Self-Help Video #7 Part 2:

Function of the Sixth Sense of Vestibular System

<https://youtu.be/cb36xCpS84g>

(begin at :55 seconds to bypass Medical Disclaimer)

We discuss how “interconnected” all senses are.

Trauma from gestational to birthed age of 18 months can impact abilities to “survive” which began for our ancestors as “tracking animals.”

<https://autismawarenesscentre.com/the-dsm-v-and-sensory-processing-disorder/>

Sensory Integration deficits are seen at birth. Many individuals have mild deficits which are never identified and which cause difficulties in the nervous system being able to function adequately for trauma processing.

[www.sensisereni.it/wp-content/uploads/2017/04/Sensory-Processing\_GBG2017.compressed.pdf](http://www.sensisereni.it/wp-content/uploads/2017/04/Sensory-Processing_GBG2017.compressed.pdf)

Sensory Integration begins in the ear structure, where there are three main parts: The outer ear, the middle ear, and the inner ear. The inner ear is where the sound wave is transformed. The hair cells of the organ of Corti are located in the cochlea. These hearing hair cells change the sound wave vibrations to nerve impulses which are sent to the brain auditory system.

Also, in the inner ear there exists the organ of the sixth sense of the vestibular system. There are other hair cells here, which send impulses to the brain and which create our coordinated movements with the external world. They connect to the visual centers to coordinate eye and head movements.

<https://opentextbc.ca/biology/chapter/17-4-hearing-and-vestibular-sensation/>

<https://www.coursehero.com/study-guides/wmopen-psychology/reading-the-vestibular-sense/>

The vestibulocochlear nerve, the 8th cranial nerve, consists of the cochlear nerve, which carries information about hearing, and the vestibular nerve, which carries information about balance. The sense of hearing and the sense of balance function together. The vestibular balance system connects to vision and to emetic centers in the brainstem, which is why you have symptoms of nausea, vomiting, and perspiration with dizziness and motion sickness of balance issues.

<https://en.wikipedia.org/wiki/Vestibulocochlear_nerve>

<https://en.wikipedia.org/wiki/Vestibulo%E2%80%93ocular_reflex>

Here is a balance training website:

<https://balanceretraininghs.lifeguidewebsites.org/player/play/balanceretraininghs>

Here are more exercises for vestibular functions.

<https://balanceretraininghs.lifeguidewebsites.org/interventions/af4c3a23-e547-462f-92a4-2b9218ef0fc0/ExerciseInstructions.pdf>

<https://www.hearinglink.org/your-hearing/balance-disorders/balance-disorder-exercises/>

<http://amazing-exercises.blogspot.com/2013/10/vestibular-exercises-and-rehabilitation.html>

<https://www.brainandspine.org.uk/our-publications/our-fact-sheets/vestibular-rehabilitation-exercises/>

The vestibulocochlear nerve connects with vestibulospinal tract and impacts upon the proprioceptive sense, the 7th body sense and kinesthesia. These sensory systems gather information from receptors that respond to stretch and tension in muscles, joints, skin, and tendons.

<https://en.wikipedia.org/wiki/Vestibulospinal_tract>

<https://sensory-processing.middletownautism.com/sensory-strategies/strategies-according-to-sense/proprioceptive/>

Research suggests that we may have two proprioceptive senses: a sense of effort and a sense of muscle tension. The sense of tension can only be revealed if the individual is instructed in awareness of that muscle state.

Dysfunction in sensory integration of proprioceptive senses can impact parenting psychological attachment to the child. In the child, sensory dysfunction of proprioceptive sense directly connects to the emotional regulation brain centers, and can create on-going anxiety connected to the muscle tension state.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6326416/>

<https://www.researchgate.net/publication/313781742_VESTIBULAR_SENSORY_DYSFUNCTION_NEUROSCIENCE_AND_PSYCHOSOCIAL_BEHAVIOUR_OVERVIEW>

<https://journals.physiology.org/doi/full/10.1152/physrev.00048.2011>

<https://www.uofmhealth.org/health-library/uz2225>

The Eustachian tube plays a role in the “self-voice” of hearing ourselves speak, thus it has a psychological role in learning to speak and “think” in “word-sounds”. It keeps the air pressure balance necessary for sound vibration. Yawning and swallowing keep the Eustachian tube healthy.

<https://www.ncbi.nlm.nih.gov/books/NBK482338/>

<https://leader.pubs.asha.org/doi/10.1044/leader.FTR1.24012019.42>

<https://www.ncbi.nlm.nih.gov/books/NBK532284/>

<https://en.wikipedia.org/wiki/Eustachian_tube>

<https://scitemed.com/article/172/scitemed-aohns-2017-00017>

Science has discovered why we rock and why it is one of the best relaxation activities to shift to parasympathetic activation. Rocking directly impacts the vestibular system.

<https://www.frontiersin.org/articles/10.3389/fnint.2014.00059/full>

<https://www.alzforum.org/news/research-news/rocking-improves-sleep-and-memory-adults>

We are re-setting our brain waves through the process termed “entrainment,” which occurs when our brainwaves become synchronized to the sensory stimulation in our environment. “Brain entrainment” is seen in everyday motor behavior such as people clapping or dancing in synchrony with music.