

Music, Rhythm and Motor Rehabilitation

What would you think if you saw a person unable to take a step on his own walk independently while listening to a rhythmic beat?

We have seen residents who are unable to initiate or coordinate movements due to MS or Parkinson's disease suddenly begin to walk or even dance, seemingly without effort, in response to strong rhythmic music. This happens because these people have lost something called executive function -- that is they cannot plan movements on their own. However they may still have the ability to move, and this ability is unlocked by music.

Physical Movement and Music Therapy

When an individual needs to improve physical strength and flexibility, specific movements are encouraged through exercise. The music therapist uses musical instruments that require specific movements in order to meet these exercise needs. For most individuals, finding the motivation to exercise is sometimes difficult. Combining exercise with enjoyable, creative and successful musical experiences can often accelerate the rehabilitation process.

In certain cases, adaptive computer instruments are employed so that patients with very limited movements can access sound-making synthesizers. Computer-monitored music making can measure progress and provide directive feedback to guide the therapy.

How it works:

- Specialized equipment can be adapted to existing abilities, no matter how limited.
- Music making provides experiences that transcend the usual focus of exercise.

What happens during a session:

- Fine motor (dexterity) and/or gross motor (range of motion) activities
- Rhythmic strengthening exercises
- Motivation, focus and attention

Outcomes:

- Motion initiated in parts of the body that have limited movement
- Movement maintained in affected extremities
- Increased range of motion

- Repertoire of exercises built up so that a resident can perform independently with confidence
- Motivation to participate in daily activities
- Increased neuromuscular control

The exciting question is, "Can we develop auditory rhythmic-based cues which will consistently 'turn on' motor initiation so that people who are unable to move on their own can recover greater motor function and control?"