

All about Visual Vestibular Therapy

SIGNS A CHILD MIGHT BENEFIT FROM VISUAL VESTIBULAR THERAPY



Car sickness
Frequent ear infections
Impaired balance
Intolerance for visual information
Difficulty with writing



Difficulty riding a bike
Frequently tripping or falling
History of allergies
History of high fevers



WHAT IS THE VISUAL SYSTEM?

The visual system processes and interprets our visual environment. When our visual system is operating correctly, we can focus on important details and filter out unnecessary information that can be distracting. Additionally, when our eyes work together effectively, we can scan and track things in the world. Our visual system is inter-connected to balance; it provides us with information to sustain our balance during static (non-moving) and dynamic (moving) activities.

WHAT IS THE VESTIBULAR SYSTEM?

The vestibular, or movement detection, system includes the inner ear and aspects of the brain that process movement. It allows us to process and understand how our body is changing position in space and specifically, which direction the head is and the intensity of speed with which it is moving. The vestibular system tells us whether we are moving with gravity or against gravity. The vestibular system is inter-connected with the visual system. This means both systems help us track and focus on moving objects.

WHAT IS VISUAL VESTIBULAR THERAPY?

Visual Vestibular Therapy (“VVT”) is a treatment modality, often utilized by an occupational therapist (“OT”), that is aimed at improving balance, coordination, and visual abilities. VVT utilizes activities and exercises that retrain how your brain interprets and processes vestibular (balance) input and how it then combines the vestibular input with your visual system. In VVT, the brain is learning to more accurately interpret sensory information within and across these two systems. VVT assists individuals in improving their performance in daily occupations (tasks) such as sports extracurriculars, handwriting, reading, play activities, and much more.

WHAT DOES VISUAL-VESTIBULAR ASSESSMENT LOOK LIKE?

It is important for the child to be evaluated by their pediatrician to rule out other health issues causing impairments. A neuro or developmental optometrist may also be necessary to diagnose visual vestibular impairments.



During an OT evaluation, the OT will obtain a history from the parents/guardians. Next, the occupational therapist will assess the child's vestibulo-spinal reflexes. This may look like asking the child to move in various positions while the OT observes tone, balance, orientation, emotional regulation and asks if the child is experiencing dizziness.

The OT will observe the child's posture, their sitting and standing balance, their neck range of motion, and postural reactions. The OT will test oculomotor functions, meaning they will look at how the child's eyes respond during different movement patterns. Assessments for eye tracking (following objects) and looking near and far will also be assessed. Additionally, the OT will consider the child's developmental and cognitive abilities in an assessment and modify assessments based on these skills.

WHAT DOES A TREATMENT SESSION LOOK LIKE?



An OT trained in Visual-Vestibular sensory integration will use visual and movement activities in a purposeful way to assist in the organization of the two sensory systems. Treatment activities include the use of swings, spinning and rolling, changing body and head positions, balance activities, and visually locating, identifying and tracking objects. They may also include activities that incorporate rhythm, crossing the midline of the body, and coordinating movements of the right and left sides and top and bottom halves of the body.

WHAT CAN PARENTS/GUARDIANS DO TO HELP THEIR CHILD AT HOME?

Parents and guardians can be essential in helping children reach their goals. Depending on the child's age, cognition and coordination skills, children may need help with performing recommended activities and exercises at home. Routine and consistency for home programs is important for improving visual vestibular skills.



HOW LONG WILL IT TAKE MY CHILD TO IMPROVE THEIR VISUAL VESTIBULAR SKILLS?



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