

Why Learn to Play MUSIC?



Educational Benefits

In schools in which principals and vice principals say the quality of their music education programs is excellent or very good, graduation rates are **90.9%**, and attendance is at **93.8%**.¹

87% of teachers and **79%** of parents strongly believe music education has a positive impact on overall academic performance.²

89% of teachers and **82%** of parents rate music education highly as a source for greater student creativity, a 21st century skill that's highly likely to help young people stand out in an increasingly competitive global economy.³

Research reveals strong connections between rhythm skills and pre-reading abilities in toddlers.⁴



“Music is... magical...you take some seemingly random marks on a page, you blow air through a carefully constructed tube, and what comes out the other side is a sound that can convey things that words cannot...And while we can do a million random things with a million random objects, somehow, when we just blow some air through a tube, we create sounds that can move other human beings, can reach right into our brains and our hearts... That is... magical.”

– PETER GREENE, *THE HUFFINGTON POST*⁵

Health Benefits

“We don’t see these kinds of biological changes in people who are just listening to music, who are not playing an instrument. I like to give the analogy that you’re not going to become physically fit just by watching sports.”

– NINA KRAUS, *TIME*¹⁶



Studies show that music can trigger the brain to release chemicals that distract the body from pain.¹⁷

Musical training is thought to improve nervous system function by focusing attention on meaningful acoustic cues, and these improvements in auditory processing cascade to language and cognitive skills.¹⁸

Children who receive musical instruction have more robust brainstem responses to sound as adults than peers who never participated in music lessons. These results suggest that neural changes accompanying musical training during childhood are retained in adulthood.¹⁹

Cognitive and neural benefits of musical experience continue throughout the lifespan, from childhood through senior adulthood, and counteract some of the negative effects of aging, such as memory and hearing difficulties in older adults.²⁰

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“Music may not make you a genius, or rich, or even a better person. But it helps train you to think differently, to process different points of view — and most important, to take pleasure in listening.”

– JOANNE LIPMAN, *THE NEW YORK TIMES*⁶



Cognitive Benefits

Everyday listening skills are stronger in musically-trained children than in those without music training. Significantly, listening skills are closely tied to the ability to: perceive speech in a noisy background, pay attention, and keep sounds in memory.⁷

In order to fully reap the cognitive benefits of a music class, kids have to be actively engaged in the music and participate in the class.⁸

In a 2009 study in the *Journal of Neuroscience*, researchers used an MRI to study the brains of 31 6-year-old children, before and after they took lessons on a musical instrument for 15 months. They found that the music students' brains grew larger in the areas that control fine motor skills and hearing—and that students' abilities in both those areas also improved. The corpus callosum, which connects the left and right sides of the brain, grew as well.⁹

Music training leads to greater gains in auditory and motor function when begun in young childhood; by adolescence, the plasticity that characterizes childhood has begun to decline. Nevertheless, our results establish that music training impacts the auditory system even when it is begun in adolescence, suggesting that a modest amount of training begun later in life can affect neural function.¹⁰

Social Benefits

Children who study a musical instrument are more likely to excel in all of their studies, work better in teams, have enhanced critical thinking skills, stay in school, and pursue further education.¹¹

Perseverance is developed and strengthened through music education and supports better study habits and self-esteem.¹²

As they make music together, Making music together, children learn to work as a team while they each contribute to the song in their own way. At the same time, music helps children learn that together they can make something larger than the sum of its parts.¹³

More benefits of music for children include learning cooperation, sharing, compromise, creativity, and concentration—skills that become invaluable as they enter school, face new challenges, and begin to form new friendships and develop social skills.¹⁴

“One of the biggest kicks is to see a child come into the music program as an introvert and leave as a student leader. That's a tremendous process”

– DICK ZENTER, 2013 PATRICK JOHN HUGHES PARENT/BOOSTER AWARD WINNER¹⁵



Music and the Arts are Vital Elements of the Curriculum

Visit **NAMMFoundation.org** to learn the benefits of music education; how to support music programs in schools; and to join the SupportMusic Coalition, a national network of music education advocates.

Sources

1. Harris Interactive, 2006. 2. NAMM Foundation and Grunwald Associates LLC (2015). *Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States*: 2015. 3. NAMM Foundation and Grunwald Associates LLC (2015). *Striking a Chord: The Public's Hopes and Beliefs for K–12 Music Education in the United States*: 2015. 4. Woodruff Carr K, W.-S.T., Tierney A, Strait D, Kraus N. , Beat synchronization and speech encoding in preschoolers: A neural synchrony framework for language development. , in Association for Research in Otolaryngology Symposium. 2014: San Diego, CA. 5. Peter Greene, "Stop 'defending' music education," *The Huffington Post*, June 11, 2015. 6. Joanne Lipman, "Is Music the Key to Success?" *The New York Times*, October 13, 2013. 7. Strait, D.L. and N. Kraus, Biological impact of auditory expertise across the life span: musicians as a model of auditory learning. *Hearing Research*, 2013; Strait, D.L. and N. Kraus, Can you hear me now? Musical training shapes functional brain networks for selective auditory attention and hearing speech in noise. *Front Psychol*, 2011. 2: p. 113. 8. Dr. Nina Kraus, director of Northwestern University Auditory Neuroscience Laboratory. 9. Reported in Joanne Lipman, "A Musical Fix for American Schools," *The Wall Street Journal*, October 10, 2014. 10. Adam T. Tierney, Jennifer Krizman, Nina Kraus, "Music training alters the course of adolescent auditory development," Proceedings of the National Academy of Sciences, 2015. 11. Arte Music Academy. "Statistical benefits of music in education." Statistical-Benefits-Of-Music-In-Education. Accessed July 17, 2014. 12. Arts Education Partnership, 2011. 13. © 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization. 14. © 2015 Program for Early Parent Support (PEPS), a 501(C)(3) nonprofit organization. 15. Dick Zentner, 2013 Patrick John Hughes Parent/Booster Award Recipient 16. Nina Kraus, director of Northwestern's Auditory Neuroscience Laboratory, quoted in Melissa Locker, "This Is How Music Can Change Your Brain," *Time*, December 16, 2014. 17. Abbie Fenness Swanson, "Music helps vets control symptoms of PTSD," *Time*, March 8, 2010. 18. Nina Kraus, Jessica Slater, Elaine C. Thompson, Jane Hornickel, Dana L. Strait, Trent Nicol, Travis White-Schwoch, "Music Enrichment Programs Improve the Neural Encoding of Speech in At-Risk Children," *Journal of Neuroscience*, September 3, 2014. 19. Skoe, E. & Kraus, N. (2012). A Little Goes a Long Way: How the Adult Brain Is Shaped by Musical Training in Childhood, *Journal of Neuroscience*, 32 (34). 20. Parbery-Clark A, A.S., Kraus N., Musical Experience and Hearing Loss: Perceptual, Cognitive and Neural Benefits, in Association for Research in Otolaryngology Symposium. 2014: San Diego, CA.

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