

## The Value of Musical Training

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Nina Kraus and Samira Anderson have demonstrated the value of music for improving auditory skills. Their research has indicated that music training enhances the neural coding of speech. They suggest that community-based music programs can improve auditory learning and facilitate sound to meaning resulting in improved academic performance and auditory based communication skills.

### Student Studies in Los Angeles

Students in the Los Angeles and Chicago school districts were studied. Students in LA were given musical instruments to take home and use as their own. Students participated from age 6-9 years through high school. They had music lessons and participated in performance groups. Kraus and her group tested children from the group who had music lessons and those who were on the waiting list for the program. They recorded brainstem responses to the speech syllables /ba/ and /ga/ both prior to beginning the training and then after years one and two of training.

Differentiation of these consonants was measured by neural timing (phase) differences. Results after two years indicated changes in brainstem performance. In the LA program, 93% of students went to college. The average drop out rate in the community was 50%.

### Chicago Students

A group of high school students in Chicago participating in either music or physical training were evaluated annually starting the summer before their freshman year in high school and continuing until the summer after graduation. The students who participated in music training had faster neural timing after two years of music training, and neural responses were more stable (less disrupted by noise). No changes were noted in the physical training group.

### Conclusions

This research confirms that music training is an effective strategy for improving auditory development. The findings in both the LA and Chicago groups demonstrated that it took 2 years for the benefit to be demonstrated. How can we use this information for working with children with hearing loss?

Many people assume that hearing loss precludes learning to play a musical instrument. *That is not true.* Many children with significant hearing loss learn to play musical instruments very successfully. Music training should be encouraged, and children with all degrees of hearing loss should be exposed to music. They can and should learn musical instruments. Some will have good musical abilities, and others will not. Just the same as typically hearing children. It does not mean they should not be given the opportunity.