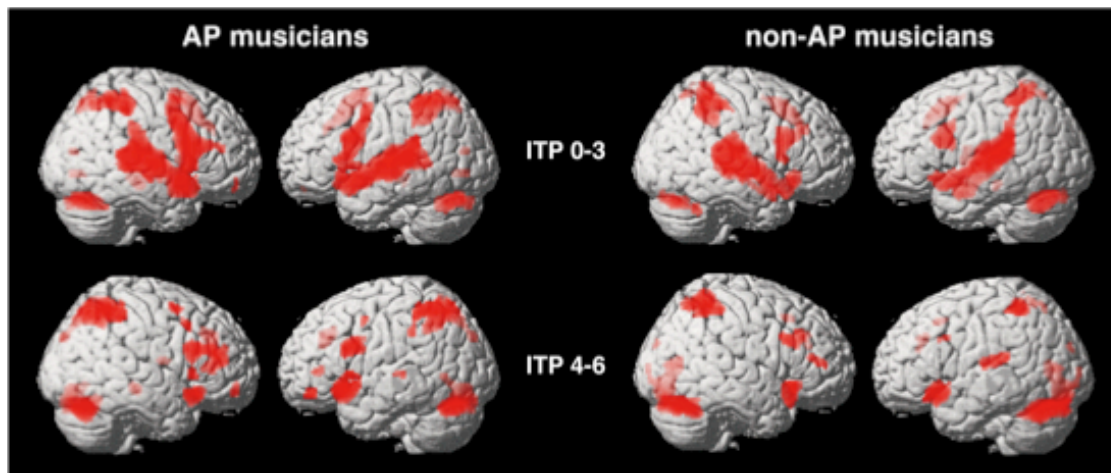


### Color Figure 15.3



**Figure 15.3 Activation for Musicians with Absolute Pitch and Without Absolute Pitch.** Musicians with absolute pitch (labeled “AP musicians”) and musicians without absolute pitch indicated if the first and last pitch in a six or seven note sequence of microtones was the same or different. The red areas indicate which areas of the brain were active during this pitch memory task.

The top row of images, labeled “ITP 0 -3” indicate processing at the beginning of hearing each sequence, while the images labeled “ITP 4-6” indicate processing time extending into working memory.

Find the cerebellum at the bottom of each brain image to get oriented. Then compare areas of red between AP musicians and non-AP musicians at the early processing and later processing stages. There are not a lot of differences to be seen to the naked eye, and only a few statistically significant differences were found through analysis. The strongest of these between group differences was AP musicians showing more activation in initial processing in the superior temporal sulcus. Overall, these results suggest that the activation patterns shown above are more general for pitch memory processing, rather than being specific to musicians who do or do not have absolute pitch.

#### Source

Schulze, K., Gaab, N., & Schlaug, G. (2009). Perceiving pitch absolutely: Comparing absolute and relative pitch possessors in a pitch memory task. *BMC Neuroscience*, 10, 106. <https://doi.org/10.1186/1471-2202-10-106>. Figure 3.

#### Copyright information

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/2.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.