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## **Exploring the Positive and Negative Effects of Music, Vibration and Sound on the Developing Baby**

Music, Vibration and Sound have a powerful impact on the developing baby. There have been various ancient traditions, theories, studies, and hypotheses on how vibration, sound and music can affect a baby's brain development and overall well being, these effects can either be positive or negative. First we will go into some of the positive effects of music and vibration and in the second part of this paper we will explore some of the negative impacts.

### **Positive Impacts of Music, Vibration and Sound on the Developing Baby:**

One study done by Dr. Patricia Kuhl called *Music and the Baby Brain* showed that music and vibration have profound effects for a growing baby's ability to develop pattern recognition and for the development of the prefrontal cortex. Music can assist children in how they relate with the world and with how they express themselves, it opens up doors for the brain and creates new neural pathways.

Another study done at the University of Geneva in Switzerland revealed music that was specifically composed and played for premature babies and their conditions helped create new neural networks. They did a double blind study for a period of time and the results showed that the babies who listened to the music resulted in having brain networks similar to those of full-term infants.

Garbh Sanskar, an ancient ayurvedic science which translates to “educating the mind of the fetus in womb” is known to help and benefit the baby’s development in utero and throughout the child's life. It includes the mother doing self-care practices, such as a healthy diet, meditation, yoga asanas, chanting and listening to certain mantras and ragas. The practice of Garbh Sanskar helps create a child that is physiologically, emotionally and spiritually sound and brings out the nature of true intelligence, which derives from the laws of nature and “Nāda Brahma”, which is Sanskrit for “sound of the universe”. Ultimately, the practice of Garbh Sanskar can assist the soul with its integration into the mind and body as well.

### **Negative Impacts of Music, Vibration and Sound on the Developing baby:**

There has been research and hypotheses on the negative impacts of music, vibration and sound on the developing baby even from the time the baby is in utero.

One hypothesis is that the fairly new practice of using routine ultrasounds (which started in the 1970s) can have negative effects on the developing fetuses brain development due to the heating and high frequency properties. Routine ultrasounds could potentially be one of the causes for the rise in cases of Autism Spectrum Disorder (ASD). There is still research being done on this. “In the 1970s and 1980s, about one out of every 2,000 children had autism. Today, the CDC estimates that one in 150 8-year-olds in the U.S. has an autism spectrum disorder, or ASD.” - *Autism Cases on the Rise; Reason for Increase a Mystery* - [www.webmd.com/brain/autism/features/autism-rise](http://www.webmd.com/brain/autism/features/autism-rise). However, there can be many reasons for the rise of ASD, such environmental factors and genetics.

Certain music and sounds can affect the mood and emotional well-being of a developing child. If a child is exposed to loud noises with a very high decibel for periods of time it can cause harm to the ears and it can interfere with the child’s language and speech development, impair learning, disturb the cardiovascular system and disrupt sleep.

Also studies have shown if children who listen to violent music and live in violent environments (where harmful words, physical and emotional abuse take place) they are more likely to have emotional and behavioral issues which can cause issues with being able to learn and can create low self esteem, anxiety, depression and suicide.

### **Conclusion:**

In conclusion, music, sound, and vibration have a big impact on babies' growing brains, both for better and for worse. We've explored very briefly how they can help with things like recognizing patterns and making new connections in the brain, but also how they might cause problems like hearing damage, emotional stress, learning and behavioral issues. Still, there's a lot we don't know yet. We've made progress in understanding, but there's more to uncover. By digging deeper into this topic, we can better support parents, doctors, and society in helping kids thrive.

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