How does music affect the brain and change our mood

1.Introduction
Music is the arrangement of sound to create some combination of form, harmony, melody, rhythm, or otherwise expressive content. Music is something we all experience daily, whether we're actively listening or just hearing it in the background. But it's more than just entertainment—it directly affects our brain and emotions. Today, I'll explain how music interacts with the brain and influences our mood.

-- Effect on Brain

2.How does it work?

Why does music have such a strong effect on us? It's all about how our brain processes sound.

Sound waves enter the **ear canal**, where they cause the **eardrum** to vibrate. These vibrations pass through tiny bones in the middle ear and reach the **cochlea.** Inside the cochlea, tiny hair cells convert the vibrations into electrical signals, which travel through the **auditory nerve** to the auditory cortex.

The **auditory cortex** processes sound, handles pitch, rhythm, and melody. (image)
The **limbic system** controls emotions, which is why music makes us feel things deeply – happiness, sadness, disgust. (image)
The **hippocampus** links music to memories—ever heard a song from years ago and instantly remembered a moment? Also the hippocampus is involved in remembering patterns, melodies and structures when learning new music. (image)

The sound also travels to every part of the brain for further processing of the sound.

(must show image of the brain parts)

Beyond brain activity, music triggers **dopamine** (for pleasure), **serotonin** (for mood regulation), and **endorphins** (for natural pain relief). That's why music can make us feel happy, calm, or even energized.

Dopamine - It's released when we experience something pleasurable or rewarding

Serotonin - Listening to calming music can increase serotonin levels in the brain, helping to reduce stress and anxiety.

-- Effect on Mood

3. How does music affect the mood?

Different types of music can influence our mood in different ways:

Upbeat music can boost your mood by increasing dopamine.
Sad, Jazz music helps us process emotions, making us feel understood, expressing emotions.
EDM, Metal music boosts adrenaline and makes us feel more energized - workouts.
Slow, calming, ambient music helps lower stress by reducing cortisol.

Again, music affects everyone differently.

Music also changes our mood in the film making and video games with soundtracks that accompany a scene from the movie/game. For example usually a fight scene accompanied by intense music that ramps up excitement or a slow, ominous melody for a plot reveal in a mystery film.

04. Productivity

Many of us listen to music while studying, working, or exercising. But does it help productivity? It depends on the type of music.

Classical or instrumental music helps you focus.
Lo-fi (low-fidelity), ambient music or noise music creates a relaxed work environment.
Fast-paced music boosts energy and motivation.

Low-fidelity music – style of music that embraces imperfections, such as background noise, static or distortion. Features beats, rhythms and melodies to create calm atmosphere.

Ambient music – genre that focuses on creating a mood or a feeling. Features atmospheric textures, natural noises (wind, rivers, rain, birdsong), blending these elements to create a calming experience.

Noise music – The noise music is like an isolation from other sounds, where the only thing we hear is the noise itself. White noise is like a static sound on a TV or a radio, or like a strong wind. The brown noise – deeper, rumbling version of white noise, like a waterfall

Thanks for watching!

THE END