thrive
Practical Insights on Pediatric Development

child&familydevelopment

Making Sense of Sensory Processing:
Balance and Proprioception

Ever know a child who seems to fall, trip and bump into things more than peers?

Many skills must be in place to support good balance and proprioception. Adequate sensory processing skills, range of motion, and strength are foundational skills required for balance and knowing where you are in space.

SENSORY PROCESSING & PROPRIOCEPTION

The Vestibular System:

- Tells us where our heads and bodies are in relation to the surface of the earth
- Tells us whether we are moving or standing still and whether objects are moving or motionless in relation to our body
- Tells us about the direction in which we are moving and how fast we are moving
- Lays a foundation for visual input
- Without good information coming from the vestibular system, sights and sounds in the environment don't make sense.

The Visual System:

- Our eyes should work together in a teamed fashion with smooth movements to scan our environment and notice how close or far things are from our body to help us maneuver through space

The Proprioceptive System:

- Proprioceptive input receptors are in the muscles and joints and give information to the brain about the amount of stretch in each muscle and pressure on each joint.
- This provides an accurate picture of the body's position in space without the use of vision.
- Proprioception provides feedback for grading muscle movements and for how much force is needed to interact with an object or person in the environment.

BALANCE

Balance Expectations by age:

- 3 year old - balance on 1 foot for 3 seconds
- 3 year old – use alternating feet when climbing stairs
- 4 year old - hop on 1 foot
- 5 year old - balance on 1 foot for 10 seconds

Red Flags for Balance Difficulties

- Child trips/falls/bumps into things often
- Child who is fearful of movement
- Child who seeks out movement
- Child who appears to have good balance while moving, but poor balance when expected to stay still
- Child who has difficulty moving through dynamic environments
- Child who has difficulty walking across different or dynamic surfaces

HOW DO THESE SYSTEMS WORK TOGETHER?

- Information from these body systems is processed and combined in order for a person to adapt and react to a changing environment.

HAVE A CONCERN?

Contact an occupational therapist or physical therapist for a standardized assessment of motor and sensory skills. Treatment for balance difficulties can include:

- Sensory Integration
- Core/Postural Strengthening
- Postural Control and Stability Training
- Balance Strategies Training
- Visual-Motor Exercises
- Oculomotor Training
- Therapeutic Listening ®

Call Child & Family Development to schedule a free phone intake!