

Facilitating Relationships... Promoting Independence

The Use of the Metronome in Therapy [Reprinted from NMTSA Functional Cadence Newsletter, Winter 2009] Paige Jacobson, MT-BC, NMT and Michelle Hardy, MT-BC, NMT Fellow

Have you ever heard the sound of a "click, click, click" coming from your child's therapist's pocket from time to time as they join you in the waiting room at the conclusion of your child's session? Do you ever wonder why? That sound is coming from a device known as a metronome. The metronome is a tool that "beeps" or "clicks" to a tempo marking that is set by the therapist. A tempo is determined according to how many clicks per minute you want to hear (ex: a tempo of 120 =120 clicks every minute).

The metronome can create a consistent, regulated auditory rhythmic template (a timed structure) for the person receiving therapy based on his/her initial arousal level and his/her functional arousal. When you hear your therapist refer to 'arousal', they are talking about the alertness of your child's body and his/her ability to respond to the environment based on how 'awake' they are. Arousal levels vary from person to person and from day to day, and we each have an optimal level of arousal that allows us the greatest success for learning (i.e. we can take information in, process it, and respond according to our environment.) Many of us have intact, 'normal' sensory systems, yet we still utilize external stimuli to alert us, typically in the form of a Starbucks or a Big Gulp. People that have sensory needs often seek out environmental stimuli and input to help regulate their arousal state, but although these accommodations are a great start, the impact is not sustainable, and not always appropriate. Because of what we know about rhythm and how it affects the brain, neurologic music therapists can positively affect one's state of arousal.

Here is what research tells us about rhythm and what it means for YOUR CHILD:

- *Rhythm can be processed in the brain at subconscious levels of sensory processing which means your child does NOT have to cognitively attend or "think about the metronome" to be influenced by rhythm.
- *Auditory rhythmic cues create stable reference markers to guide the timing of motor responses which then allow your child to anticipate, motor plan, and execute motor tasks more effectively. This essentially means that the thoughtful use of rhythm can assist your child in starting their bodies (ex: getting out of a chair or using their voice) and demonstrate their true cognitive abilities...they often UNDERSTAND what is being asked but can't make their bodies move into action.
- *Auditory rhythmic cues create stable reference markers to guide the timing of motor responses. Motor actions (ex: speech and walking) are improved when a structured division of time is provided for the brain to utilize. Rhythm has the ability to prime the brain to fire neural impulses more quickly and accurately which then allows your child to anticipate, motor plan, and execute motor tasks more effectively.

If you are interested in more detailed information on this topic, please check out Thaut's "The Connection Between Rhythmicity and Brain Function" article in the Parent Empowerment Center.