia to people without schizophrenia. There are medium-sized associations between increased NSS scores and increased symptom severity and poorer cognitive performance. Both people with remitting or chronic schizophrenia symptoms show improvements in NSS over time, although remitting symptoms are associated with greatest NSS improvements. Increased severity of NSS is also associated with reduced activation of the basal ganglia and inferior frontal cortex, increased activation of the superior temporal gyrus, reduced grey matter volume in the precentral and inferior frontal gyri and thalamus, and reduced white matter volume in the middle temporal and cerebellum regions.

For more information see the technical table.