This Is Your Brain On Music: How Our Brains Process Melodies That Pull On Our Heartstrings

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You’re lying on your back in bed with a pair of headphones on, listening to a new album by one of your favorite artists. While you listen, you feel unexplained emotions brimming; it’s as if you’re transcending reality.

The brain’s ability to absorb and make sense of music — what some scientists refer to as organized sound — is highly complex and far more effective than even a computer’s capacity to identify and process it. But questions about how exactly the brain takes in organized sound still remain: **Why does it make us feel the way we do? – What do you think?**

Everyone likes different types of music: Some people may feel more uplifted when they listen to classical music, while others don’t get the same high when listening to Bach or Beethoven. However, [research](http://onlinelibrary.wiley.com/doi/10.1111/ejn.12173/abstract) has shown that despite personal preferences, music in general has a synchronized effect on people’s brains.

“Despite our idiosyncrasies in listening, the brain experiences music in a very consistent fashion across subjects,” Daniel Abrams, an author of the study and a postdoctoral researcher at Stanford University School of Medicine, told [CNN](http://www.cnn.com/2013/04/15/health/brain-music-research/). Participants in the study, who had no formal musical training, listened to four symphonies by William Boyce, while undergoing an fMRI brain scan. The researchers found that among all the participants, the music had an almost identical effect in their brains; it activated brain regions that are involved in movement, planning, attention, and memory — which means that when we listen to music, we aren’t just simply processing sound, like background noise or the sound of a car engine. Music is more meaningful to our brains than just any sound: It's repetitive, melodious, organized.

**New VOCABULARY: Write 5 words and look up the definitions.**



The auditory cortex is responsible for processing sounds in the brain, but music activates far more in the brain, including regions associated with emotions, movement, and memory.

*Wikimedia*

Daniel Levitin, a psychologist who studies neuroscience and music at McGill University, believes that because music can activate these areas in the brain in everyone, no matter your musical preferences, music is unifying. “It’s not our natural tendency to thrust ourselves into a crowd of 20,000 people, but for a Muse concert or a Radiohead concert we’ll do it,” Levitin told CNN. “There’s this unifying force that comes from the music, and we don’t get that from other things.” In his book *This Is Your Brain On Music*, Levitin argues that evolutionarily speaking, music led to social bonding and improved fitness.

Other researchers believe music was important to human evolution in various ways, from providing babies with a playful way to learn language, to aiding the memorization of knowledge or history (passing down information to other generations), or even helping to stay awake around a bonfire while on watch for predators.

And because we like repetition, our brains are constantly predicting what will happen next based on a pattern like the beat of a song. This is how we end up tapping our toes or dancing.

**Why is music so important in our culture?**

**MUSIC, THE DRUG?**

Music conjures pleasure and is often associated with enjoyable activities like partying, socializing, mating, and relaxing. Several studies have linked music to drug-like effects.

Research conducted by neuroscientist Valorie Salimpoor found that music releases dopamine, the “feel good hormone” that is activated from pleasurable experiences like food or sex. “Music, an abstract stimulus, can arouse feelings of euphoria and craving,” the authors [wrote](http://www.nature.com/neuro/journal/v14/n2/abs/nn.2726.html), “similar to tangible rewards that involve the striatal dopaminergic system.” They found that dopamine release was at “peak emotional arousal” during music listening.

Listening to music changes your brain chemistry, Levitin says. “And we know that people use music the way they use drugs,” he told NPR. “You come home at the end of the day, you reach for some music that will relax you, puts you in a good mood. ... What one person calls heavy metal another person might call soothing classic rock. But when you’ve got the music dialed in that you like, it will put you in a good mood, put you in a bad mood, propel you.”

**How is listening to music similar to using drugs?**

Evidence 1:

Evidence 2:

Evidence 3:

**Why is music meaningful to you? How does the information above provide a deeper understanding for why music has such meaning for you?**