

When did humans evolve to hear speech?

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Anthropologists have estimated the hearing abilities of early hominins – reconstructing a human ancestor's sensory perception.

Rolf Quam from Binghamton University in New York and his colleagues studied skulls and ear bones from *Australopithecus africanus* and *Paranthropus robustus*, two species that lived between 1 million and 3 million years ago, as well as modern humans and chimpanzees.

Using CT scans of the bones, they built 3D reconstructions of the ear of each species. Then they fed a series of anatomical measurements into a computer model to predict their hearing abilities.

The results for humans and chimpanzees fitted well with laboratory data, suggesting the model aligned well with real performance.

For each species, they then estimated the frequency range they can hear best. Humans have better hearing than chimps in the 3-5 kHz range. The early hominins had a similar sensitive range to chimpanzees, but shifted slightly towards that of modern humans, so they have better hearing than chimps do for 3-4 kHz sounds.

Australopithecus and *Paranthropus* are not believed to have been capable of language, but they almost certainly communicated vocally as other primates do, says Quam.

Read full, original post: [Ears of early humans could hear frequencies used in speech](#)