Ear Dominance Research

Importance of Ear Dominance

Dr Alfred Tomatis and others came to the conclusion, that the right ear is the dominant ear for a person to listen effectively, since it relays sounds directly to the left hemisphere of the brain. The left hemisphere of the brain controls the right side of the body. When information is sent to the right ear, that information is immediately transferred to the left hemisphere of the brain where the speech and language areas are located. However, if someone is listening predominantly with the left ear, the information will go to the right hemisphere and not to the speech and language center. In that situation, the information must be transferred to the left hemisphere for successful understanding. This causes the information to be delayed and often incomplete. As the left ear dominant person is sending information from the right to the left hemisphere, they may be missing the rest of the information told to them.

The Learning Ear

Therefore, those who listen with the left ear may actually have more difficulty learning. They may be missing part of the verbal information and may not be able to comprehend everything that is being said to them. This can cause auditory confusion and even stuttering and dyslexia, according to Tomatis.
Badenhorst (1975) found that the subjects with a right speech-hearing preference were:

- more able to relate appropriately to emotional stimuli
- more in control of their emotional responses
- more extroverted
- less prone to anxiety, tension, frustration and aggression.

Most people prefer to be addressed in their right ears in everyday settings and are more likely to do a favor when the request is received in their right ears rather than their left ones.

- Badenhorst, F.H. (1975). *'n Rorschachstudie van regssydiges en linkslwsteraars met gemengde laterale voorkeure.* Ongepubliseerde M.-graad-skripsie, Potchefstroom Universiteit vir CHO: Potchefstroom.
- Tomatis, A.A. (1969). *Dyslexia.* Ontario: University of Ottawa Press, 83.
- Tomatis, A.A. (1978). *Education and dyslexia.* Fribourg: AIAPP.
- Tomatis, A.A. (1996). *The Ear and Language.* Dorval. Ontario: Moulin.
- Van Wyk, E.M. (1974). *'n Ondersoek na ouditiewe dominansie by 'n groep hakkelaars.* Ongepubliseerde

Right Ear Advantage

It is easy to see that listening with the right ear, gives one an advantage. Approximately 90% of people have this “Right Ear Advantage” with “Left Hemisphere Language Dominance”.

Marzoli, D, Tommasi, L. Side biases in humans (Homo sapiens): three ecological studies on hemispheric asymmetries. 2009. Naturwissenschaften, 96 (9), 1099-106. Knecht, S, Dräger, B, Deppe, M, et al. Handedness and hemispheric language dominance in healthy humans. 2000. Brain, 123 (12), 2512-2518.

Right ears and information:

Not only do humans prefer to hear in the right ear, we actually hear information better in our right ears,

Tommasi said.
When trying to listen to someone speak in a noisy situation it is common to turn your head to present one ear closer to the person speaking. Due to asymmetries in our brains, it seems that when choosing which ear to present, humans seem to have a preference for their right ear.

Monotic ear testing-
Right Ear Dominance

The fractional delay in auditory processing caused by left ear dominance causes dyslexia (word reversals) or stuttering. It is possible to train the right ear to become dominant.
The left hemisphere of the brain contains our auditory processing centers and the primary processing centers for the emotions, hearing, speech, speech comprehension, and language comprehension. The left side of our brain is connected to the right side of our body. Thus, our right ear has the more direct connection to the auditory processing centers. If the right ear is dominant, it channels sound directly to these centers.
Research has shown that when the right ear is the dominant ear for directing sound to the brain, we are better able to process what we hear, and we have better emotional response. Ear specialist Dr Alfred Tomatis found that **by increasing the input of sound to the right ear, one can be trained to become right ear dominant.**

The Sound Therapy programs encourage right ear dominance, with more sound directed through the right ear than the left.

Learning and Listening
To become a good learner, one has to become a good listener.
Tomatis makes a clear distinction between hearing and listening:

Hearing is a passive process. It is merely detecting the sounds around us.

Listening is an active process. It requires the conscious desire to determine the meaning of what we hear.

We can have excellent hearing but be poor listeners. Many children with learning difficulties or attention problems have excellent hearing, according to the school audiologist, but still cannot read well or concentrate. Their problem is a listening problem, not a hearing problem.

What are the signs of vestibular dysfunction? Poor posture, clumsiness, jerky or fidgety movements, messy handwriting, poor sensory integration, avoidance of physical activities or sports are often signs of a sign of vestibular dysfunction. Because the vestibule affects so many of our basic functions, children or adults with vestibular difficulties often have learning disabilities.

Our ears control balance, coordination, verticality, muscle tone and the muscles of our eyes. This is the role of the vestibule. The vestibule is also an important relay for all the sensory information that our body sends to our brain. Children who have vestibular problems, often have sensory integration difficulties.

Our ears analyze sounds, which is especially important for language comprehension. This is done in the Cochlea.

Our ears relay all sensory information to the brain. To achieve this, the vestibule and the cochlea have to work in perfect harmony. They act as a relay station between the nervous system and the brain. Touch, vision and hearing, all are interpreted through our vestibular-cochlear system.