

Couch potatoes of the animal kingdom

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A new study by Herman Pontzer, Ph.D., assistant professor of anthropology in Arts & Sciences at Washington University in St. Louis, suggests that orangutans use less energy than even sedentary humans. Credit: Wikipedia Commons

Pass the chips and hand over the remote.

In a study involving the first-ever daily energy expenditure measurements in apes, a researcher from Washington University in St. Louis and his team have determined that orangutans living in a large indoor/outdoor habitat used less energy, relative to [body mass](#), than nearly any eutherian mammal ever measured, including sedentary humans.

All this despite activity levels similar to orangutans in the wild.

"It's like finding a sloth in your family tree," says Herman Pontzer, PhD,

assistant professor of [anthropology](#) in Arts & Sciences and lead author of the study. "It's remarkably low energy use."

The research will be published online the week of Aug. 2 in the early edition of the *Proceedings of the National Academy of Sciences*.

Pontzer and his team spent two weeks studying daily [energy expenditure](#) of orangutans in the Great Ape Trust, a 230-acre campus in Des Moines, Iowa.

The study revealed an extremely low rate of energy use not previously observed in primates, but consistent with slow growth and low rate of reproduction in orangutans.

Pontzer suggests this may be an evolutionary response to severe food shortages in the orangutan's native Southeast Asian rainforests. The rainforests of Borneo and Sumatra are highly random environments that often experience crashes in the availability of ripe fruit, the food on which orangutans depend.

The study suggests that [orangutans](#) have adapted over time by becoming consummate low-energy specialists, decreasing their daily energy needs to avoid starvation in food-poor times.

Pontzer thinks this research also may shed light on the evolved energy use of other primates, as well as human foragers. He plans to expand the study.

Provided by Washington University in St. Louis

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