

# Farming to blame for our shrinking size and brains

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A fossil of modern humans, dating back 160,000 years. Photo © 2000 David L. Brill, Brill Atlanta

(PhysOrg.com) -- At Britain's Royal Society, Dr. Marta Lahr from Cambridge University's Leverhulme Centre for Human Evolutionary Studies presented her findings that the height and brain size of modern-day humans is shrinking.

Looking at human [fossil evidence](#) for the past 200,000 years, Lahr looked at the size and structure of the bones and [skulls](#) found across Europe, Africa and Asia. What they discovered was that the largest *Homo sapiens* lived 20,000 to 30,000 years ago with an average weight between 176 and 188 pounds and a [brain size](#) of 1,500 cubic centimeters.

They discovered that some 10,000 years ago however, size started getting smaller both in stature and in brain size. Within the last 10 years, the average human size has changed to a weight between 154 and 176 pounds and a brain size of 1,350 cubic centimeters.

While large size remained static for close to 200,000 years, researchers believe the reduction in stature can be connected to a change from the hunter-gatherer way of life to that of agriculture which began some 9,000 years ago.



The fossilized skull of an adult male hominid unearthed in 1997 from a site near the village of Herto, Middle Awash, Ethiopia. The skull, reconstructed by UC Berkeley paleoanthropologist Tim White, is slightly larger than the most extreme adult male humans today, but in other ways is more similar to modern humans than to earlier hominids, such as the neanderthals. White and his team concluded that the 160,000 year old hominid is the oldest known modern human, which they named Homo sapiens idaltu. Image © J. Matternes

While the change to agriculture would have provided a plentiful crop of

food, the limiting factor of farming may have created vitamin and mineral deficiencies and resulted in a stunted growth. Early Chinese farmers ate cereals such as rice which lacks the B vitamin niacin which is essential for growth.

Agriculture however does not explain the reduction in brain size. Lahr believes that this may be a result of the energy required to maintain larger brains. The [human brain](#) accounts for one quarter of the energy the body uses. This reduction in brain size however does not mean that modern humans are less intelligent. [Human brains](#) have evolved to work more efficiently and utilize less energy.

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