



# Using Music Therapy in Stroke Rehabilitation

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# What is Music Therapy?

- a well recognized profession over 40 countries around the world
- use music to achieve therapeutic aims
- functional use of musical interactions for the purpose of **restoring, maintaining & improving** client's well-being, including:
  - emotional, physical, cognitive, social and psychological health.

*(Source: Australian Music Therapy Association -- 2008 )*

# Who can benefit?

- People of **all ages and abilities**, from early childhood to elderly adulthood.
- Music therapists design and conduct music therapy programs to meet individual needs.
- It allows individuals of **any age, background and varied disabilities** to feel confident in their abilities and motivates them to achieve their goals.

# Music Therapy Goals

- Some examples of music therapy goals are:

◇ Cognitive development

◇ Develop gross and fine motor skills, and coordination

◇ Emotional and self expression

◇ Enhance communication skills

◇ Foster social interaction

# How Music Can Heal the Brain

## Studies showing Music can:

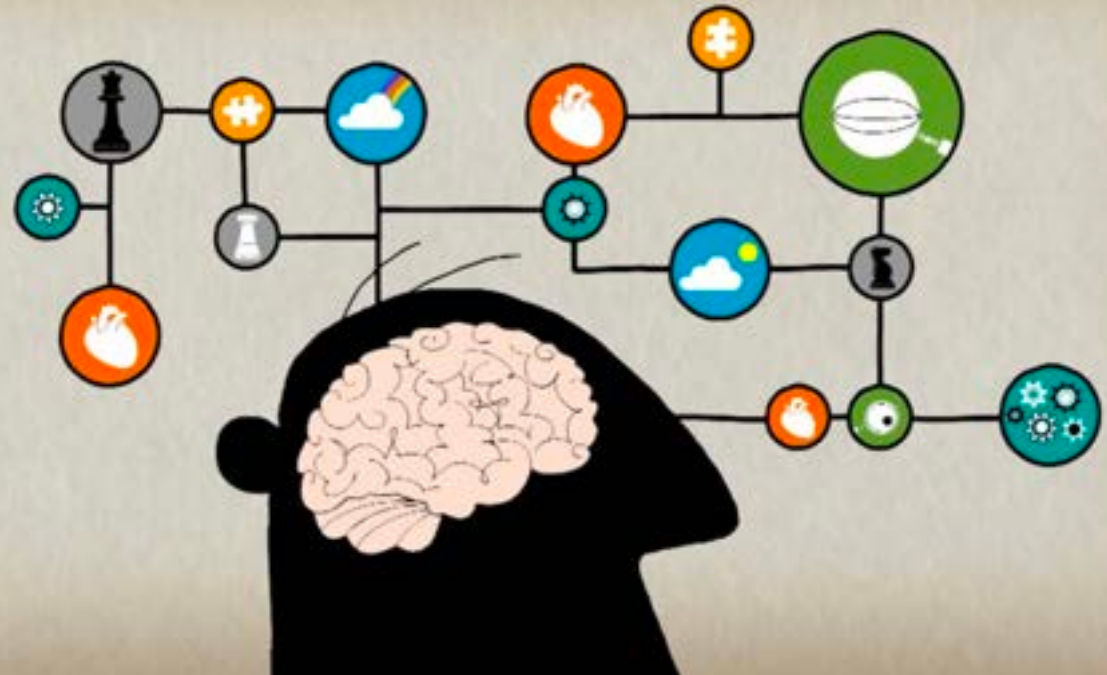
- Reduce levels of stress hormones,
- Decrease Heart rate and Blood pressure,
- Relieve Anxiety, and uplifting mood

## Neuroscience have revealed music therapy can also:

- Help patients overcome head injuries,
- Recover lost speech or mobility,
- And even rewire their brains.

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Music is so powerful  
because the brain **doesn't** have a **single**  
**section** devoted to music.

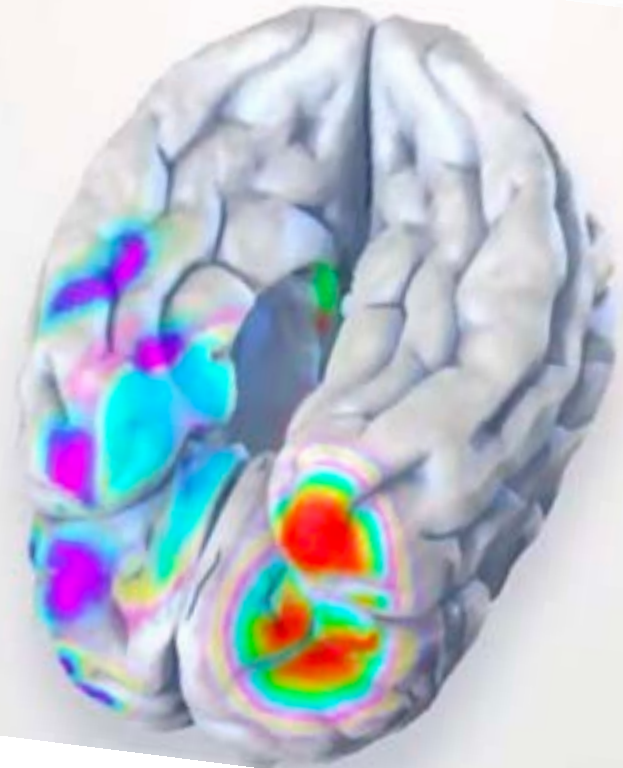


THE PATHWAYS ACTIVATED BY MUSIC ALSO  
ORCHESTRATE LANGUAGE, ATTENTION, MEMORY,  
COMPLEX COGNITION, AND MOVEMENT



## Power Of Music On The Brain: Dementia & Parkinson's

- Alzheimer's or dementia who has a lot of agitation and sundowning, MT shows remarkable results for decreasing it.
- Traumatic brain injury or Parkinson's disease, the Rhythmic Auditory Stimulation can help stabilize client's gait.





# Potential benefits of Music Therapy In Stroke Rehabilitation

- Attenuate Dysphagia and Expressive Aphasia
- Improve cognition and motor function
- Alleviate negative moods
- Accelerate neurological recovery in stroke patients

# Samples of Neurologic Music Therapy

## Sensorimotor Rehabilitation

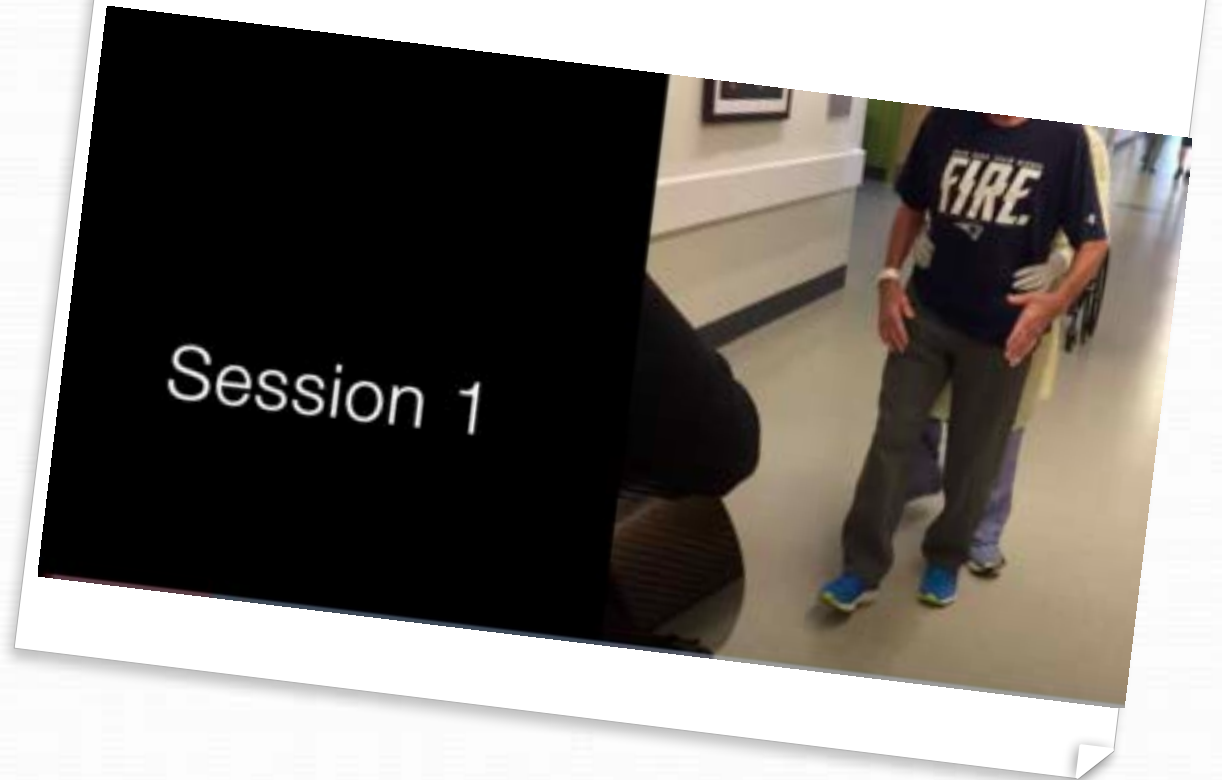
- **Rhythmic Auditory Stimulation (RAS)**
  - Always uses in **Gait therapy**
  - Aid in the recovery of functional stable (stroke, Parkinson's Disease, traumatic brain injury, effects of aging, etc.)
  - The rhythm as an **external timekeeper entrains desired movement frequencies**, through anticipatory cueing of functional movement patterns

# Samples of Neurologic Music Therapy

## Sensorimotor Rehabilitation

- **Patterned Sensory Enhancement (PSE)**
  - Uses music elements to provide spatial, temporal, and force cues to movement that are not intrinsically rhythmic.
- **Therapeutic Instrumental Music Performance (TIMP)**
  - Playing musical instruments in order to exercise and stimulate functional movement patterns.

# ♪ Music and Neuroscience to assist Gait Training Following Spinal Cord Injury



# **Neurologic Music Therapy**

## **Speech and Language Rehabilitation**

- **Melodic Intonation Therapy (MIT)**
- **Oral Motor and Respirator Exercises (OMREX)**
- **Therapeutic Singing (TS)**
- **Rhythmic Speech Cuing (RSC)**
- **Musical Speech Stimulation (MUSTIM)**

# ♪ Music Therapy and Expressive Aphasia

## Gabby Giffords Finding Voice Through Music Therapy

Gabby Giffords Won't Back Down



# Neurologic Music Therapy Cognitive Rehabilitation

## 出街要帶三寶



要出街，帶三寶  
摸下手袋有冇銀包，電話，鎖匙  
帶齊三寶先去街

銀包鎖匙同電話 搵三寶  
銀包鎖匙同電話 帶三寶  
銀包鎖匙同電話 已執好  
銀包鎖匙同電話 Yeah!

# strokeRehabOnline.com

- Doctors feel that **repetitive music stimulation** over time can help **create new connections**.
- Songs with lyrics can be used to help stroke patients with language problems.
- Singing along to favourite songs can make it **easier** for patients to **form words and phrases**.
- Using movement in time **with the music and working on rhythm** can help in the **recovery of motor skills**.



*Thank You!*



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