



### Neurologic Music Therapy Techniques

Clinical research has shown the numerous positive effects of music therapy in the treatment of people who have neurological disease and disability. Scientific studies have shown the parallels between singing and speech production, rhythm and movement, and song structure/mnemonics and learning. These parallels provide evidence-based support for the use of music in the treatment of non-musical goals. Neurologic Music Therapy techniques include:

**Rhythmic Auditory Stimulation (RAS)** – RAS is a specific technique to facilitate rehabilitation of movements that are intrinsically biologically rhythmical. One of the most important of these rhythmical movements is gait.

**Patterned Sensory Enhancement (PSE)** – PSE uses rhythmic, melodic, harmonic and dynamic aspects of music to provide temporal, spatial and force cues for movement. These movements reflect functional exercises and activities of daily living.

**Therapeutic Instrumental Music Playing (TIMP)** – TIMP uses playing musical instruments to exercise and simulate functional movement patterns.

**Speech Stimulation** – The use of musical and song patterns to stimulate non-propositional speech

**Melodic Intonation Therapy (MIT)** – A treatment technique for aphasia rehabilitation, which utilizes a client's unimpaired ability to sing to facilitate spontaneous and voluntary speech. MIT incorporates chanted and sung melodies that resemble natural speech intonation patterns.

**Rhythmic Speech Cuing** – The use of rhythmic cuing to control the initiation and rate of speech thru cuing and pacing.

**Vocal Intonation Therapy** – Intoned phrases simulating the prosody, inflection and pacing of normal speech. Vocal exercises to train all aspects of voice control.

**Therapeutic Singing** – A technique that is used to practice articulation or initiation of speech as well as increase breath control and posture.

**Oral Motor Exercises** – The use of different musical elements to practice muscular control of a speech apparatus to facilitate the production of specific sounds.

#### References:

Thaut (1999) Training Manual for Neurologic Music Therapy. Center for Biomedical Research in Music: Colorado State University

For more information about NMT please visit the  
Center for Biomedical Research in Music at:  
<http://www.colostate.edu/depts/cbrm>