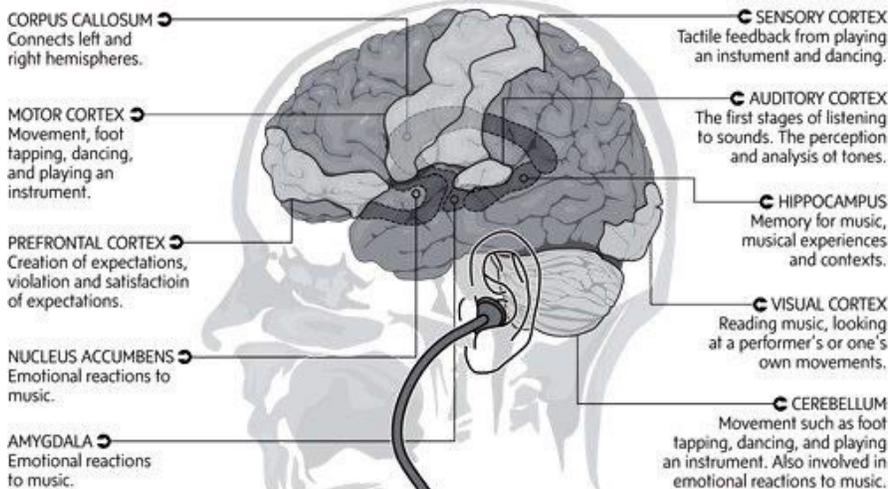


# Expressive Therapies LLC

Empowering individuals, those living with social, cognitive, emotional, physical and/or spiritual needs, through music and mental health therapies to improve health and well-being.

## Music on the mind

When we listen to music, it's processed in many different areas of our brain. The extent of the brain's involvement was scarcely imagined until the early nineties, when functional brain imaging became possible. The major computational centres include:



MIKE FAILLE/THE GLOBE AND MAIL SOURCE: THIS IS YOUR BRAIN ON MUSIC: THE SCIENCE OF A HUMAN OBSESSION

## Music Therapy and the Brain:

### Why is music effective in teaching non-musical skills?

Music therapy uses music to address non-musical goals. Expressive Therapies LLC uses music to help our clients increase language skills, improve fine and gross motor control, and express emotions. In this issue we are highlighting how the brain and its many parts are affected by music and how music therapists utilize these interactions to treat our clients.

1

### EMOTIONS

Understanding how the Limbic System and music work together

2

### MOVEMENTS

Music affects physiology and muscle control

3

### LANGUAGE

Speaking is more musical than we realize



## CRESCENDO CONCERT

December 8,  
6:00pm at Copper  
Rock Coffee in  
Downtown  
Appleton



## GROUP SIGN UP!!!

Check out all of the groups taking place in 2017 by looking at our new ebook! Copy and paste the following link into your web browser and see which group fits best!

[https://  
www.flipgorilla.com  
/p/  
248195750444401  
85/show](https://www.flipgorilla.com/p/24819575044440185/show)

# The Brain: Its Influence on Emotions, Movement, and Language

## EXPRESSING EMOTIONS:

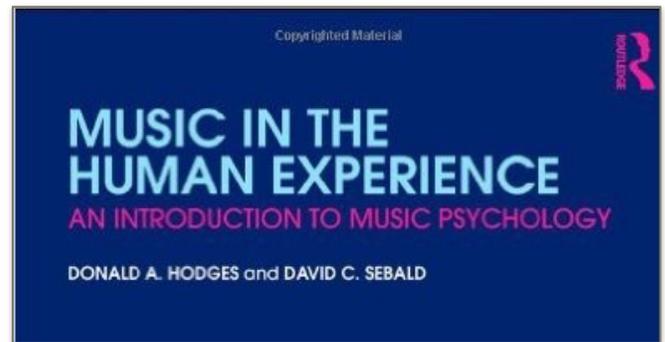
When it comes to emotions, the *Limbic System* is one of the prime areas activated in the brain. Areas of the Limbic System determine what we perceive as pleasant and unpleasant sounds (amygdala, see brain map on page 1), determine how we learn, memorize, and emote (hippocampus), determine how we create emotional memories (parahippocampal gyrus), and activate when we experience intense pleasure (nucleus accumbens). At Expressive Therapies LLC we create a safe space where we use music to assist in processing and working through past and present emotions. Unprocessed emotions can negatively affect our daily lives by impacting our mood, causing stress and anxiety; by helping clients address suppressed emotions we relieve subconscious stress and anxiety and improve quality of life. A trained music therapist who has the knowledge of musical elements, psychology, and fundamental counseling skills may utilize songwriting, lyric analysis or improvisation to evoke and express emotions. The variety of techniques used in treatment aim to improve clients' abilities to process and express their emotions.

## CONTROLLING MOVEMENTS:



Have you ever noticed yourself tapping your fingers or toes to a beat without thinking about it? Or swaying while watching someone dance? This response is based on the sensory information

received by your ears and eyes. The beat of the music or the image of the dancer activates the area of the brain that controls motor movements (cerebellum) and the area that facilitates how



Information in this newsletter comes from "Music in the Human Experience" by Hodges and Sebald. The book summarizes components of music theory, physiology, neurology, and psychology into one handy resource!

muscles work together at the same time (basil ganglia) to move to the beat (almost) effortlessly. The cerebellum and basil ganglia are key areas involved in improving control of fine and gross motor skills. When you combine learning a new or former physical skill — gripping a pencil or walking — the fine and gross motor skills needed for the movement can be aided by the rhythm and tempo of music.

Research focused on Neurologic Music Therapy has helped develop certain techniques to address walking gait and other functional motor planning. A technique included in the *Handbook of Neurologic Music Therapy* is Therapeutical Instrumental Music Performance (TIMP): "a motor rehabilitation technique that utilizes musical instruments to help patients to exercise impaired motor function and regain fictional patterns of movement"<sup>1</sup>. The rhythm and tempo help organize movements into a fluid motion. The ability to organize movements to synchronize to the beat of a tune is called *entrainment*. A music therapist may utilize the musical elements of your favorite music to teach you about entrainment and how entrainment can benefit your daily life. Plus, listening to music you

1: "Handbook of Neurologic Music Therapy by Thaut and Hoemberg.

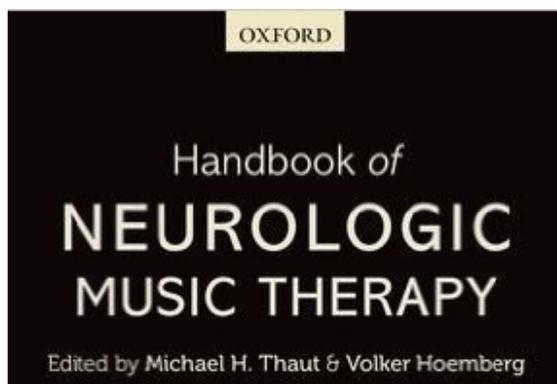
enjoy with the appropriate rhythm and tempo can make an activity you have to repeat again and again enjoyable. No wonder folks like their iPods in the gym — a beat to keep them going and a tune to keep them happy!

### DEVELOPING LANGUAGE:

Have you ever considered how hard it is to memorize a speech, yet how easy it is to memorize your favorite song? The musical elements of pitch, melody, tempo, and rhythm activate your *Limbic System* to help memorize all components of the song and store it in first your short term and then your long term memory. Your short term memory helps you repeat something over and over again until you are able to store the order of words into your long term memory. Music therapists use pitch, melody, rhythm, and tempo to address literacy needs of clients. Techniques include memorizing letters of the alphabet and the letter's corresponding sounds through singing and composing songs for clients to use language appropriately in social greetings.

Did you know music therapists treat post-stroke patients who suffer from non-fluent Broca's aphasia? Broca's non-fluent aphasia occurs when a person has difficulty finding the correct words to say as a result from damage to the left hemisphere of the brain where the Broca's area is located. While the Broca's area of the brain is damaged the patient is unable to form complete sentences, the hippocampus (which enables us to learn, memorize, and emote words) may still be intact and the patient

may be able to recite an entire song without difficulty. Neurologic Music Therapy techniques included in speech rehabilitation include Melodic Intonation Therapy (MIT): "a technique that uses melodic and rhythmic elements of intoning (singing) phrases and words to assist in speech recovery for patients with aphasia"<sup>2</sup>. This technique is one of six techniques that trained neurologic music therapist can use to treat patients with speech recovery rehabilitation needs.



Much of the information in this newsletter is knowledge three of our music therapists learned by completing the Neurologic Music Therapy training. This training not only trains music therapists to treat language complications, but cognitive, sensory, and motor dysfunctions as well. Feel free to ask one of our trained music therapists for more details!

\*\* If you want to see an example of music therapy being used for speech recovery, copy and paste the following link into your web browser. This video highlights the speech and music therapy rehabilitation treatment of Arizona Senator Gabby Giffords after she was shot in the head severely damaging to her Broca's area (I promise it's uplifting and ends happily!): [https://www.youtube.com/watch?v=tiJ9X\\_wLSWM](https://www.youtube.com/watch?v=tiJ9X_wLSWM)

## To Conclude

While there is a plethora of information regarding music therapy and the brain, this newsletter highlight how music and the brain interact. Expressive Therapies LLC staff invest time monthly in staying up to date on research to better treat our clients. We love our work and enjoy educating clients, professionals, and friends on the research we know and how effective it is with the populations we serve. Thank you for reading!



2: "Handbook of Neurologic Music Therapy by Thaut and Hoemberg.

# THANK YOU FOR SUBSCRIBING TO OUR NEWSLETTER!

We appreciate connecting with the community by sharing the specifics of music therapy. If you have further inquiries, we highly recommend visiting our website at [www.expressivetherapies.net](http://www.expressivetherapies.net), look-up our Facebook page by typing *Expressive Therapies* into the Facebook search bar, check out the American Music Therapy Association's website at [www.musictherapy.org](http://www.musictherapy.org), or email us at [info@expressivetherapies.net](mailto:info@expressivetherapies.net).

***Take care and Be Well!***

***Sincerely, Expressive Therapies LLC***

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## UPCOMING EVENTS

- Save the Date: CRESCENDO Concert Dec. 8 at 6:00pm within CopperRock Coffee in downtown Appleton
- Group Sign Up: Take a look at our Group Booklet and see if there is a group that fits best:

<https://www.flipgorilla.com/p/24819575044440185/show>

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