

Hypertonia Assessment

To assess muscle tone:

1. Palpate resting level of contraction in muscle belly
2. Note body position; test in multiple postures if possible
3. Measure passive range of motion at slow, medium, fast speeds
 - Slow = 3 sec to complete the motion
 - Intermediate = 0.5 sec to complete
 - Fast = as rapidly as possible
4. Assess quick reversals of motion at all speeds
 - Immediate resistance = co-contraction
 - Delayed resistance = spastic catch
5. Assess tone changes with voluntary movement
 - Same motion, contralateral side
 - Movement of another part of body

Adapted from Sanger, et al., 2003

Measurement Tools:

Modified Ashworth Scale	Does not differentiate between types of hypertonia http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=902
Tardieu Scale	Measures velocity-dependent hypertonia http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1038
Barry-Albright Dystonia Scale	https://www.ncbi.nlm.nih.gov/pubmed/10400175
Hypertonia Assessment Tool	Quick screen to differentiate among types of hypertonia http://research.hollandbloorview.ca/ou/comemeasures/hat

For reference only; inclusion of a tool does not imply endorsement by the Academy of Pediatric Physical Therapy or the Hospital-Based Special Interest Group.

Hypertonia Assessment

Hypertonia “Abnormally increased resistance to externally imposed movement about a joint”

Types of Hypertonia

Spasticity	“Velocity-dependent resistance of a muscle to stretch”
Dystonia	“Involuntary sustained or intermittent muscle contractions (causing) twisting and repetitive movements, abnormal postures, or both” <ul style="list-style-type: none">• Worsens with increased effort• Body part tends toward a typical fixed posture, often at end-range
Mixed hypertonia	Spasticity and dystonia occurring together
Rigidity	Often co-contracted (“lead pipe”); resistance does not vary with voluntary effort, different postures, or speed of movement <ul style="list-style-type: none">• Often no typical fixed posture