

Table 1. Acute Movement Disorders in Children

Hyperkinetic/ dyskinetic	Definition ⁴ and key features	Clinical considerations
Tics	Repeated, individually recognizable (stereotyped), intermittent movements or movement fragments that are almost always briefly suppressible and are usually associated with awareness of an urge to perform the movement	Screen for signs of malignant Tourette syndrome ⁷
Stereotypies	Repetitive, simple movements that can be voluntarily suppressed	If concern for autism disorder or Rett Syndrome ("hand-wringing," developmental regression), consultation/follow up with a pediatric neurologist ⁹
Dystonia	Involuntary sustained or intermittent muscle contractions causing twisting and repetitive movements, abnormal postures, or both	Close monitoring/intervention for upper airway dystonia resulting in laryngospasm ^{10,11} In severe dystonia or status dystonicus, evaluate for rhabdomyolysis and acute renal failure ¹²
Tremor	Rhythmic oscillation of a body part, produced by either alternating synchronous contractions of reciprocally innervated antagonistic muscles	Evaluate for parkinsonism
Chorea/ hemichorea	An ongoing random-appearing sequence of one or more discrete involuntary movements or movement fragments	Check blood glucose level Consider testing for acute rheumatic fever, including evaluation for carditis ^{13,14}
Ballism	Chorea that affects proximal joints such as shoulder or hip leading to large amplitude movements of the limbs, sometimes with a flinging or flailing quality	Check blood glucose level Consider workup for cerebrovascular cause (e.g. subthalamic nucleus CVA)
Athetosis	Slow, continuous, involuntary writhing movement that prevents maintenance of a stable posture	In neonates, consider birth complications (trauma, asphyxia) and kernicterus ¹⁵
Myoclonus	A sequence of repeated, often nonrhythmic, brief shocklike jerks due to sudden involuntary contraction or relaxation of one or more muscles	Initiate seizure precautions if concern for associated epilepsy
Hypokinetic/ bradykinetic Parkinsonism (bradykinesia, rigidity, tremor)	Syndrom of slowness of movement (bradykinesia), tremor in the hands or legs, rigidity of muscles, shuffling gait, and postural instability	Consider a trial of levodopa
Special Cases Neuroleptic malignant syndrome (NMS)	Syndrom of fever, rigidity, mental status change, autonomic dysfunction, and movement disorder resulting from exposure to dopamine receptor-blocking drugs ¹⁶ Acute onset (contrast to serotonin syndrome) Elevated creatine kinase Transaminitis Leukocytosis	Treatment aimed at preventing life-threatening complications (dehydration, electrolyte imbalance, acute renal failure, pulmonary embolism, cardiac arrest, seizure, sepsis) ¹⁶ Supportive care includes lowering core temperatures (cooling or dantrolene for severe hyperthermia), hydration, and control of agitation with benzodiazepines ¹⁶
Serotonin syndrome (SS)	Syndrom of mental status change, abnormal neuromuscular tone, and autonomic dysfunction resulting from exposure to serotonergic drugs ¹⁷ Subacute onset (contrast to neuroleptic malignant syndrome)	Treatment aimed at preventing life-threatening complications (seizure, disseminated intravascular coagulation, metabolic acidosis, cardiac arrest) ¹⁷ In contrast to NMS, dantrolene is NOT recommended for severe hyperthermia - consider paralysis and endotracheal intubation ¹⁷