

OT Activity Analysis of Drums Alive Clinical Applications for Occupational Therapists

1. **Breathing, Posture, Core:** Foundational skills for safe and optimal movement
2. **ADL's/Body Mechanics**
 - a. Lower body: Sit to Stand with hip hinge, ball as support to facilitate good body mechanics, adding cognitive activity as an option. Standing: ball as support for weight shifting, forward reaching, heel lifts, squats, lunges unilateral stance and balance.
 - b. Upper body: Use of drumsticks for range of motion, fine motor skills, coordination; use of drum beats for range of motion, bimanual coordination, strength, power and dexterity.
 - c. Functional benefits of combined upper and lower body movements (drum beat and locomotor patterns)
3. **Modifications**
 - a. Drumsticks: built up handles with foam (pipe insulation) for easier grasp for conditions such as arthritis and to absorb vibration; weighted drumsticks for strength training or use of pool noodles for longer, lighter drumstick; use of drumstick handles with assorted textures for sensory re-education.
 - b. Consider individual sensory styles
 - i. ear plugs vs. sound amplification
 - ii. wellness vs. power drumming
 - c. Sensory deficits
 - i. hearing
 - ii. vision
4. **Cognition**
 - a. Cognitive Skills: Focus, attention span, memory, executive function, speed of processing, reaction time, dual and multi-tasking, language and numerical skills. Timing and rhythmicity, brain wave activation and synchronization are affected by music and rhythmic patterns in both choreography and cognitive activities.
 - b. Visual perceptual skills: Visual cuing (screen, large cards, activity sheets taped on ball); color coding on drum and drumsticks and use of scarves, choreography and activities which require crossing midline, spatial awareness and visual attention
 - c. Auditory: Verbal cues and auditory based activities such as *Echo* and *Call and Response* to address attention, auditory discrimination and auditory memory
 - d. Kinesthetic: Proprioception, body awareness and tactile input
5. **Instructor/Student Interaction Dyad/Group**
 - a. Learning Style/Cuing: Visual cuing with mirroring and gestures, auditory cuing for right/left or specific drumbeat or locomotor patterns; preference for multimodal learning.
 - b. Observation of Student(s): breath holding, jaw tension, shoulder elevation or other postural compensations; inability to execute due to confusion or overwhelm, breaks as needed to stretch opposing muscle groups such as finger extension, shoulder retraction, intermittent diaphragmatic breathing
 - c. Progression/Regression: instructor intervention as needed based on observation

6. Special Conditions

- a. Parkinson's Disease: Large amplitude movements, speech and vocalization, facial expression, right/left integration, focus, attention, dual tasking, memory, fluid movements and motor control including gross and fine motor coordination, gait and balance
- b. Stroke: Inhibition or facilitation of muscle tone, visual field awareness, upper extremity retraining, lower body motor control, sensory re-education
- c. Arthritis: Range of motion with decreased pain, strength training through high repetitions and low resistance
- d. Wellness for Physical and Mental Health: Motivation and positive reinforcement to engage in physical activity, group dynamics, carryover to activities of daily living (ADL's) and prevention of falls.