

Recognizing Vestibular Problems in Children

Author: Jennifer Braswell Christy, PT, PhD

Fact Sheet

Produced by



A Special Interest
Group of



Contact us:

ANPT

5841 Cedar Lake Rd S.

Ste 204

Minneapolis, MN 55416

Phone: 952.646.2038

Fax: 952.545.6073

info@neuropt.org

www.neuropt.org

a component of



What is the vestibular system?

The vestibular system is a tiny organ located in each inner ear that helps with balance and allows steady vision during head movements. The cochlea (hearing organ) is closely linked to the vestibular system and therefore children who are born with severe hearing loss might also have balance problems. Migraine syndrome can cause temporary sensations of spinning (vertigo), motion sensitivity and poor balance, related to the vestibular system. Middle ear infections (otitis media) can also cause poor balance and clumsiness that gets better following placement tubes in the ear.

How can I recognize a vestibular problem in my child?

Children with vestibular problems might have poor balance leading to falls, especially during high level activities (eg, hopping, skipping and walking on a balance beam). Babies with vestibular problems are typically delayed in learning to sit, stand and walk. Although children rarely complain, they might also have trouble focusing their eyes during head movement (eg, reading a sign when walking). If inner ear function is suddenly lost on one side, the eyes will beat quickly away from the damaged side and your child might complain of spinning. This can happen right after a child has cochlear implant surgery. The dizziness and quick jerking of the eyes should go away after a few days but the imbalance and problems focusing may stay. Migraine can cause symptoms such as headache, spinning, balance problems, ringing in the ears and difficulty speaking. These symptoms might go away quickly or remain for a few days¹.

How can a physical therapist (PT) help my child?

A PT can assess your child's balance and motor skills to determine if he/she is functioning at an age appropriate level. Special tests can be done to screen for inner ear problems². If these tests are abnormal, your child will be referred to a physician for further testing. If there are problems with balance or motor skills, the PT can prescribe exercises that should be done every day. There are also special exercises to help your child be able to see clearly during head

movements. The therapist will show you and your child the exercises in the clinic, and then give you exercises to include into your child's daily routine. Research shows that these exercises, if done for at least 12 weeks, can improve motor skills, balance and gaze stability^{3,4}. Migraine is usually treated with medication. However, a PT can help with balance and motion sensitivity problems that occur with migraines

References:

1. Rine RM, Weiner-Vacher S. Evaluation and treatment of vestibular dysfunction in children. *NeuroRehabilitation*. 2013;32:507-18.
2. Christy JB, Payne J, Azuero A, Formby C. Reliability and diagnostic accuracy of clinical tests of vestibular function for children. *Pediatric Phys Ther*. 2014;26: 180-189.
3. Braswell, J. and Rine, R. M. Preliminary evidence of improved gaze stability following exercise in two children with vestibular hypofunction. *Int.J.Pediatr.Otorhinolaryngol*. 2006;70:1967-1973.
4. Rine RM, Braswell J, Fisher D, Joyce K, Kalar K, and Shaffer M. Improvement of motor development and postural control following intervention in children with sensorineural hearing loss and vestibular impairment. *Int.J.Pediatr.Otorhinolaryngol*. 2004;68:1141-1148.

Produced by



**a Special Interest
Group of**



a component of

