

## What is Sound Therapy?

Given the sheer volume of information available on auditory interventions, parents have a formidable and unenviable task in selecting the clinician and type of program most suitable for their child's specific needs.

Reality is that each of the forms of auditory intervention available has something to offer and that each may have points of applicability for an individual child. A clinician trained in several different forms of auditory intervention might reflect less specific bias on methodology and be helpful in guiding parents through the method of training or appropriate sequencing of techniques most beneficial for their child.

The Sensory Gym is able to offer diversity in the auditory interventions available for a client.

Colleen Hacker, MS, OTR has a high level of training in a range of auditory techniques and is considered a leading clinician in this area of practice. Her first certification in sound therapy (Berard Auditory Integration Training) was acquired in 1994. In 1997, Colleen began collaborating with Sheila Frick on the beginning therapeutic listening® courses (Listening with the Whole Body), and in 1998, she joined Sheila Frick's practice in Madison, Wisconsin and began a 6 year intensive collaboration training and teaching with Sheila. Colleen co-authored the first edition of the book, **Listening with the Whole Body**.

Colleen is trained in the following auditory intervention programs:

- Berard Auditory Integration Training (AIT©)
- SAMONAS Sound Therapy
- Therapeutic Listening®
- Listening Fitness Trainer (LiFT)
- The Listening Program®

In an effort to make these programs as accessible and affordable to families as possible, The Sensory Gym offers the following intervention programs:

- Berard Auditory Integration Training (AIT©)
- SAMONAS Sound Therapy
- Therapeutic Listening®

### **Berard Auditory Integration Training (AIT©)**

Most of the clinically based auditory training techniques are based on the early work of Alfred Tomatis, including that of Dr. Guy Berard, a French medical doctor who studied and worked with Tomatis.

Berard felt that the original protocol of Tomatis was too lengthy and developed a different method of filtering sound. This technique, which uses filtered pop music in which sound frequencies are electronically modulated at random intervals for random periods of time, is **called Auditory Integration Training (AIT©)**. Berard believes that hypersensitive hearing causes auditory processing problems. Berard and his technique gained worldwide

recognition in 1990 with the publication of Annabel Stehli's biographical account of her daughter Georgie. **The Sound of a Miracle** describes how Georgie, diagnosed with severe autism, greatly benefited from a course of 20 AIT© treatments with Berard. AIT© is a clinic based program; implementation relies upon the use of the Earducator, a device developed by Berard for filtering music, and upon a practitioner with specialized training.

The Sensory Gym is one of a handful of clinics Australia-wide that can provide AIT©.

A traditional AIT program requires a 10-day intensive clinic-based program. AIT© is especially helpful in reducing sound reactivity and other types of sensory reactivity as well as helping to regulate the disregulated child.

The Sensory Gym offers both a traditional 10-day program and shortened 5-day programs making use of the AIT© methodology.

Almost 15 years of experience have led to the creation of alternative protocols for the children seen in Colleen's practice settings. All AIT© occurs within the context of an entire treatment program; all AIT© sessions are followed by 30-60 minutes of work in one of the clinic gyms to integrate and organize the input received from AIT©. In using this type of protocol as "standard," it has been possible to promote integration and organization throughout the intensive treatment, and periods of disorganization can be minimized.

### **SAMONAS Sound Therapy**

Beginning in 1997, Colleen worked and trained with Ingo Steinbach.

Ingo Steinbach is the developer of ***SAMONAS Sound Therapy***. Steinbach is a physicist and sound engineer who has created a recording method in which the spatial essence of the recording is optimally preserved and the high harmonics of the music are "activated" in order to be energizing and regulating. SAMONAS CDs are utilized both during treatment sessions and as part of home and school programs. They are especially beneficial for refinement of modulation, attention, and higher level motor and communication skills.

All of the recordings used in Steinbach's work are based on the SONAS (system of optimal natural structure) principle, which makes it possible to maintain the valuable elements and structure of natural sounds throughout the entire process of recording, processing and reproduction.

The choice of music is based on the principles of music therapy. Most selections are classical music and some inclusion nature sounds.

Steinbach also developed a special device called the envelope shape modulator which enhances the upper frequency range of the music, thereby "spectrally activating" the recordings.

The higher frequencies provide information about directional distance of sounds as well as other detailed information about the sound source. In addition to the spectral activation, there are also brief passages on the CDs with intensive filtering during which almost nothing but the overtones in the music can be heard. Listening to these "high extension" passages trains the ear to pay attention to the upper ranges in the sound spectrum. The higher tones are the

parts of the sound spectrum that captivate attention and hold interest. These recordings are identified as SAMONAS, for spectrally activated music of optimal natural structure.

Colleen has completed advanced training in SAMONAS Sound Therapy, allowing her the use of bone conduction equipment combined with the music utilized in a SAMONAS Sound Therapy program. The bone conduction unit engineered by Ingo Steinbach allows for adjusting the relative proportion of sound energy delivered via bone conduction or air conduction. Bone conducted sound tends to be powerfully organizing for treatment of individuals with sensory modulation disorders. Additionally, sound amplified by bone conduction can bypass the middle ear. The biomechanics of the ossicle chain can become damaged or inefficient following repeated middle ear infections. Bone conduction provides a means of circumventing the middle ear and while still supporting the listener to “make sense” of sounds.

### **Therapeutic Listening®**

The term *therapeutic listening*® was coined by Sheila Frick, OTR, a clinician and lecturer from the United States, to include the CDs produced by Steinbach as well as some additional CDs produced in the US. The variety of CDs currently available ensures availability of this form of home programming for clients with a wide range of therapeutic needs. The CDs used in therapeutic listening® require use of specific headphones and a portable CD player. Programs utilizing therapeutic listening® typically last from 2 – 6 months, with many individuals continuing on some form of therapeutic listening® for longer intervals. Maximum effectiveness in treatment outcomes is promoted by daily use.

Therapeutic Listening® implies that the listening programs are individualized to each client and are ideally suited for application in home and school settings. Therapeutic Listening® also implies that the actual listening program is only part of a comprehensive treatment plan treating the underlying sensory processing disorder. The use of therapeutic listening® in conjunction with other sensory integrative techniques seems to increase the effectiveness of both treatment modalities. An accompanying decrease in the time necessary to meet treatment goals in the areas of modulation, balance and movement perception, exploration of the environment, sense of physical competence, and drive to challenge one’s own praxis and sequencing abilities as well as social competence and language abilities is commonly experienced.

Colleen collaborated closely with Sheila Frick, from 1997 until her move to Australia, including co-authorship of the first edition of the book **Listening with the Whole Body**. Colleen has helped train thousands of the clinicians in the technique of therapeutic listening®.