



Can Therapists and Helping Professionals Benefit from Listening Training?

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A new sound listening system from the owners of the Tomatis® Method can enable people to overcome anxiety, depression, and social difficulties. Helping professionals (including psychologists, therapists, coaches, physicians), can leverage the awesome healing power of listening to help deal with issues ranging from dyslexia and ADD to work performance issues. Executives can accelerate the learning of foreign languages. Pregnant mothers have a new tool to help them develop a beautiful relationship with their babies and create a strong foundation for language and learning in their newborns. This paper will introduce you to listening training. We intend to show you how effective it can be, especially as we cope with additional stresses of these difficult, economic times. Let us begin at the beginning by examining the power of music to heal our minds, our bodies and our souls.

The Magic of Music to Energize and Grow the Brain

Did you know that music can lift your spirits, energize your body, and jump start your brain? It can! In fact, you may already be using music and sound to enrich your own life. The purpose of this white paper is to tell you how professionals like you – Psychologists, Therapists (Occupational, Physical, and Speech), Life & Executive Coaches, Teachers, and others – are using the power of sound training to add value to their practices. Later on, we'll introduce you to a new sound training system from the owners of the renowned **Tomatis Method**. But first, let us talk for a minute about why listening to music is so uniquely powerful.

The Act of Listening

Listening is more than a mechanical function provided by our ears; many believe it is our most basic skill. While hearing is the passive reception of sound, listening is active. Listening involves the *active* acknowledgement, distinction, and organization of sound information. You can have excellent hearing, but very poor listening. Also, no two people listen the same. Our personal history of health—physical and mental— influences us from growth *in utero* through early childhood development and adolescence and even into advanced age. How we listen to ourselves and others profoundly affects how we learn, communicate, think, feel. Why? Because an effective “listener” is actually differentiating between distracting sounds and the essential information that needs processing. That is why our listening skills affect how we manage our relationships! By improving listening skills, it is possible to achieve lasting physical and psychological results.



The Healing Power of Music

Certain music helps to accelerate learning, focus attention, affect our state of mind and enhance health. Every part of our being is capable of responding to music. So it makes sense that one can

use music to strengthen the body, mind and spirit. This is what we refer to as *sensory integration*: the process of integrating information about the world around us with all our senses from outside and inside our own bodies. Through integrating and organizing the senses of vision, hearing, touch, movement, muscle awareness, taste, and smell, we are able to interact comfortably and efficiently in work, play and through social interaction. If listening to music is so powerful, is there any specific music that is more likely to improve listening skills? Yes there is: the music of Mozart.

The Magic of Mozart and the Tomatis® Method

Let's look at what listening trainers from around the world have learned from working with and researching the prestigious Tomatis Method of auditory processing training. A lot depends on personal taste and one's mood at any given moment, but the music of Mozart has been shown to be extremely powerful and healing



After numerous evaluations of how different types of music improve listening and listening-related abilities, we have found that the results obtained by using Mozart's music are remarkable. For instance, on the physiological level, sound stimulation is received by more parts of the brain than any other sensory input. This includes the limbic system, which plays a major role in *emotional wellbeing*. On an anatomical level, the feeling of alertness resulting from a *healthy ear* occurs when sensory input coming through the vestibular-cochlear system is channeled to a system at the base of the brain known as the ascending reticular activating system. From there, the stimuli are relayed to the cerebral cortex, affecting one's level of "consciousness" and one's sense of feeling "sharp" versus "diffused". There are many other effects from Mozart and the results hold true no matter where in the world the evaluations occurred. We now understand that the music of Mozart is especially beneficial because it allows listeners to reestablish their own inner "equilibrium" or "balance."

Rhythm, Harmony, and Melody

According to the classical ideal, there are three fundamentals or parameters of music: rhythm, harmony and melody. (We'll exclude pitch for the purpose of this discussion.) Let's briefly review these fundamentals to better understand Mozart's effect upon the sense of human balance. *Rhythm* touches the body; *harmony* affects our emotions; and *melody* calls upon our intellect. These three fundamental aspects or parameters should be in balance, at least according to classical principles, in order to think effectively and efficiently.

In many musical forms, this balance is rarely obtained. Just listen to the music collection on your or your child's iPod! In actuality, one or the other of the musical parameters is often dominant and, because of this, we are typically exposed to a rather unusual or even "unbalanced" musical experience. However, in his music, Mozart—more than any other composer—achieved the "balance" that our brains were designed to hear. This helps explain the universal character of his music.

Music as Human Tool

A 2009 PBS special entitled "Music and the Neanderthal's Communication" examined how humans long have had music in their lives. Music allowed our ancestors to communicate, and it stimulated the development of new ideas. Music motivated them to action and success. Even today, anthropologists continue to find new evidence of how music has played an important role in human development. Dr. Stephen Mithen is one such scientist interested in the role music played in the

lives of our early ancestors. Author of *The Singing Neanderthals: The Origins of Music, Language, Mind, and Body*, Mithen commented for PBS that Neanderthals do not appear to have had language, but that he believes there is evidence they may have communicated in musical phrases. His comments included: “The Neanderthals—there’s no evidence that they had language. But they must have had a sophisticated form of communication. They were just like humans, they (might) would have had to have told other people how they’re feeling, they would have had to look after their children and nurture them. They had to have made plans for group hunting and general movement. So what sort of communications system did they have?”... “So I think they communicated by using sets of phrases, almost like musical phrases that would have had semantic meanings, phrases such as something that would translate into “Let us share meat,” “We’ll go hunting” or “How are you feeling?” but would have been expressed in musical tones, different types of pitches, different types of rhythms. They might have used these also to build a sense of group identity, very much how we use music today, especially for caring for infants, you know just like we do today with our youngest children before they got language, we sing to them and move them rhythmically. I’m sure the Neanderthals would have been doing exactly the same.”

Communication through Music

Perhaps music was indeed a language of communication. Evidence mounts that, throughout time, music has played a role in developing cultures. In 1991, a frozen young man was found in the Turkan region of Italy. He had with him what appeared to be a carved bone flute which testing found to be 40,000 years old. In the Dictionary of the History of Ideas at the University of Virginia, the Gale Group shows how early humans related music and science, how humans depended on music for learning:



“To construct even the simplest instruments out of strings or pipes, musicians had to derive as best they could the laws of sound production. The most elementary fact, generally accredited to the Pythagoreans but probably known to the ancient Babylonians and Egyptians, is that if a string is stopped in the middle, each of the two halves sounds an octave higher than the whole; if divided into three parts, two-thirds of the string will sound a fifth above the whole; and so on.

“Because it relies on precise measurement, music was considered until fairly modern times, indeed until around 1650, a branch of science. In late antiquity it began to be included in the four mathematical disciplines of the quadrivium along with arithmetic, geometry, and astronomy. But actually only theoretical music was accorded this place. No singing or playing was included in this curriculum. Practical music making went its own way, maintaining only limited contact with theoretical music, drifting farthest from it in the Middle Ages and approaching nearer during the Renaissance.

See:<http://www.pbs.org/wnet/musicinstinct/video/music-and-evolution/music-and-the-neanderthals-communication/66/>

The musical component of the mathematical curriculum in the universities never went beyond the heritage of Greek music theory. Only the Renaissance humanists succeeded in making this relevant to Western musical art.”²

The Healing Aspect of Music

In the last century more attention has been given to the healing aspects of music. Let us tell you a little more about the work of Dr. Tomatis. He was the son of a French opera singer and he became a renowned Ear, Nose and Throat physician whose work with music and listening achieved worldwide recognition.

Tomatis recognized the possibility that music—specifically classical music (Mozart and Strauss, for example) and Gregorian Chant—could work with the ear to energize the mind. He and other colleagues paid close attention to the healing aspects of music. He observed that our ability to listen relies about 90% on air

conduction (sound that is transmitted through the air) and about 10% on bone conduction (sound that is transmitted through the vibration of our bones). The relationship of these two conductors contributes to the relative clarity a person perceives while processing sound. Bone and air conduction, in turn, affect harmonic balance.

Dr. Tomatis found that music could change emotions and lift spirits, depending on how effectively we listen. He theorized that music could organize the brain to function in a more efficient and effective manner. Ultimately, Tomatis was inspired to find a way to stimulate the ear in order to activate the integration of the brain, nervous system, physiology and emotions and create *long-term* change for individuals. Indeed, the ability to obtain **lasting**, durable change is what distinguishes the Tomatis® Method from other listening programs.

The thousands of clinical observations that he made during his research on occupational deafness, carried out for the French Ministry of Labour and the Ministry of Aviation and Shipyards, enabled him to establish the relationship between hearing and language and, by extension, the relationship between listening and communication. He was a peerless clinician gifted with exceptional intuition.

The good doctor also worked with professional singers—many of them friends of his opera singer father—from an early stage in his medical career. He observed clinically that there were relations of cause and effect between troubles in hearing and phonation, the process by which the vocal chords produce certain sounds through quasi-periodic vibration. Specifically, he discovered that the distorted frequencies perceived by a patient's ear are reproduced vocally. In other words, **the voice can only produce what the ear hears.**

Tomatis worked to correct the hearing of his patients by creating a complex electronic filtering and gating system, aptly named the “Tomatis Electronic Ear.” This sophisticated, electronic device, employs certain frequencies of music to retrain a client's ears. Opera singers regained their voices; children spoke more clearly; and students learned more easily. Their brains and nervous systems regained their balance, that critical balance necessary to achieve personal success.



Tomatis' work indicated that while music alone can be healing in the short term, music programmed specifically with **the Electronic Ear initiates long-term change or improvements.** His many scientific discoveries resulted in the emergence of a new multi-disciplinary science called Audio-Psycho-Phonology (APP), which Tomatis pioneered over 50 years ago.

2 See: <http://etext.virginia.edu/cgi-local/DHI/dhi.cgi?id=dv3-32>

Gregorian Chant and The Benedictine Monks

In his book *Beauty and the Soul*, transpersonal psychologist Piero Ferrucci³ illustrates the power of music to heal by telling a story about a group of French monks.

Shortly after the liturgical reforms of the Second Vatican Council in the 1960s, 70 out of 90 monks in a particular Benedictine monastery grew strangely ill. “They were lethargic, depressed, unable to carry out their normal tasks,” writes Ferrucci. Various medical experts came to study the monastery, but only one—a research audiologist named Tomatis—was able to identify their problem.



Before the Vatican II reforms, the monks had sang Gregorian Chant eight or nine times a day for 10 to 20 minutes at a time. After the reforms, they hardly chanted at all – the only one thing that had changed in their lives. “Tomatis prescribed a return to the past order, and within weeks all the monks recovered,” Ferrucci reports.

David Neff, editor-in-chief of the Christianity Today Media Group, admits that it is hard to draw a scientific conclusion from the story but he draws three conclusions⁴.

1. Monastic chant—although it is sung in unison--creates a kind of interpersonal harmony. When we sing together, we breathe together. We become something organic.
2. Chant is meditative, attuning us to truth. When we are out of tune with truth, we become dis-eased. We can only be healthy when we are in tune with the truth.
3. Singing is physical. Those who don't do it much may not realize how important posture and breathing are to proper singing, but there is certainly a healthful property to practicing the proper postures and diaphragmatic breathing demanded by singing.

Since Tomatis's experience with the monks, many studies have been done that demonstrate the link between music and healing. Today, music is now used in hospices, in psychiatric wards, in pain management programs, in neonatal care units, and generally, throughout hospitals.

³ Ferrucci, Piero, *Beauty and the Soul: The Extraordinary Power of Everyday Beauty to Heal Your Life*, Tarcher (August 20, 2009)

⁴ See: <http://ancientevangelicalfuture.blogspot.com/2009/07/healing-power-of-church-choirs.html>

Music During Pregnancy

Tomatis was the first to note that language learning begins *in utero*. His ground-breaking work with pregnant women showed the critical developmental role the mother's voice plays for the unborn child.

A large double-blind study⁵ at the Vesoul and Foche hospitals in Paris, France shows how every birth can be a happy event and how future mothers and infants can use the Method to develop a beautiful relationship. Pregnancy anxiety decreases, actual birthing is easier, and newborns generally have good muscle tone and are very bright.

Pregnancy and Tomatis

In the early days of Tomatis' work, a large double-blind study was conducted at the Vesoul and Foche hospitals in Paris, France. This study was constructed with a large control group in order to demonstrate the value of the Tomatis Method for pregnant women. The study shows how every birth can be a happy event and how future mothers and infants can use the Method to develop a beautiful relationship.

We now know that, at four and a half months, the ear is fully functional and the fetus begins to learn language. After the sixth month, a fetus moves in rhythm to its mother's speech.

Konrad Lorenz found - in his study of ducks - that babies are born imprinted to their mother's voice⁶. Phonemes are the smallest units of sound from which we form words. There are 50 phonemes from which all language is formed. By the seventh month in utero, the fetus responds to each of the phonemes in a word (spoken by the mother) with a specific muscular movement. There is no time delay between the sensory input of the mother's voice and the motor response of the baby. This is consistent with Tomatis' theory that the fetus is listening to the mother's voice, via rapid bone conduction, and that this listening plays an important role in the development of audio-vocal control and language in the fetus.

Dr. Henry Truby, Emeritus Professor of Pediatrics and Linguistics at the University of Miami, points out that after the sixth month, the fetus moves in rhythm to the mother's speech and that spectrographs of the first cry of a premature infant at 28 weeks could be matched with his mother's voice⁷. The elements of music—tonal pitch, timbre, intensity and rhythm—are also elements used in speaking a language. For this reason, music prepares the ear, body and brain to listen to, integrate and produce language sounds.

⁵ See: <http://tomatisassociation.org/Content/Documents/Document.ashx?DocId=60431>

⁶ See: <http://ajp.psychiatryonline.org/cgi/content/full/161/10/1767>

⁷ See: <http://www.atotalapproach.com/docs/TomatisPregnancyProgram.pdf> & <http://www.birthpsychology.com/lifebefore/sound1.html>

Origins of the Tomatis Effect

Tomatis' work grew out of his curiosity about the influence of the human ear on a healthy mind and body. He ultimately concluded that overall human health is intimately related to hearing and listening. He developed, researched and proved his theory that the voice only produces what the ear hears and presented his work at the Academy of Medicine and the Academy of Science in Paris in 1957 and 1960 respectively. He officially presented his invention, the Electronic Ear, at the Brussels World's Fair in 1958.

Tomatis' theory was independently confirmed at the Sorbonne in 1957 and became known as the Tomatis Effect. The Tomatis Effect is summarized in three Tomatis laws:

1. The voice only contains what the ear can hear.
2. If the hearing is modified, the voice is immediately and unconsciously modified.
3. It is possible to durably transform phonation when auditive stimulation is maintained over a certain time
(the law of duration or remanence).

Clinical vs. Empirical Data on the Tomatis® Effect

Many professionals find the underlying science behind the Tomatis Effect critical to their acceptance of its profound effectiveness. So far, unfortunately, the available clinical studies are in foreign languages, difficult to find, or directed to just one result. These results can be helpful for a specific subject, but not applicable across all situations. While there are clinical studies in progress as we write, they are incomplete. The empirical data indicates that many adults and children around the world find that the Method helps with:

- o Anxiety, Depression
- o Stress Management
- o Work Performance Issues
- o Learning Difficulties and School Problems
- o Communication Problems, Dyslexia
- o Relationship Difficulties – partner, family, friends
- o Social Difficulties – withdrawal, isolation, loneliness
- o Self-Esteem
- o Motivation – not living life fully / creatively
- o Memory / Concentration / Focus
- o Energy
- o Body-Image – Posture / Balance
- o Personal Development
- o Creativity
- o Music, Voice, Singing
- o Foreign Language assimilation and learning

H.A. Stutt, in a review of the current Tomatis research (1983)⁸ revealed that the Method may lead to an increase in I.Q, better communication and reading skills and the ability to express verbally thoughts and feelings.

⁸ Stutt, H.A. (1983) The Tomatis Method: A review of current research. Montreal: McGill University

Bibliography on the Tomatis® Method

Anyone wishing to delve deeper into the research will find excellent bibliographical references on the website of the International Association of Registered and Certified Tomatis Consultants⁹. *Ricochet Online Journal*, the official, peer-reviewed journal of the Association, is dedicated to reporting information about the Tomatis Method and its many applications worldwide¹⁰.

Imitation: the Sincerest Form of Flattery

Over the past 10 years, a number of acoustic and sound-based “listening” programs have sprung up. Many of these programs claim to be “based” on the work of Dr. Alfred Tomatis or to be aligned with his accomplishments. Why?

The answer is simple. Tomatis is widely considered to be the founder of listening programs. Mention of his name in a product or service brochure tends to reassure consumers who have done their research and are knowledgeable about some of the developments in the field.

Unfortunately, many of the programs and methodologies claiming to be Tomatis-based often have only the remotest relationship with the work of Alfred Tomatis. Such programs use the lingo, but they do not employ the proven and proprietary combinations of programming found in the actual Tomatis Method and, in the new Solisten® system. They do not provide the specific elements of the Tomatis Method that produce the Tomatis Effect.

For instance, some organizations sell CDs by referring to Tomatis’ work. In fact, such CDs are often only compilations of musical works, more or less well put together, but which are **unable to produce the effects of the Tomatis Method**.

How then can one get the full benefits of the Tomatis Method? And what harm might be done if someone’s less-than-satisfactory experience precludes them from trying the true Tomatis program, which is life changing?

Accredited Tomatis Centers and Consultants¹¹ alone may use the Electronic Ear, the proprietary device invented by Tomatis and then updated and perfected with ongoing research and development at TDSA. This device includes a “gating system,” advanced frequency filters, delay controls, and professional grade headphones that use both **air and bone conduction**. The resulting programs, customized for each user, affect listening attentiveness, auditory laterality, the localization of sound in space, latency time, sound discrimination, memory, and, finally, the audio-vocal connection.

Can You Add the Benefits of the Tomatis Effect to Your Professional Practice?

Professionals who are not Tomatis Consultants but who want to provide the benefits of the true Tomatis Effect to their clients now have a solution. It is called Solisten. Despite the worldwide demand for a portable solution, frankly, the road to this solution has been a long one. Why?

The developers at TDSA were skeptical that the genuine Tomatis Effect could be obtained without the sophisticated equipment and rigorous professional training found in the accredited Tomatis Centers. On the other hand, they knew that in these days of traffic jams and busy schedules not all clients can come to a local accredited Center with the frequency that the Method requires.

⁹ See: www.TomatisAssociation.com

¹⁰ See: <http://ricochet-onlinejournal.com>

¹¹ See: www.TomatisAssociation.org

Now, after costly trials and disappointments, TDSA has delivered the solution that so many

colleagues and friends have been requesting. It is called Solisten®: an extremely high quality, portable digital device and headphones designed to extend the benefits of the Tomatis® Effect to a much larger audience.

In order to launch the product, TDSA created a new, US headquartered company called Solisten, LLC. Now, for the first time ever, the company that owns the original Tomatis Method is making the Solisten package available to professionals who want to train in the Tomatis work and add the benefits of the Tomatis Effect to their professional practice.

If you are intrigued by the healing power of music and the benefits of the **Tomatis® Effect** you may wish to check out the following testimonials.

Solisten® and Tomatis® Method Client Stories

We are very excited by the results reported by the professionals using Solisten! Here are some meaningful testimonials:

“I wanted to let you know that I feel wonderful! I have more energy than ever and I do my daily routine with pleasure. My mind is starting to open up with ideas about my business and how I want to re-invent myself as a professional. In fact, there are many thoughts and plans that have been coming to mind about my life in general...My dreams of dreary rain on dark days have transformed into exhilarating spring rains. I know there are many more mountains to climb and the process is ongoing. For today, I feel better than I have in a long time. In fact, I don't remember the last time I have felt this, if ever. I am calm, yet energized. My mind is uncluttered...thank you for listening to me for all these years. Second, thank you for Solisten, which has opened up my ears so that I can really hear your guidance and "listen" to myself for the first time in my life.”

Adult client under treatment for depression and anxiety for many years

“Both families have seen some very dramatic differences with their children. The 9-year-old (Asperger Syndrome) boy began sleeping in his bed four out of the first five days we began Solisten with him. He will currently play a couple of table games (Orthello and Dots) demonstrating logic in his moves. His logic is also seen in his language. The 5-year-old SPD (sensory processing) girl has shown the most dramatic differences. Her language has improved incredibly in terms of logical thinking. Her motor skills appear better coordinated. She has begun coloring between the lines and is willing to try to print other letters/words other than her name. Her cutting with scissors is also much better. Her parents (her dad is a pediatrician) feel it is all due to Solisten. I have been working with her for 2 1/2 years and she has had speech services for over 3 years. She also receives special ed. I also agree Solisten has been the difference.”

A new consultant about some of his first Solisten clients

“I took my first Tomatis program 12 years ago and have taken regular refreshers every two years. I just tried the Solisten program and just like my other Tomatis experiences, my energy is renewed. My memory is clear, I hear better, am more organized and getting more done in a day than before. Each time I take a listening program, I clean through files and organize my house. It is a great feeling!”

A woman in her 50s

“I completed law school with very good grades and took the Bar exam. I had to re-take one part of the Bar exam. Before the re-take, I took the (full) Tomatis Method and something happened when I took the program. I started processing information more quickly. I was able to easily recall what I had studied and could focus well and answer the questions. I passed the Bar!”

A young lawyer commenting on his learning and processing improvements

“My two teenage children were fighting each other all the time. Neither was motivated to embrace life, get a job, or improve their selves. All three of us took the (full) Tomatis® Method and our lives have changed. My son at 18 has a job, and has saved his money and has his own car, and has a full scholarship to university. My daughter, who displayed strong symptoms of dyslexia, at 16 took leadership positions at her new high school, graduated early and also has a full ride to university. I am watching amazed at how positive our lives have become and the friendship that has developed between my kids.”

A mother and her two teenagers who improved their relationships

”As of week 4 of school, my son’s grades are as follows: writing composition B+ (this involves creating complete sentences- a very big deal - previously couldn't do); spelling A+; English B; vocabulary A; geometry A; social studies B+. His handwriting continues to improve and show evidence of smooth cursive lines and connections. His focus and attention appear to be very good throughout the day. We have now removed the melatonin vitamins for sleep, completely from his daily regimen. His teacher is creative and passionate, and very positive in her reinforcement methods. He is receiving NO special accommodations with regard to workload, etc...He continues to have improved short-term memory with regard to homework assignments and due dates. This child is excelling in his school work.”

Mother of a nine-year-old boy diagnosed with sensory integration problems, anxiety, ADHD and OCD

Conclusion

We have seen that from as far back as the Neanderthal, our brains have responded to music to help us function well, learn, communicate and emote.

Based on the discoveries of Dr. Tomatis, Solisten® Listening Training can improve a wide variety of issues because the ear is rich in neural connections with the brain stem, the cerebellum, the higher cortical centers, and the vestibular connections, the body and musculature. Problems and deficits which have a neurological basis can be greatly helped and even remediated in some cases.