Extrapyramidal Symptoms

Neuropsychological Disorders · https://neuro.vip/neuropsychology/neuropsychological-disorders/extrapyramidal-symptoms/

Extrapyramidal symptoms refer to a group of **movement disorders** that arise due to **dysfunction in the extrapyramidal system**, which is a network of brain structures involved in the coordination and regulation of movement. The extrapyramidal system includes several **deep brain nuclei—such as the basal ganglia**—that are distinct from the motor pathways of the pyramidal (corticospinal) tract.

Causes and Mechanism

Extrapyramidal symptoms are commonly seen as side effects of certain **medications**, most notably antipsychotics that block dopamine receptors. They can also occur in **neurodegenerative disorders** that affect the basal ganglia, such as Parkinson's disease. Because the extrapyramidal pathways are crucial for smooth, automatic movement, disruption leads to a variety of abnormal **involuntary movements**.

Key Extrapyramidal Symptoms

- **Dystonia:** Involuntary, sustained muscle contractions leading to twisting and abnormal postures.
- **Parkinsonism:** Symptoms resembling Parkinson's disease—including tremor, muscle rigidity, slowness of movement (bradykinesia), and shuffling gait.
- **Akathisia:** A sense of inner restlessness and an uncontrollable need to move, often seen as pacing or fidgeting.
- **Tardive Dyskinesia:** Repetitive, involuntary movements, typically involving the face, lips, tongue, or limbs, usually developing after long-term use of antipsychotic medications.

Clinical Relevance for Neuropsychology

Recognising extrapyramidal symptoms is essential in neuropsychological settings, as these symptoms can **interfere with psychomotor testing and assist in the differential diagnosis**

of neuropsychological disorders and neurodegenerative diseases. Extrapyramidal symptoms may also significantly affect **quality of life and compliance with medical treatments**. Timely identification can direct appropriate management, such as medication review or referral to neurology.

Summary

Extrapyramidal symptoms encompass a variety of drug-induced or disease-related movement disorders linked to dysfunction of the extrapyramidal system. They are clinically important for diagnosis, monitoring medication side effects, and understanding movement abnormalities in neuropsychological assessment.