

THE ARIZONA REPUBLIC

July 18, 2007

[Jobs](#) | [Cars](#) | [Homes](#) | [Classified](#) | [Yellow pages](#) | [Log In](#) | [Register](#)

User Name / E-mail:

Password:

[Forgot password?](#)

NEWS online print edition



The evolution of walking upright

Using 2 legs saves humans energy, study says

Randolph E. Schmid

Associated Press

Jul. 18, 2007 12:00 AM

WASHINGTON - Why did humans evolve to walk upright? Perhaps because it's just plain easier.

Make that "energetically less costly," in science-speak, and you have the conclusion of researchers who are proposing a likely reason for our modern gait.

Bipedalism, or walking on two feet, is one of the defining characteristics of being human, and scientists have debated for years how it came about.

So, in the latest attempt to find an explanation, researchers trained five chimpanzees to walk on a treadmill while wearing masks that allowed measurement of their oxygen consumption. The chimps were measured while walking upright and while moving on their legs and knuckles.

That measurement of the energy needed to move around was compared with similar tests on humans and the results are published in this week's online edition of *Proceedings of the National Academy of Sciences*.

It turns out that humans walking on two legs use only one-quarter of the energy that chimpanzees use while knuckle-walking on four limbs. And the chimps, on average, use as much energy using two legs as they do when they use all four limbs.

However, there was variability among chimpanzees in how much energy they used, and this difference corresponded to their different gaits and anatomy.

"What we were surprised at was the variation," David Raichlen, assistant professor of anthropology at the University of Arizona, said in a telephone interview. "That was pretty exciting, because . . . without variation there is no evolution."

The research was supported by the National Science Foundation and the L.S.B. Leakey Foundation.

What do you think?

Registered users can post comments on this article

azcentral.com login required

- [sign in to post a comment](#) »
- [click here to register for a free account](#) »

Your Comment:

You must be logged in to post comments.
[Log In](#) | [Register](#)