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-contract
   - 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

Tardieu Scale
- Measures velocity-dependent hypertonia
- http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?id=1038

Barry-Albright Dystonia Scale

Hypertonia Assessment Tool
- Quick screen to differentiate among types of hypertonia
- http://research.holland poop view.ca/ou tcome measures/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"
- 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
- Often no typical fixed posture