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| Another psychologist Eric Seigel at Elmhurst College, Illinois, initially started out to disprove the Mozart Effect by using a different spatial reasoning test. In his test, a subject looks at two letter E�s, with one rotated at a skewed orientation in relation to the other. The greater the angle, the harder it is to judge whether the letters are the same or different. The milliseconds it takes the subject to make that judgment are a precise measure of spatial reasoning. To Seigel�s surprise, subjects who took the test after listening to Mozart did significantly better, which Seigel says is in line with Rauscher�s results in the original paper-folding test. (Kliewer)  At the University of Illinois Medical Center, neurologist John Hughes and a musicologist colleague have analyzed hundreds of compositions by Mozart, Chopin and 55 other composers. They made up a scale that would score how other the music�s volume rises and falls in surges of 10 seconds or longer.  Not surprisingly, pop music scored the lowest on this measure, while Mozart scored two to three times higher. Hughes predicts that sequences repeating regularly every twenty to thirty seconds my trigger the strongest response in the brain, because many functions of the central nervous system, such as the onset of sleep and brain wave patterns, also occur in thirty second cycles. And of all the music analyzed, Mozart most often peaks every thirty seconds. Results like these help predict which pieces of music have the strongest effect on the brain.  Julene Johnson of the Institute of Brain Aging and Dementia at the University of California at Irvine gave Shaw�s original paper-folding test to Alzheimer�s patients, who often have impaired spatial reasoning because of their illness. In a pilot study, on patient�s score improved by three or four correct answers out of eight tests items after a ten minute dose of Mozart, but not after being exposed to silence or popular music from the 1930s.  In another study, 30 rats were exposed to Sonata in D for twelve hours everyday for over two months. These rats ran a maze an average of 27% faster with 37% fewer errors than 80 other rats raised with white noise or in silence. These studies conclude that improvement can not be due to the "enjoyment arousal" predicted by the psychologist because rats do not have emotional response to Mozart. They suggest a neurological basis for the Mozart Effect. (Rauscher)  In yet another study, 36 severely epileptic people who suffered almost constant seizures that sometimes left them comatose were used. 29 of those patients experienced milder seizures when the debilitating electric storms that sweep their brains became smaller and less frequently shorter after listening to Mozart. The same patients were then exposed to popular music from the 1930s but did not improve at all. (Hughes)  Dr. Gottfried Schlaug is a neurology instructor at Harvard Medical School who has done a series of experiments using magnetic-reasoning-imaging technology to examine the brains of musicians who began to play an instrument before turning seven, musicians who started later on, and people with no musical background. He found that certain regions of the brain, such as the corpus callosum and the right motor cortex, were larger in musicians who started their musical career before the age of seven. Also, musicians with perfect pitch, or the ability to identify musical notes heard out of context, have larger left temporal lobes that nonmusicians do. This shows that starting music lessons at a younger age may enhance the brain activity.  The belief that classical music, specifically Mozart, can enhance memory as well as brain activity is pretty much accepted. There has been numerous experiments after experiments testing out different types of influences that the music can have. Although listening to Mozart may not increase your IQ, it is sure that it can enhance your memory. Also, knowing how to play an instrument proves to have greater influence than listening to Mozart, no matter how much.  That information makes me feel better, for I am a piano veteran, as well as a flutist for the past couple of years. That makes me wonder about my brother who has never had a music lesson�could that be the reason behind his report cards?  ([BACK](http://docs.google.com/intro3.html))  [[Home](http://docs.google.com/home.html)][[Introduction](http://docs.google.com/introduction.html)][[Hypothesis](http://docs.google.com/hypothesis.html)][[Procedure](http://docs.google.com/procedure.html)][[Data](http://docs.google.com/data.html)][[Conclusions](http://docs.google.com/conclusions.html)][[Bilio/Links](http://docs.google.com/biblio.html)]  [[2001 Projects](http://docs.google.com/index.html)][[2000 Projects](http://docs.google.com/AP2000/index.html)][[1999 Projects](http://docs.google.com/AP99/index.html)][[1998 Projects](http://docs.google.com/AP98/index.html)] |