

# Not all rhythmic skills are related, which may have implications for language ability

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Tapping to a beat and remembering rhythms may not be related skills, which may also have implications for language ability, according to a study published September 16, 2015 in the open-access journal *PLOS ONE* by Adam Tierney and Nina Kraus from Northwestern University.

Rhythms, or patterns of sound and silence in time, may play a vital role in both speech and music. However, not knowing how [rhythm](#) skills relate to each other has limited researchers' understanding of how language relies on rhythm processing. In particular, it is unknown whether all rhythm skills are linked together, forming a single broad rhythmic competence, or whether there are multiple separate rhythm skills. Using a battery of two beat tapping and two rhythm memory tests, the authors of this study recruited over 60 teenage participants to investigate whether beat tapping and rhythm memory/sequencing form two separate clusters of rhythm skills.

The researchers found that tapping to a metronome and the ability to adjust to a changing tempo while tapping to a metronome seem to be related skills. The ability to remember rhythms and to drum along to repeating rhythmic sequences may also be related. However, the authors found no relationship between beat tapping skills and rhythm memory skills, and they suggest that these may actually be separate skills. The authors also hope that this discovery will inform future research disambiguating how distinct rhythm competencies track with specific language functions.

**More information:** Tierney A, Kraus N (2015) Evidence for Multiple Rhythmic Skills. *PLoS ONE* 10(9): e0136645. [DOI: 10.1371/journal.pone.0136645](https://doi.org/10.1371/journal.pone.0136645)

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