



Private Occupational Therapy

In-Home Pediatric Occupational Therapy

Proprioceptive System

Proprioception is the sensory input regarding muscles and joints that provides awareness of the body's position. This sensory system informs the brain where body parts are, where they are in reference to one another and how much tension is within them. Sensory receptors for this system are located throughout the body (muscles, joints, tendons, etc.). These receptors relay information up the spinal cord to the brain stem and cerebellum in order to process and produce an appropriate response to the environmental demand. This information is typically not consciously processed. The proprioceptive system also informs the brain about how much force should be utilized for a given task. This is a very necessary system for motor control, both gross and fine, as well as posture.

Functions:

- Judging the force of movement and smooth controlled body movements
- Works with the textile system to help us know where our body is in relation to other people and objects in our environment
- Provides calming input to our brain, allowing us to increase focus and attention

Functional Skills of proprioceptive processing

- Movement in space for coordinated learning of motor activities
- Movement in space to maneuver around familiar environments with our excessive thought
- Movement around unfamiliar environments without falling
- Ability to know what force to emit on items in order to manipulate them
- Ability to maintain body in calm/organized state

Symptoms of Difficulty of the Proprioceptive System

- Problems with touch and/or with gravity and movement
- Have a poor sense of body awareness
- Appear clumsy, uncoordinated; falls or trips frequently
- Difficulty carrying out unfamiliar and complex motor movements
- Difficulty learning to do new tasks on the first couple of tries
- Manipulates small items too hard or too soft
- Toe-walking or slapping feet when walking; sits on feet

Proprioceptive Activities

- Have a child push or pull a wagon, grocery cart
- Use wrist weights or ankle weights
- Do 'animal walks'; wheelbarrow walks, march, stomp, jump
- Have child hang from bars
- Chair races are fun on rainy days or have child move the furniture
- Weighted blankets or vests, use beanbag chairs to sit in or under
- Squeeze toys, koosh balls, stress balls, fill a balloon with sand, flour, cornmeal
- Have child 'hold up the wall' or 'push the wall'
- Steamroller using a yoga ball while child lays flat on the ground
- Play the 'hotdog' or 'buritto' game (roll child up in tight yoga mat, towel, or blanket and pound ketchup, mustard, lettuce, beans, etc on top)



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- Use sidewalk chalk to draw pictures on the ground or garage door; or on large paper taped to wall
- Stir thick material; knead dough
- Swimming
- Gymnastics
- Wash windows/clean desks or tables
- Any yard work or house work (sweeping, raking, vacuuming, etc)
- Water plants with a water can
- Hammer nails into board or golf tees into styrofoam
- Stomp aluminum cans for recycling
- Crawl through a tunnel
- Give a massage