



# Music for Mind and Memory

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# Peace Like a River

1. I've got peace like a river, I've got peace like a river,  
I've got peace like a river in my soul.

I've got peace like a river, I've got peace like a river,  
I've got peace like a river in my soul.

2. I've got joy like a fountain

3. I've got love like the ocean

# My music therapy journey



# Topics for today's presentation:



- ▶ Definition of Music Therapy
- ▶ Research on benefits of music therapy
- ▶ Music Therapy Experiences

# What Is music therapy?

**The use of musical experiences verified by research, implemented by a board-certified music therapist, to help people improve or maintain health and wellness.**

# Music therapists use four methods of intervention:



RECEPTIVE-

listening



RE\_CREATIVE

covers



COMPOSITIONAL

songwriting

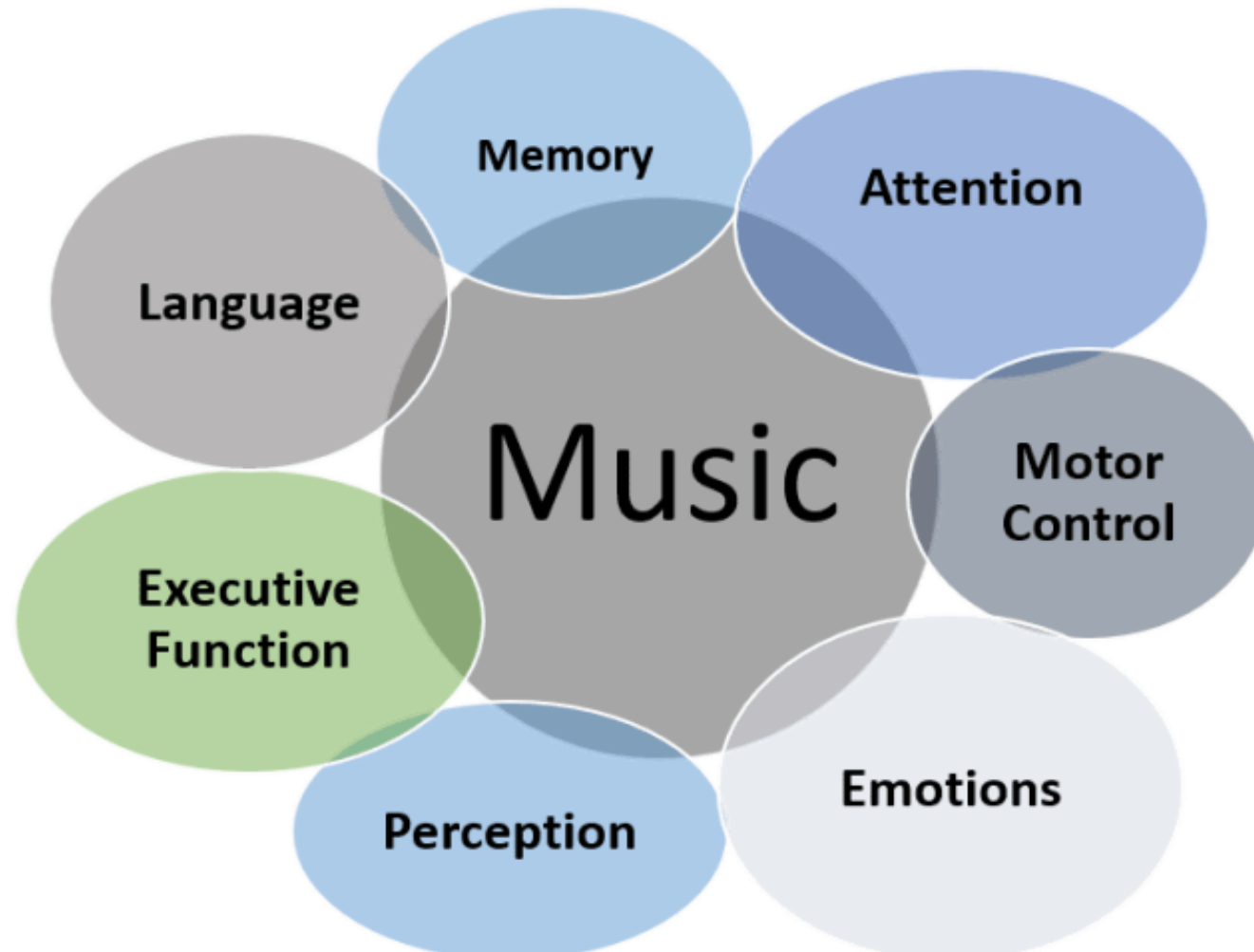


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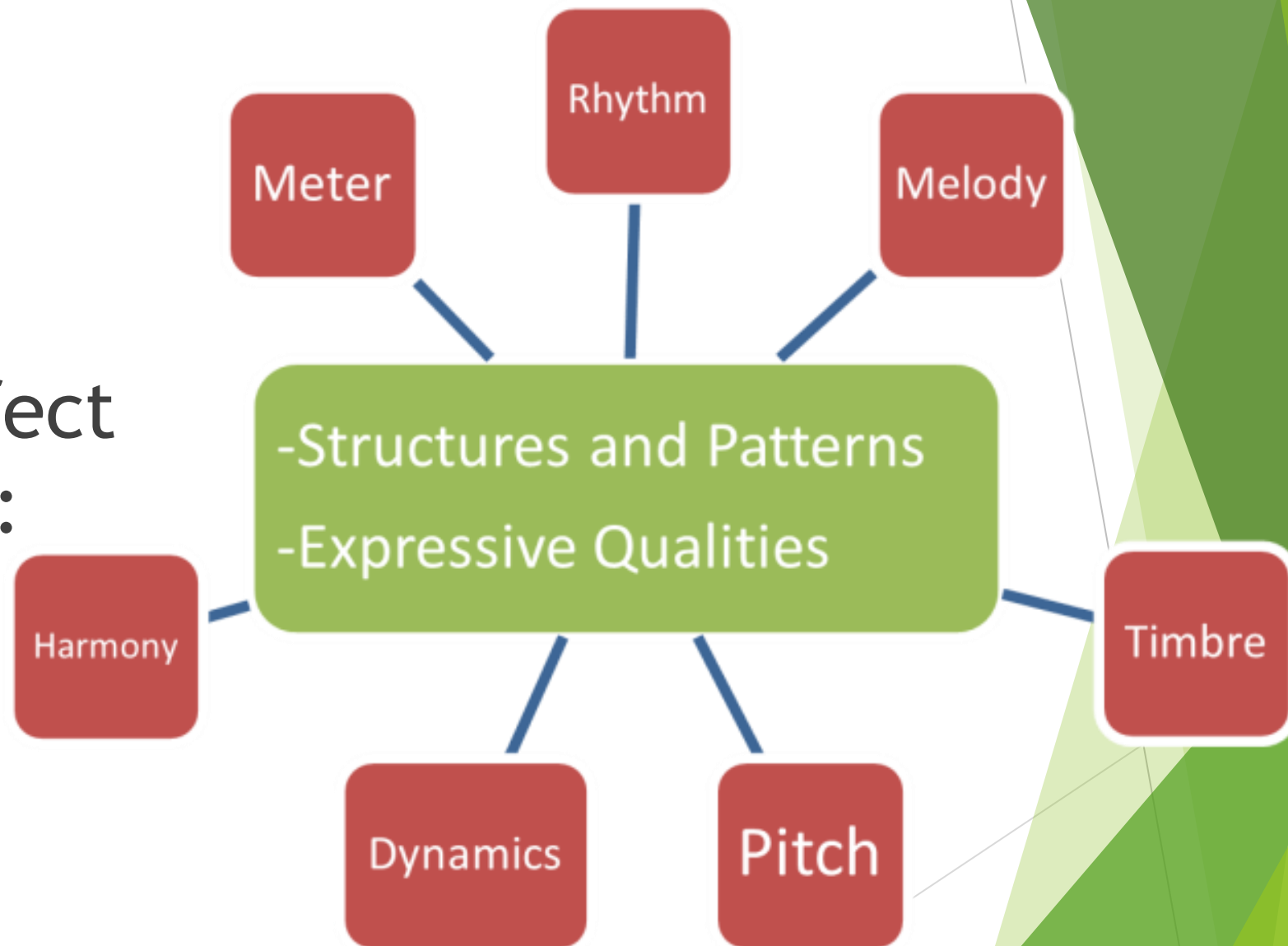
spontaneous music making

- Neurologic Music Therapy (NMT) is defined as the therapeutic application of music to cognitive, affective, sensory, language, and motor dysfunctions due to neurologic disease of the human nervous system (Academy of Neurologic Music Therapy, 2023).

**NMT uses twenty clinically proven musical interventions to address the following areas of functioning:**

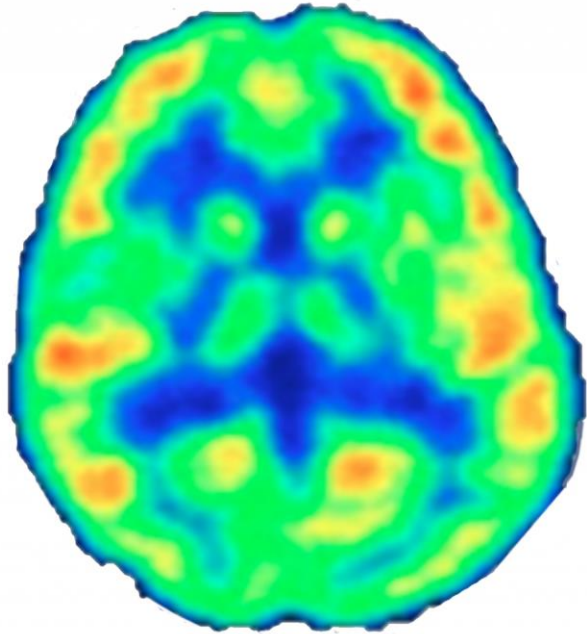


Elements of music that affect our neurology:

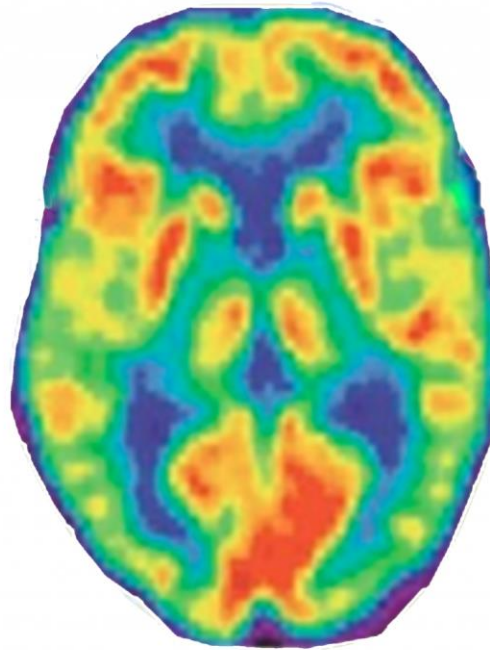




Engaging in music increases  
‘feel-good’ chemicals in the brain and body:  
serotonin, endorphins, oxytocin, dopamine.



**Brain at rest**



**Brain's response  
to music**

Music therapists are equipped to assess and identify musical sensory needs for people of all ages and stages of life.



# Research on music therapy and Parkinson's Disease

A systematic review of music therapy in treatment of Parkinson's patients, published in the International Journal of Environmental Research and Public Health (Sotomayor et al, 2021, confirmed positive effects on various aspects:

- ▶ **motor components**, which can be addressed through listening, body rhythm, and rhythmic auditory stimulation.
- ▶ **singing, either individually or in groups**, improves communication, swallowing, breathing, emotional regulation, and quality of life of people with PD.



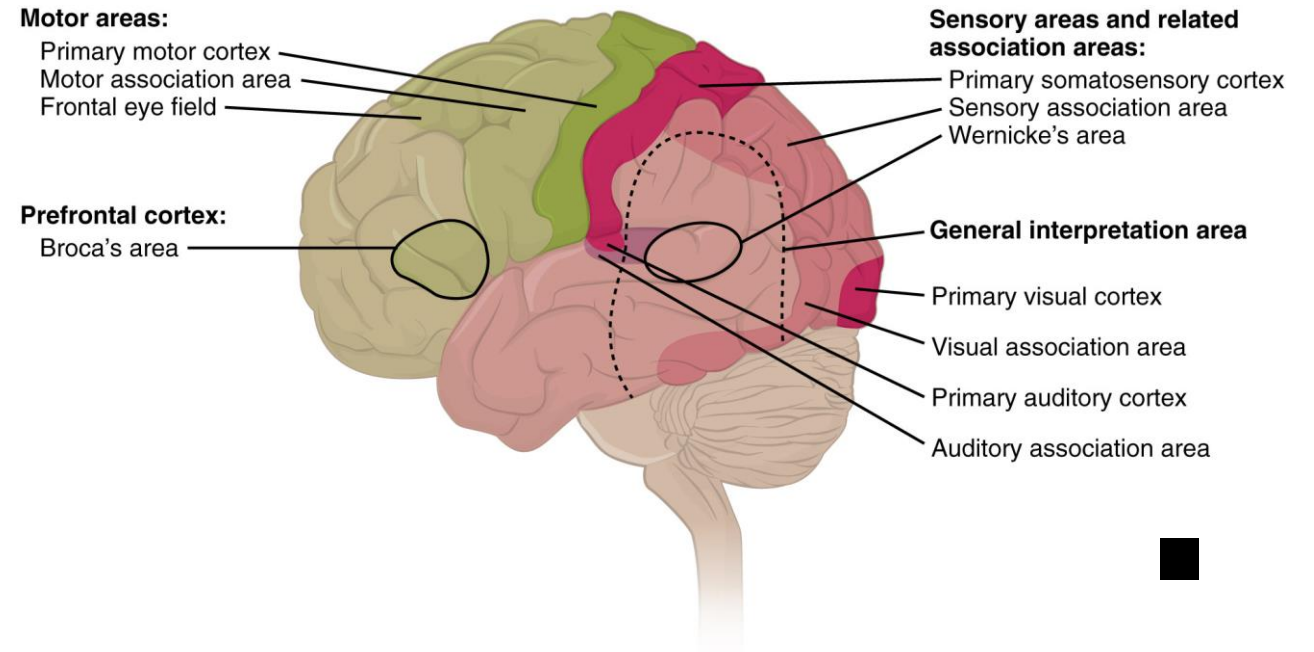
Music therapy is an effective way to treat the gait disorders caused by Parkinson's disease (Wu et al, 2022).

► Music activates the “auditory-motor pathway,” activating motor neurons through the rhythms contained in the music itself, causing muscles to contract and synchronizing body movements with the beat (process of entrainment).



Music therapy is an effective way to treat the gait disorders caused by Parkinson's disease (Wu et al, 2022).

The human body will show corresponding motor performance when stimulated by music.

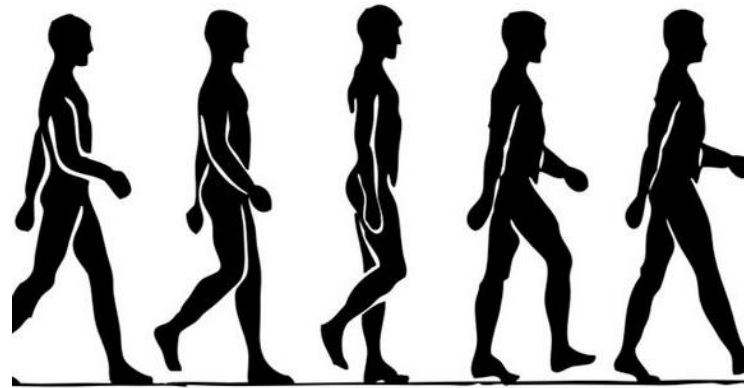


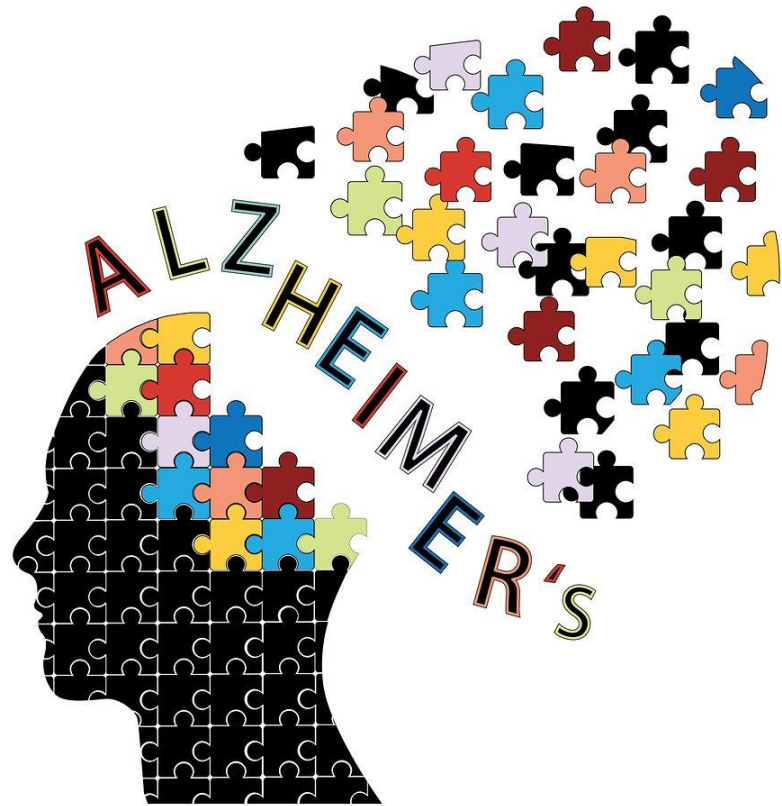
Music therapy is an effective way to treat the gait disorders caused by Parkinson's disease (Wu et al, 2022).

All mechanisms work together to complete the intervention of music therapy on patients' gait and help patients to recover better.



1 & 2 & 3 &





# Care of patients living with dementia and Alzheimer's disease

More than 7 million adults in the United States are living with Alzheimer's disease and other forms of dementia (CDC, 2024).

20% reside in care facilities, as individual needs often outweigh the abilities of caregivers at home.

Behaviors and symptoms that impact daily living can include agitation, wandering, repetitive questioning, depression and sleep problems.

# MARYLAND CAREGIVING



2021 Behavioral Risk Factor Surveillance System (BRFSS) Data



**1 in 5** adults are caregivers

CAREGIVERS provide regular care or assistance to a FRIEND or FAMILY member with a health problem or disability

## CAREGIVING CAN BE

### LENGTHY

**Nearly half**

have provided care for at least two years



### INTENSE

**A third** have provided care for at least 20 hours per week



## HOW DO CAREGIVERS HELP?



**80%** manage household tasks

**Over half** assist with personal care



## WHO ARE CAREGIVERS?

**59%** are women

**26%** are 65 years old or older

**35%** are caring for a parent or parent-in-law

**25%** of caregivers are providing care to someone with dementia



## FUTURE CAREGIVERS



**1 in 6** NON-CAREGIVERS expect to **BECOME CAREGIVERS** within 2 years

alzheimer's association



For more information: [www.alz.org/publichealth](http://www.alz.org/publichealth) [www.cdc.gov/aging](http://www.cdc.gov/aging)



# Music Therapy in Older Adults Living with Dementia is...



◆ A holistic approach that relies on individual strengths and needs, positively impacts mood, behavior, cognition and mobility.

◆ A multi-modal means of expression, both verbal and nonverbal.

◆ Sensory stimulation, personally engaging, validating and comforting.

◆ A source of meaningful experiences between the caregiver and their loved one.

## How should a caregiver choose music for their loved ones?

- ▶ The peak of recollection of popular music occurs in the teenage years, regardless of era of birth.
- ▶ Music from this "reminiscence bump" provides a rich source of retained music that should be tapped when creating playlists of meaningful music for people living with dementia.

(Rao et al, 2021, J. of Multidisciplinary Healthcare)

# Music Reminiscence Therapy: The SEED Model

The SEED model proposes that music, when used together with reminiscence interventions, helps to:

S- Summon autobiographical memories;

E- Evoke strong emotional reactions;

E- Elicit physiological responses;

D- Define identity.



# Why is music effective in enhancing memories for adults with dementia and brain injuries?



Most people have a positive relationship with music, and long-term memories of experiences in faith-based and educational settings will still be accessible to the person with memory loss.



Because musical perception is processed throughout the entire brain, music activates all areas of brain tissue during both receptive and expressive musical behavior.

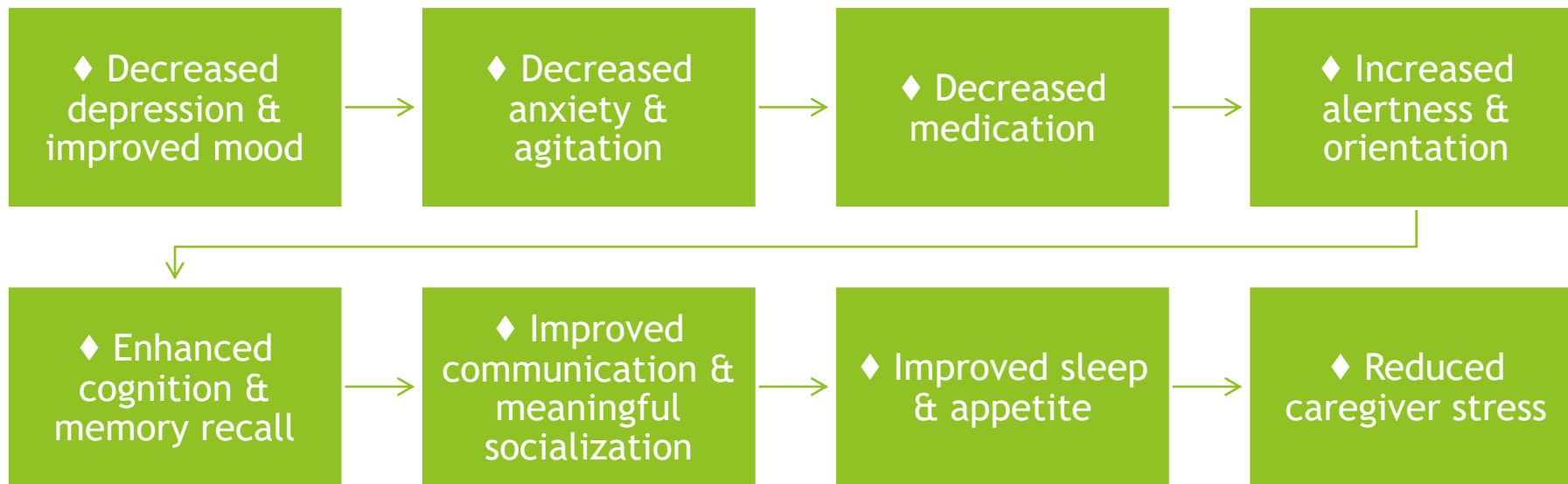


Musical memory, therefore, is stored throughout the brain which means that it is accessible even in the late stages of memory disorders when only some brain tissue is still capable of functioning normally.



Music therapy cannot reverse the loss of cognitive function, but it can maximize the existing function (AMTA, 2024).

# Research on music therapy in the treatment of memory disorders has shown the following benefits:



Let's take a closer look at the musical interventions used in music therapy.



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Receptive

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Re-creative

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Compositional

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Improvisational

## Common examples of re-creative music therapy interventions:

- ▶ Instrument play to meet fine/ gross motor needs, strengthen cognition, improve grounding and focusing
- ▶ Singing to encourage vocalization, support communication goals, encourage deep breathing, elevate mood

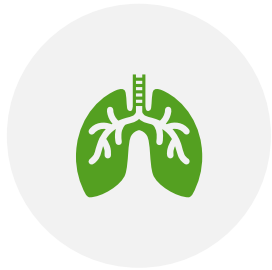


# Re-creative intervention: singing on vowels for pain reduction (Loewy, 2022)

- ▶ EE = HEAD
- ▶ AH = CHEST/LUNGS
- ▶ OH = STOMACH/ABDOMEN
- ▶ OOH= LEGS/FEET



# Receptive music therapy interventions include listening and responding by:



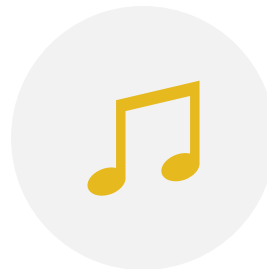
Breathing, visualizing



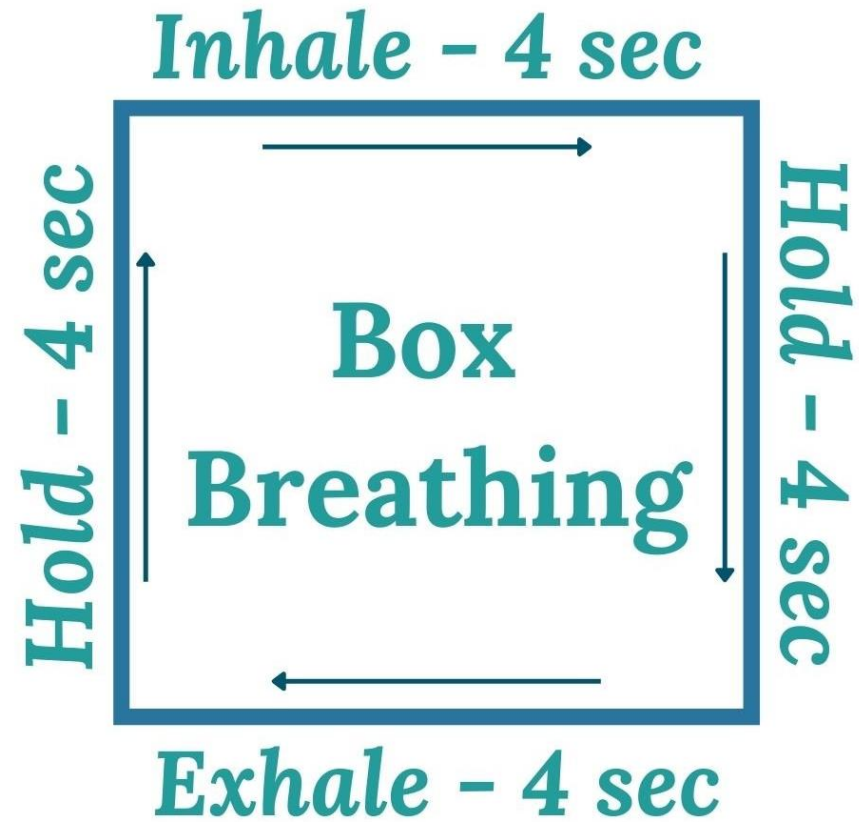
Lyric analysis to address self expression, positive social interaction



Guided movement to music to increase range of motion, motor function, self-regulation, following directions, increased attention,



Guided music listening to increase auditory perception and auditory processing; increase positive memories, reminiscence, reality orientation,



Receptive  
intervention:  
Box breathing  
with music



## Examples of compositional music therapy strategies:

- ❖ Songwriting and composition to facilitate self-expression, increase creativity, facilitate group cohesion and working together
- ❖ Music as a mnemonic device to assist memory
- ❖ Creating lyrics to process an event, emotion, or transition

# Compositional Intervention: The Worried Day Blues

Woke up this morning  
I got out of bed  
I looked at my calendar and this is what I said

**I got the worried day blues  
I got the worried day blues  
I got the worried day blues,  
But with God I'm gonna be alright!**

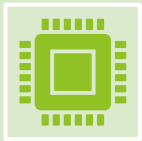
I'm feeling \_\_\_\_\_  
thinking about \_\_\_\_\_  
To keep calm and carry on I  
(line to rhyme with second line)

Too many \_\_\_\_\_  
Too many \_\_\_\_\_  
Too many \_\_\_\_\_  
(line to rhyme with second line)

# Some frequently used improvisational interventions used by music therapists include:



a. Musical improvisation on instruments to facilitate self-expression, creativity



b. Free play on instruments or singing increases flexible thinking and increases self-initiation and self-efficacy beliefs.

# Black key piano improvisation



## ► Percussion circle



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# Musical strategies to wake up and energize



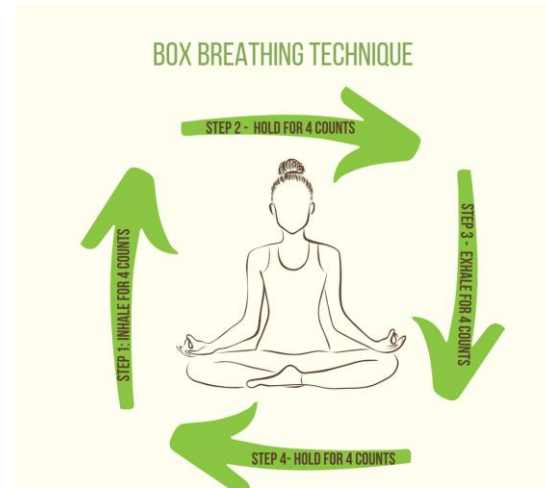
Body percussion- students take turns leading and following movements and sound patterns. Can use energizing music, with or without lyrics.



Use musical tempo settings at 80 beats per minute or higher.



Create a wake-up movement routine with music to an energizing song that is used to set the tone in the morning.



Musical strategies to calm, relax, de-escalate:

- ▶ Use musical tempo settings at 60 beats per minute or slower
- ▶ Use the box breathing technique.
- ▶ Draw or color to music. Have students move their crayon to match the tempo/rhythm of the music.
- ▶ Hum familiar slow songs.
- ▶ Use calming instruments: Rain sticks, tongue drums, kalimbas, or ocean drums





# Musical strategies to increase attention, focus, engagement, and auditory perception:



- ▶ Play “Name That Song”, “Guess the Movie by the Song”, “Guess the Instrument”. You can sing yourself, use recordings, or use videos (links on tip-sheet)
- ▶ The Building Beats Toolbox offers links to many web-based creative music making activities that are good for group participation at the whiteboard, or for individual work on devices.
- ▶ Watch and listen to sights and sounds of nature, and list sounds and sights you hear. Use videos (link in tip-sheet) or take a walk outdoors. Can do this as a “sound scavenger hunt” as well.

THANK YOU  
FOR JOINING  
TODAY!  
Blessings!

Feel free to contact me:

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