



Music

a n d
t h e

Brain

Hippocampus

- Produces and retrieves memories, regulates emotional responses and helps us navigate
- One of the first areas of the brain to be affected by Alzheimer's, this leads to confusion and memory loss
- Listening to music may increase the amount of growth and development of nervous tissue leading to improved memory

Putamen

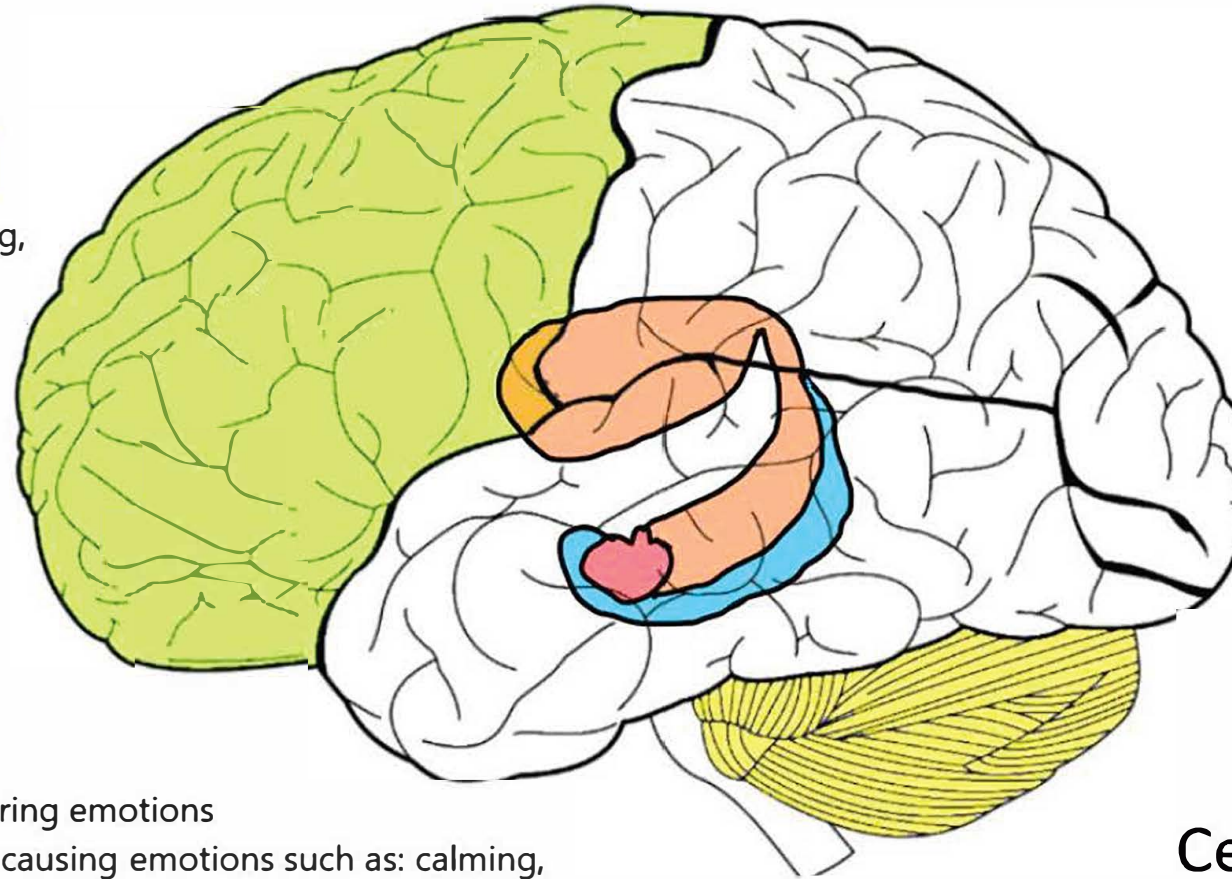
- Responsible for processing rhythm, controlling body movement, and coordination
- Music can increase the amount of dopamine in this area
- Music also increases our response to rhythm, and can temporarily stop the effects of Parkinson's disease

Frontal Cortex

- Responsible for planning, reasoning, and motor functions

Amygdala

- In charge of processing and triggering emotions
- Activated while listening to music, causing emotions such as: calming, lessening fear, or making you feel more energetic
- Responses will vary based on what type of music you are listening to



How Music Affects the Brain

Cerebellum

Coordinates movement and stores physical memory
Responsible for muscle memory and very long term memory

Case Studies

What effects does music have on our brains?

"Music is primal. It affects all of us, but in very personal, unique ways," said Burdette, a neuroradiologist at Wake Forest Baptist Medical Center. "Your interaction with music is different than mine, but it's still powerful." -Burdette (Sciencedaily.com, 2017)

Music listeners had higher scores for mental well-being and slightly reduced levels of anxiety and depression compared to people overall. (Budson, 2020)

"Active musical engagement, including those over age 50, was associated with higher rates of happiness and good cognitive function." (Budson, 2020)

"Of those who reported often being exposed to music as a child, 68% rated their ability to learn new things as "excellent" or "very good," compared to 50% of those who were not exposed to music." (Budson, 2020)

Case Studies

What effects does music have on our brains?

"I find this type of work fascinating, because I think music is so important," Burdette said. "If science can help get more people to recognize what music does to and for us, great." (Burdette, M.D. 2017)

"Your brain has a reaction when you like or don't like something, including music. We've been able to take some baby steps into seeing that, and 'dislike' looks different than 'like' and much different than 'favorite.'" (Burdette, M.D., 2017)

"Of survey respondents who currently go to musical performances, 69% rated their brain health as "excellent" or "very good," compared to 58% for those who went in the past and 52% for those who never attended." (Budson, MD., 2020)

"Adults with no early music exposure but who currently engage in some music appreciation show above average mental well-being scores." (Budson, MD., 2020)

Fun Facts

"Music temporarily stops the symptoms of Parkinson's disease. Rhythmic music, for example, has been used to help Parkinson's patients function, such as getting up and down and even walking" (Music and the Brain: What Happens When You're Listening to Music, n.d.).

Evidence suggests that music can decrease seizure frequency, stop refractory status epilepticus (one or continuous seizures lasting more than five minutes), and decrease abnormal electric spikes in the brain in children with epilepsy in awake and sleep states (Music and the Brain: The Neuroscience of Music and Musical Appreciation, 2017).

Researchers found that listening to favorite songs altered the connection between auditory brain areas and a region responsible for memory and social emotion consolidation (Music Has Powerful (and Visible) Effects on the Brain, 2017).

"An Alzheimer's patient, even if he doesn't recognize his wife, could still play the piano if he learned it when he was young because playing has become a muscle memory" (Music and the Brain: What Happens When You're Listening to Music, n.d.).

Lyrics About Mental Health



"Some days, things just take way too much of my energy I look up and the whole room's spinning You take my cares away I can so overcomplicate, people tell me to medicate" (Breathin by Ariana Grande)

"I do it every, every, every time It's only when I'm lonely Sometimes I just wanna cave and I don't wanna fight I try and I try and I try and I try and I try Just hold me, I'm lonely" (Sober by Demi Lovato)



"Good day in my mind, safe to take a step out Get some air now, let your edge out Too soon, I spoke, you be heavy in my mind Can you get the heck out? I need rest now, got me bummed out" (Good Days by SZA)

Personal Blurbs

and our playlists

How has music affected our mental health?



Over the past few years music has been very present in my life. Just recently finding the genres I do enjoy, it helps elevate my mood, focus, & motivation. Music helps me relax, & it lets me express myself & creativity. - Addison

Music is my greatest passion. It's something I've been surrounded by my entire life, and it's something that's very sacred to me. It has helped me through many rough times and continues to every day. - Ella



Music helped me a lot when I'm not feeling well & need to unwind. Music has become very important to me. - Hannah

Music is very important to me. It allows me to take my mind off things, de-stress, and focus more. - Nathan



Mental Health Playlist



References

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