

Adult Words

What are Adult Words?

Adult words are words spoken by adults near the key child who is wearing the LENA device, when the adult's speech is the primary sound source.



What about singing?

Singing is handled the same way as talking in a regular tone.

If the adult is singing alone with no background music, then the words are counted and the speech is eligible to be part of a conversational turn.

Choral singing or singing with background music would most likely be designated as overlap rather than attributed to the adult. Words are not counted in overlap, and so no turns can be counted.

What is the Adult Word Count?

The Adult Word Count (AWC) is the estimated total number of words spoken to and near the child by adults, male and female.

- The estimate is computed from all audio segments where LENA has identified the speaker as a male adult or female adult. All adult words are combined.
- LENA does not identify what specific words were spoken, only how many.

- When LENA's automated counts were compared against those from professional transcribers, we reached an overall agreement of 98%, for a .92 correlation.
- Please refer to our [Technical Reports](#) for more information on the development of this and other LENA system measures.

Why is the sum of the hourly counts sometimes different from the daily count?

The hourly counts represent the exact number of adult words counted in that hour. The daily counts are statistical projections that allow LENA to compare any LENA Day that is at least 9.5 hours in duration against our normative set, in which all recordings were 12 hours long. For more information, see the Information for Researchers chapter.

What is the Adult Word Percentile?

The Adult Word Percentile (PCTL) shows how the number of words in this LENA Day compares with an age-matched normative sample. Average AWC is represented by the 50th percentile.

Percentiles are available at the daily level for recordings of at least 9.5 hours in duration. (Percentiles are not available for LENA Grow recordings, as the environment is too different from the mostly home-based recordings collected for norms development.)

For details on the development of LENA norms, see:

Gilkerson, J., Richards, J. A., Warren, S. F., Montgomery, J. K., Greenwood, C. R., Oller, D. K., & Hansen, J. H. (2017). Mapping the early language environment using all-day recordings and automated analysis. *American Journal of Speech-Language Pathology*, 26(2), 248-265. doi: 10.1044/2016_AJSLP-15-0169

Where to find Adult Word data

In the individual LENA report, the total AWC for each LENA Day is displayed on the corresponding daily bar. The hourly bars show the AWC from each hour within the recording.

The AWC is also displayed in the LENA recording data exports at the full recording, hourly, and 5-minute level.

Is the Adult Word Count accurate for languages other than English?

The absolute values for Adult Word Count in a non-English language may not be as accurate as for English due to differences in the languages' sets of sounds, average syllables per word, and other language-specific factors; however, the counts can be expected to deviate by the same amount for a given family from one recording to the next, allowing you to track change over time. It may not be appropriate to include non-English AWC data in an otherwise English dataset for research, but for the purpose of working with parents or doing case studies, it is still useful.