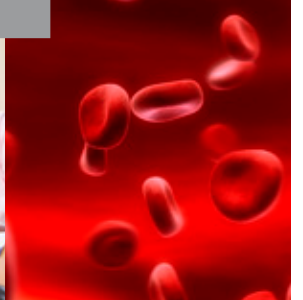
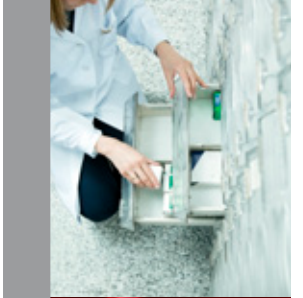
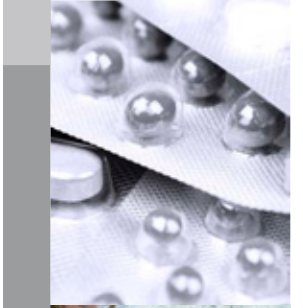




# *Music Therapy*



**Intervene** & find out more

## What is it?

Music has been used in medicine for thousands of years. Ancient greek philosophers believed that music could heal both the body and soul. New studies indicate that listening to music affects the release of powerful brain chemicals that can regulate mood, reduce aggression and depression, and improve sleep.

## Why music?

Music can serve a means of communication for those where the function of language has become very challenging or lost. Language appears to be a relatively new function of the brain in human history, whereas music is pre-verbal and is pancultural. Music is a pre-verbal and sometimes non-verbal brain function, predating the ability for language. Furthermore, music is processed by many different parts of the brain rather than just one center, as in language. The elements of music such as rhythm, pitch, and melody and are all processed differently. The emotions are also tied in with music, thus activating the limbic system. Oliver Sacks (Professor of neurology at Columbia University Medical Centre), an advocate of music therapy, says that we listen to music with our muscles. The arousal is in the brain stem and the dynamic registers in the basal ganglia. With music being received and processed at the brain stem level, it shows how basic and primeval sound is to humans. This is why, as Sacks says, deeply demented people respond to music. Music therapist and author Alicia Ann Clair identifies four main benefits for those with late stage dementia:

- + changes in facial expression and tension
- + increased eye contact
- + vocal activity
- + physical movement

## What is music therapy used for?

- + encourage emotional expression
- + promote social interaction
- + help reduce pain
- + deal with anxiety
- + relieve chemotherapy-induced nausea and vomiting
- + reduce stress

- + lower heart rate
- + lower blood pressure
- + lower breathing rate
- + aid healing
- + improve physical movement
- + enrich a patients quality of life

### Specifically for Alzheimer's disease

- + Music therapy can be a creative and effective behavioral intervention in management of disruptive behaviors displayed by people with Alzheimer's disease

## What does music therapy involve?

- + making music-*not relevant to Alzheimer's disease*
- + **listening to music-relevant to Alzheimer's disease**
- + writing songs-*not relevant to Alzheimer's disease*
- + talking about lyrics-*not relevant to Alzheimer's disease*

Music therapy may also involve imagery and learning through music.

## What are the benefits to Alzheimer's patients?

- + Existing studies emphasize its therapeutic role in decreasing agitated behavior
- + Music therapy promotes feelings of acceptance and belonging
- + Playing favorite songs is often used to calm down anxious Alzheimer's disease patients
- + Alzheimer's disease patients can continue to participate in organized music activities, even though they exhibit deteriorating levels of functioning
- + Alzheimer's sufferers may be able to retain musical perception and learn new information when presented in a musical context
- + Music may offer an alternate way of communication for people with Alzheimer's disease when their ability to express and interpret language has significantly declined

## Science behind music therapy

For centuries, music has been known to calm people down and provide relief from stress and tension. One possible explanation for its effects is found in a study by researchers at the University of Miami's School of Medicine in Florida, led by Dr. Ardash Kumar.

The study assessed how music therapy affected secretion levels of five brain chemicals (melatonin, serotonin, norepinephrine, epinephrine, and prolactin) in Alzheimer's patients.

"For centuries, music has been known to calm people down and provide relief from stress and tension. Music therapy can be a useful therapeutic tool to promote interactive communication."

After a month-long program (30 minutes a day, five days a week), the team found that music therapy led to increased secretion levels of melatonin, a hormone associated with mood regulation, lower aggression, reduced depression and enhanced sleep. The higher melatonin levels persisted even six weeks after music therapy sessions had stopped. Secretions of epinephrine and norepinephrine rose immediately after music therapy sessions but did not remain for long after the sessions had ceased. Music therapy did not influence secretions of serotonin and prolactin.

## Getting started

**Music can stir long-term memories;** and, best results may be obtained from music popular during the patient's youth. Some patients might respond well to rhythm-and-blues, or to instrumental hymns and spiritual songs. For the current crop of the over 80s, music from Glenn Miller might be invaluable.

**Singing along, or swaying or clapping hands** with the music should be encouraged. Music therapy may awaken a desire to dance, which can be therapeutic. A patient's enjoyment is typically increased as they move or sing with the music. Music therapy can also be linked to other memory-stirring activities such as looking at photographs.

**Music that is familiar to the patient** can evoke a more positive response than unfamiliar music. One might surmise that if the territory is familiar, something known, then it provides more comfort than something which is foreign and takes getting used to. Familiar music is predictable and thus reassuring, comforting, something that is known in an environment that probably appears unknown after living in the house they have always lived

in for fifty years. Unfamiliar music may be less successful because it requires processing and analysis by the brain. When one listens to a new piece of music (especially a musician) the brain tends to be engaged in analyzing the instrumentation, judging the overall quality, searching for melody, interpreting the words, etc. These are skills the Alzheimer's patient likely does not have.

**Degree of liking is another factor,** similar to the above point. Research has shown that a person tends to breathe deeper listening to music he or she likes. Of course, what one person finds relaxing or pleasurable the other person may not like at all. Musical taste is very individualistic.

**While music may be familiar,** it must also be determined what the patient's history and associations are to that music.

**Finally, how the musical elements go together** and how they function must be determined. The desired response may be dependent upon harmony, tempo, rhythm, melody, timbre, instrumentation, etc. Music with a slow, rhythmic tempo can be relaxing. Music with a pattern or that is sedative can also be found to be relaxing. Music that arouses feelings of love and tenderness can also produce similar effects known as parasympathetic arousal. Conversely, faster, more complex music can be arousing. The autonomic nervous system is sensitive to pitch. High pitch generally causes tension and a low pitch conversely is more resonant, relaxing. Volume, whether too loud or too soft, can be bothersome. As mentioned before, the personality of the listener comes into play as a variable: age, intellect, ethnicity, environment, economy, religion, education, and other personality factors. If the music is familiar and pleasing, it will have a greater effect.

## Quick-start

- + Listen to favorite artist
- + Remembering words of songs
- + Singing along, clapping etc.
- + Talking about songs and memories associated with them