8.13: Glossary

**Action potential:** A change in voltage of a cell membrane in response to a stimulus that results in transmission of an electrical signal; unique to neurons and muscle fibers.

**Acute dystonia:** Painful muscle spasms.

**Affective mood disorders:** Mental illness such as major depression.

**Akathisia:** Distressing motor restlessness.

**Blood-brain barrier (BBB):** A physiological barrier between the circulatory system and the central nervous system that establishes a privileged blood supply, restricting the flow of substances into the CNS.

**Bradykinesia:** Slowness in initiation and execution of voluntary movements.

**Central nervous system (CNS):** Anatomical division of the nervous system located within the cranial and vertebral cavities, namely the brain and spinal cord.

**Chemical synapse:** Connection between two neurons, or between a neuron and its target, where a neurotransmitter diffuses across a very short distance.

**Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS):** A condition reported in patients taking antiepileptic drugs. Some of these events have been fatal or life threatening. DRESS typically presents with fever, rash, lymphadenopathy, and/or facial swelling.

**Dystonia:** Inappropriate and continuous muscle contraction.
**Electrical synapse:** Connection between two neurons, or any two electrically active cells, where ions flow directly through channels spanning their adjacent cell membranes.

**Extrapyramidal symptoms:** Involuntary motor symptoms similar to those associated with Parkinson’s disease. Includes symptoms such as akathisia (distressing motor restlessness) and acute dystonia (painful muscle spasms). Often treated with anticholinergic medications such as benztropine and trihexyphenidyl.

**Gait disturbance:** An abnormal way of walking, such as shuffling feet.

**Hypertensive crisis:** Severe hypertension (blood pressure greater than 180/120 mm Hg) with evidence of organ dysfunction. Symptoms may include occipital headache (which may radiate frontally), palpitations, neck stiffness or soreness, nausea or vomiting, sweating, dilated pupils, photophobia, shortness of breath, or confusion. Either tachycardia or bradycardia may be present and may be associated with constricting chest pain. Seizures may also occur. Intracranial bleeding, sometimes fatal, has been reported in association with the increase in blood pressure.

**Mania:** Periods of extreme highs in bipolar disorder. Manic episodes may include these symptoms: rapid speech, hyperactivity, reduced need for sleep, flight of ideas, grandiosity, poor judgement, aggression/hostility, risky sexual behavior, neglected basic self-care, or decreased impulse control.

**Nerve:** Cord-like bundle of axons located in the peripheral nervous system that transmits sensory input and response output to and from the central nervous system.

**Neuroleptic malignant syndrome (NMS):** Potentially life-threatening adverse effect that includes high fever, unstable blood pressure, and myoglobinemia.

**Neuron(s):** Neural tissue cell that is primarily responsible for generating and propagating electrical signals into, within, and out of the nervous system.

**Neurotransmitter:** Chemical signal that is released from the synaptic end bulb of a neuron to cause a change in the target cell.

**Ophthalmoplegia:** Weakness in eye muscles.

**Orthostatic hypotension:** A significant change in blood pressure from lying to sitting to standing.

**Peripheral nervous system (PNS):** An anatomical division of the nervous system that is largely outside the cranial and vertebral cavities, namely all parts except the brain and spinal cord.

**Postural instability:** Abnormal fixation of posture (stoop when standing), problems with equilibrium, and righting reflex.

**Rigidity:** Increased muscle tone and increase resistance to movement. As severity increases, there may be cogwheel rigidity.

**Serotonin syndrome:** May occur when taking serotonin medications. Includes mental status changes (e.g., agitation, hallucinations, coma), autonomic instability (e.g., tachycardia, labile blood pressure, hyperthermia), neuromuscular aberrations (e.g., hyperreflexia, incoordination) and/or gastrointestinal symptoms (e.g., nausea, vomiting, diarrhea).
Serotonin syndrome, in its most severe form, can resemble neuroleptic malignant syndrome, which includes hyperthermia, muscle rigidity, autonomic instability with possible rapid fluctuation of vital signs, and mental status changes.

**Status epilepticus:** A state of repeated or continuous seizures.

**Tardive dyskinesia:** Involuntary contraction of the oral and facial muscles (such as tongue thrusting) and wavelike movements of the extremities.

**Thalamus:** The region of the central nervous system that acts as a relay for sensory pathways.

**Threshold:** The membrane voltage at which an action potential is initiated.

**Tremor:** Usually tremor at rest; when person sits, the arms shake, but tremor stops when person attempts to grab something.