The Mozart effect and epilepsy

The term ‘the Mozart effect’ was first coined by Alfred A. Tomatis who used Mozart’s music as the listening stimulus in his work attempting to cure a variety of disorders. The approach has been popularised in a book by Don Campbell, and is based on an experiment published in the scientific journal Nature, suggesting that listening to Mozart temporarily boosted scores on one portion of the IQ test.

Other scientific studies suggest that classical music increases brain activity more positively than other kinds of music, and that listening to certain kinds of complex music may induce an improvement in the performance of certain kinds of mental tasks known as spatio-temporal reasoning. These studies are currently being disputed but may have some merit.

Two pieces of Mozart’s music, Sonata for Two Pianos in D Major (K. 448) and Piano Concerto No. 23 (K. 488), were found to have this effect.

Studies found that rats negotiated a maze faster and more accurately after hearing K448 than rats who were played white noise, silence, or minimalist music. Elsewhere, children taught a keyboard instrument for six months, learning simple melodies of Mozart, did better on spatial-temporal tests than children who spent the time working with computers. Later research by John Jenkins also suggested that K448 can reduce the number of seizures and the severity of the seizures in people with epilepsy. A closer look shows that Mozart's music does have a profound effect on the brain, though no one yet knows why.

The Mozart effect on seizures

Mozart Music has been evaluated to see if it has other properties. The April 2001 edition of Journal of the Royal Society of Medicine assessed the possible health benefits of the music of Mozart. John Jenkins played Sonata K.448 to patients with epilepsy and found a decrease in epileptiform activity.

The research looked at 29 people with severe epilepsy. Their brainwaves were measured as they listened to the music and 23 people showed reduced epileptic activity. In one patient the epileptic activity dropped from being present two thirds of the time, to just one fifth of the time. In two other patients who experience epileptic activity 90% of the time, this dropped to 50% Whatever the effect of the music is, it isn’t simply related to enjoying the music, because many of the people were asleep during these tests.

The effect stopped when the music stopped, so in order to assess the longer term effect, an eight year old girl was played music for 10 minutes in every hour. Her seizures fell from nine in the first
hour to one in the last hour. On the second day she had just two seizures in eight hours. Professor John Jenkins from the University of London, author of the paper ‘The Mozart Effect’ thinks the music in some way affects the electrical impulses of the brain.

The **Mozart effect** can also refer to:

- Popularised versions of the hypothesis, which suggest that “listening to Mozart makes you smarter”, or that early childhood exposure to classical music has a beneficial effect on mental development
- A US trademark for a set of commercial recordings and related materials, which are claimed to harness the effect for a variety of purposes. The trademark owner, Don Campbell, Inc., claims benefits far beyond improving spatio-temporal reasoning or raising intelligence, defining the mark as “an inclusive term signifying the transformational powers of music in health, education, and well-being.”

While the clinical research into the Mozart effect is limited, the studies are encouraging. At the end of the day, listening to music is a soothing way of relaxing the body and reducing any emotional stress for us all. For people with epilepsy there may be the additional benefits of reduced seizures.

**References**


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