

New Study Examines Evolutionary Explanations For Biological Immortality

Though getting older may seem inevitable, a major new study from the forthcoming issue of *Physiological and Biochemical Zoology* examines the point in human life when your body simply stops aging.

"For decades, demographers and gerontologists noticed that late life human data did not fit [expected] models: there was a shortage of deaths," write Michael R. Rose, Casandra L. Rauser, and Laurence D. Mueller. "More specifically, the exponential increase in age-specific death rate seemed to slow down considerably, if not cease."

The sudden plateau in mortality rates after a certain age has long been observed with other organisms, but its presence in human populations has been dismissed as a result of the advent of nursing homes and modern medicine. However, close examination of demographic data supports a distinct third phase of life history known as "late life," characterized by the cessation of age-related deterioration.

"Late life is a unique and distinct phase of life very different from aging," write the authors. "Each phase evolves according to very different rules. Evolutionary biology has a new set of problems to solve."

The authors posit that late life arises after the forces of natural selection affecting both fertility and mortality cease to have an impact.

Rose, Michael R., Casandra L. Rauser, Laurence D. Mueller. "Late Life: A New Frontier for Physiology." *Physiological and Biochemical Zoology* 78:6.

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