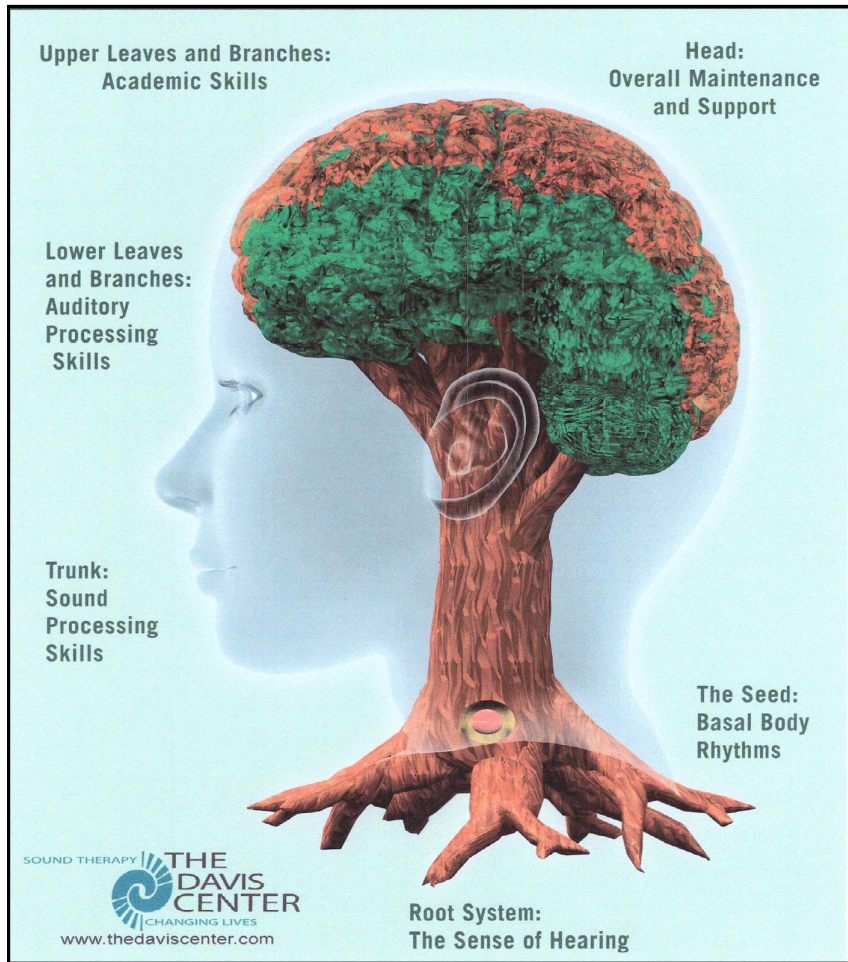


The Sound Approach
to Learning, Development and Wellness
 Incorporating
The Davis Model of Sound InterventionSM



The Tree of Sound Enhancement Therapy®



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LEARNING • DEVELOPMENT • WELLNESS

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Your body has the ability to heal itself. The Davis Model of Sound InterventionSM (DMSI from this point forward) provides an opportunity to support this natural process. With the introduction of appropriate sound-based therapies as determined from the underlying principles of DMSI, this approach becomes *The Sound Approach* to Learning, Development and Wellness.

How is this possible?

Webster's Dictionary defines sound as the sensation produced in the organs of hearing when the surrounding air vibrates. Today, sound is also considered to be vibrational energy. Vibration indicates frequency, of which one form is sound. We may not always 'hear' these sounds as our ear 'hears' sound between 18-20,000 Hz. However, our bodies feel sound vibrations through our bone structure, our skin, and our interconnected cell network throughout our body. Our brain then receives this input. Sound impacts our entire body, even if we are not aware of it.

Everything in the world has a sound, including inanimate objects. This sound is not associated with our ability to hear the sound with our ears, but rather with the ability to process this sound with our brain. Our brain interprets the sound as wave form patterns that are associated with a body function or an external environmental function. How does this affect our ability to self-heal? The way the brain receives, interprets and processes the sound provides our underlying ability to stay balanced and supports our ability to learn, develop and maintain our health and wellness. DMSI supports the body's ability to maintain this balance.

The Foundation of The Davis Model of Sound Intervention

The concepts underlying DMSI revolves around 3 key points:

- 1) There is a subtle energy system that exists between each person's voice, ear and brain, collectively known as the Voice-Ear-Brain Connection. Five laws exist that substantiate this system—three known as The Tomatis Effect and two as The Davis Addendum to the Tomatis Effect. Together these laws suggest that the voice produces what the ear hears, and the ear emits the same stressed frequencies as the voice. If one is modified, the other changes and the brain sends the correcting response to the body.
- 2) Every cell in the body emits and takes in sound frequencies, thereby portraying the body as one's Signature Symphony of Sound—everyone singing their own song. If there is an 'out of tune' frequency, the 'instruments (cells)' of the body are not supporting the symphony and the music is discordant. The 'out of tune' frequencies are identified. The correcting sound is introduced to the body and the brain then introduces the balancing frequency to the cell to 'tune it up'.

- 3) The ear is viewed as the body's global sensory processor and not just a hearing mechanism, as all of the body's senses are stimulated either directly or indirectly through the ear. With this sensory sound vibration combined with the other ways the body transmits and processes sound, the body as a whole is considered a vibrational frequency entity.

The body is always emitting sound and receiving sound. The brain must determine how best to balance these sound wave patterns. The brain's interpretation of the patterns determines how we function—Can we think clearly? Do we feel alright? Are we happy or sad? Can we maintain our attention? Can we formulate our thoughts into good sentences? Is our back pain overbearing? And whatever else the patterns provide as input for interpretation. All of this is happening unknowingly on our part.

If something is off with our balanced sound wave patterns, we can have a 'ripple effect' happening within our body. Imagine a pebble being dropped into water. You can picture the wave ripple effect moving outward. The pebble isn't the part that moves, rather the waveform energy moves outward. If you injure your foot, the injury stays at the foot but the rest of the body feels the ripple effect of the injury. As an example, the injured foot may make you limp thereby distorting your hip, back, neck etc. The wave patterns received by the brain are also altered. The brain works to rebalance the body. We have the capability to rebalance or self-heal but we may not have the tools to support this process. DMSI provides one way to work towards self-healing.

The Importance of The Voice-Ear-Brain Connection

While all three concepts of DMSI are important, the key point is the connection between the voice, ear and brain. As a newly identified subtle energy system, this connection is as important to the body as the Chakra system or acupuncture meridian points. The body must be looked at as a resonating entity of sound wave patterns, but the connection between the voice, ear and brain must be balanced for us to maintain a sense of feeling 'whole'.

Dr. Alfred Tomatis discovered that the voice produces what the ear hears and when the correcting frequencies were reintroduced to the ear, the voice regained coherent or balanced vocal responses. Dorinne Davis discovered that the ear also emits the same stressed frequencies as the voice, and once again when the correcting frequencies were reintroduced to the ear, the voice regained coherent or balanced vocal outputs. Once balanced, the brain then has the opportunity to process the information better and the body can begin the self-healing process. Keeping this triad in balance sometimes takes external intervention until the body can support itself towards self-balance. DMSI provides a way for each person to reach this balance. How can this happen?

The Tree of Sound Enhancement Therapy

The Tree of Sound Enhancement Therapy was developed as the developmental flow chart for the correct administration of any sound-based therapy. Within DMSI, sound-based therapies are the keys to making individualized change for each person. So terms like sound healing and general sound therapy are not applied until the person reaches the point where their sound energy demonstrates stability. Sound-based therapy is defined as using sound vibration with special equipment, specific programs, modified music, and/or specific tones/beats, the need for which is identified with appropriate testing. Because there are many of these programs on the market, each with demonstrated good outcomes, *The Tree of Sound Enhancement Therapy* became a good tool to determine how to apply sound-based therapy programs based on the body change possibilities of each therapy.

The Tree analogy has 6 basic parts:

1. The “Root System” addresses one’s sense of hearing. The therapy(ies) offered at this level are a form of Auditory Integration Training, which repatterns how the acoustic reflex muscle in the middle ear responds to sound, and subsequently supports the reception of sound to the inner ear. These therapies are modeled after the work of Dr. Guy Berard. The changes evidenced are a result of better sound reception.
2. The “Seed” is the foundation for all sound response in the body as it addresses our basal body rhythms, such as the heart beat or breath stream. The therapies at this level of *The Tree* can be utilized at any time in the person’s protocol of sound therapies because these skills bring the person back into focus and keep them feeling positive at their core level. These therapies introduce rhythmical patterns to which the body responds physically and emotionally.
3. The “Trunk” addresses all responses of the ear for general sound processing stimulation, not hearing. The programs at this level are called Listening Training Programs and are modeled after the work of Dr. Alfred Tomatis who established the Tomatis Method. These programs must include the use of air conduction vibration, bone conduction vibration, and use of a microphone to establish a feedback loop between the voice and ear, and subsequently the brain. The changes evidenced are a result of the vibrational stimulation through the parts of the ear: cochlea, semi-circular canals, and vestibule, as well as the bones, circulatory system, nervous system, soft-tissue network, and cell structure of the body.
4. The “Lower Leaves and Branches” address specific auditory processing skills such as memory, sequencing, and discrimination. These skills are inherent in how the brain receives information from the auditory pathway to the brain, specifically from the cochlea to the auditory reception centers in the brain. There are numerous sound-based therapies that address these skills either in a specific skill area such as temporal sequencing, or with general overall auditory processing skills.
5. The “Upper Leaves and Branches” address the academic areas such as reading, spelling and handwriting skills, which can only be maximally achieved when the foundation of *The Tree* is in place. People can have these skills as splinter skills but not always process them in their entirety. The programs suggested at this level must include an auditory, visual, and language combination of instructional skills, thereby allowing for full integration of the foundational skills.
6. The “Overall Maintenance of *The Tree*” addresses one’s wellness or body support for maintaining the learning and developmental changes obtained with the therapies at the various parts of *The Tree*. The Maintenance of *The Tree* is depicted with a head surrounding *The Tree* because it is the voice that reflects how the body is functioning. This surrounding head reflects the combination of the Voice, the Ear, and the Brain supporting each other for the learning and developmental changes. Currently the voice identifies the body’s imbalances and then, by using a specific sound-based therapy, the ear sends the correcting frequency to the brain and body so that the body can make foundational change.

Diagnostic Evaluation for Therapy Protocol (DETP®)

Once *The Tree* was developed, a test battery was needed to determine how best to use the many different sound-based therapies that have been created. The Diagnostic Evaluation for Therapy Protocol (DETP®) was designed to test for skill sets demonstrating weakness in the 4 parts of the original *Tree* analogy, (The 6 part *Tree* was designed in 2009). The testing determines if, when, how long and in what order any or all of the many different sound-based therapies should be appropriately applied.

Once determined, the process of making individual change with these therapies begins. Repeat testing is often indicated to determine if more underlying issues are impeding the overall success of the therapies. The testing only identifies current issues at the time of the testing. In many cases, such as with children with learning challenges, the underlying issues are often masked by how the body presents itself at that time. So, like the injured foot that may create eventual back pain, once the sound-based therapies begin, underlying issues may become more noticeable, and then must also be addressed.

Sound-based therapy appears to stimulate the body's area of greatest weakness working to bring stability or balance of function. So the underlying issues become stimulated or enhanced during the process. In some cases, immediate movement forward is noticed; while for others, the underlying issues surface creating more confusion or imbalance for the person. This is a necessary step in the moving forward of the balancing process. Without this, the approach would become a bandaid approach only addressing the noticeable symptom(s), instead of the cause of the noticeable symptom(s). For some, the length of time needed to balance the body may take longer than others because of how deeply rooted the issue is. And for most people, more than one sound-based therapy is needed to reach that balanced Voice-Ear-Brain Connection.

How Does This Process Affect Learning, Development and Wellness Challenges?

As discussed, sound travels in waves and is processed by the entire body. The brain is the balancer for 'out of tune' sound patterns. The connection between the voice, ear and brain must stay balanced in order for the body to remain balanced.

This may make sense from a wellness perspective because we understand that if there is back pain, there must be some underlying issue, or if a headache exists, some 'out of balanced' issue is creating the headache. If the 'out of balance' issue is addressed or alleviated, the headache or back pain will go away.

For the learning challenged, an 'out of balance' issue may not be an idea that people can easily understand. For many students with reading issues, as an example, a tutor may be hired and the skills of reading will be taught, emphasizing phonics, word recognition, fluent reading, comprehension, etc. With *The Sound Approach*, the concepts of DMSI would be included.

Once the sound responsiveness of the student is tested and identified, a sound-based therapy protocol is established to work towards making connections for the underlying needed skills for reading. So instead of teaching to the issue, sound-based therapy repatterns the underlying cause of the issue so that the issue is minimized or disappears. The student then moves forward with over-all knowledge of what is required and how to accomplish the task.

Every day of our lives, our body takes in information that eventually develops higher thinking skills for reading, math, and other academic skills. To advance to any higher skill set level, a person must first feel and explore the world around them, allow their brain to integrate all of the sensory information received in order to stimulate the cognitive receptors. The ear is our body's major sensory stimulator. Sound stimulates the receptive and expressive body responses of taste, touch, smell, vision, and hearing through the direct and indirect branching effects of the cranial nerves. These responses are activated by sound vibrations. The brain determines if it wants to tune into the sound or block it out.

As a child develops in utero, the ear is the only sensory system that is fully functioning around 4 ½ months. All other senses begin to fully function at birth. By its very development, the ear is demonstrating how important it is to a child's learning and development. In addition to the ear being our hearing mechanism, the ear is also our vestibular and balance/movement mechanism. Our body movement, coordination, balance, proprioception (body in time and space), and muscle tone are all supported by vibrational stimulation to this part of the ear. Developmentally, a child needs good sound stimulation to activate the hearing part of the ear so that the brain receives good clear, crisp input for later language and social skill development. However, good stimulation to the vestibular and motor portions of the ear to balance what the brain needs to process is also needed. This is why movement is so important to being able to learn efficiently.

Sound must be heard correctly in order to be processed correctly. If there is a breakdown in the transmission of sound to the hearing part of the ear, the breakdown may also impact the vestibular portion. If either of these parts is understimulated, the brain can not receive appropriate messages to process. One example is the child with a history of middle ear infections. The infected fluid interrupts the normal flow of sound's vibrations through the middle ear prior to its being received by the inner ear (that portion of the ear that picks up the sound's frequency information and body vestibular and movement input and sends it to the brain). With this disruption, necessary stimulation at the brain for interpretation may be limited. Over time, the brain receives faulty information and children become experts at processing this faulty information, not knowing that there could have been a clearer message.

When a child displays symptoms such as an over-sensitivity to sound, or he ignores sound, the symptoms are of someone who has a 'hearing issue'. (For the sake of this article, a hearing issue does not indicate a hearing loss. It will be assumed that people have normal or near normal hearing.) Yet there are children who have sound processing issues (not to be confused with an Auditory Processing Disorder) whose symptoms may be demonstrated by poor eye contact, poor balance and coordination, poor posture, weak oral motor skills, low muscle tone, articulation difficulties, stammering/stuttering, poor voice quality, poor receptive or expressive language skills, poor social skills, poor organizational skills, poor attention/focus skills, not wanting to try different taste textures, weak eye/hand coordination, difficulty sounding out words, poor vocabulary usage, difficulty comprehending what they read, not wanting to read out loud, and more. These children have difficulty integrating the sensory information they received as they were developing. Typically if the hearing issues are present, the sound processing issues are also present. Both of these issues affect learning.

Each of these issues can be helped with sound-based therapies. Can a person learn and develop without helping their hearing and sound processing issues? Yes, however, they will struggle with learning throughout their life. There have been some well known people who have struggled with these issues and done extremely well, but more often people give up, feel frustrated, develop a poor self-concept, or get interested in something less challenging in order to feel good about who and what they are. Can a person stay well without balancing their voice, ear and brain? That depends upon your definition of wellness. Our bodies are always trying to self-heal. DMSI provides a way to maximize this natural process.

Summary

The connection between the voice, ear and brain must stay in balance for maximum efficient learning to be processed and developed and our wellness to be enhanced as much as our body allows. Sound-based therapies used in the appropriate order determined by testing can balance this connection. The DETP® is used to determine the appropriate order. Once balance is achieved, the person begins a daily body self-tuning with a technique called Ototoning™, the last step in supporting personal self-healing as determined within DMSI.

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Additional Information:

www.thedaviscenter.com

www.dorinnedavis.com

www.ototoning.com

Sound Bodies through Sound Therapy by Dorinne Davis

Every Day a Miracle: Success Stories with Sound Therapy by Dorinne Davis

The Cycle of Sound: A Missing Energetic Link by Dorinne Davis

Who Can Be Helped with Sound-based Therapy?

People of all ages and all issues can be helped with Sound-based therapy because it is not the diagnosis or age that is important. Rather it is the imbalance of the person's cellular sound wave patterns and the imbalance between their Voice-Ear-Brain Connection that must be identified to determine if The Davis Model of Sound Intervention is appropriate. However, people with the following diagnoses or symptoms have been helped with The Davis Model of Sound Intervention:

Autism	Central Auditory Processing Disorder
ADHD	Auditory Hypersensitivities
Asperger's syndrome	Back Pain
Down syndrome	Stroke
Williams syndrome	Fibromyalgia
Learning Disabilities	Depression
Developmental Delay	Anxiety
Apraxia	Muscle Pain
Chromosome Imbalances	Eye Issues like:
Sensory Integration Disorder	Macular Degeneration
Sensory Processing Disorder	Glaucoma
Dyslexia	
Auditory Processing Disorder	

What are some of the sound-based therapies used within The Davis Model of Sound Intervention?

Berard Auditory Integration Training
FST
The Tomatis® Method
EnListen®
Fast ForWord®
Interactive Metronome®
BioAcoustics™

What can be used to maintain the changes?

The Ototoner™ (patent pending)
Ototoning technique



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