

Statins may slow human aging by protecting against telomere shortening: A feature of senescent cells

August 29 2013

Not only do statins extend lives by lowering cholesterol levels and reducing the risks of cardiovascular disease, but new research in the September 2013 issue of *The FASEB Journal* suggests that they may extend lifespans as well. Specifically, statins may reduce the rate at which telomeres shorten, a key factor in the natural aging process. This opens the door for using statins, or derivatives of statins, as an anti-aging therapy.

"By telomerase activation, statins may represent a new molecular switch able to slow down [senescent cells](#) in our tissues and be able to lead healthy lifespan extension," said Giuseppe Paolisso, M.D., Ph.D., a researcher involved in the work from the Department of Internal Medicine, Surgical, Neurological Metabolic Disease and Geriatric Medicine at Second University of Naples in Naples, Italy.

To make this discovery, Paolisso and colleagues worked with two groups of subjects. The first group was under chronic statin therapy, and the second group (control), did not use statins. When researchers measured telomerase activity in both groups, those undergoing statin treatment had higher telomerase activity in their [white blood cells](#), which was associated with lower telomeres shortening along with aging as compared to the control group. This strongly highlights the role of telomerase activation in preventing the excessive accumulation of short telomeres.

"The great thing about statins is that they reduce risks for cardiovascular disease significantly and are generally safe for most people. The bad thing is that statins do have side effects, like muscle injury," said Gerald Weissmann, M.D., Editor-in-Chief of *The FASEB Journal*. "But if it is confirmed that statins might actually slow aging itself—and not just the symptoms of aging—then statins are much more powerful drugs than we ever thought."

More information: Virginia Boccardi, Michelangela Barbieri, Maria Rosaria Rizzo, Raffaele Marfella, Antonietta Esposito, Luigi Marano, and Giuseppe Paolisso. A new pleiotropic effect of statins in elderly: modulation of telomerase activity. *FASEB J* September 2013 27:3879-3885, [DOI: 10.1096/fj.13-232066](https://doi.org/10.1096/fj.13-232066)

Provided by Federation of American Societies for Experimental Biology

Citation: Statins may slow human aging by protecting against telomere shortening: A feature of senescent cells (2013, August 29) retrieved 6 May 2024 from <https://medicalxpress.com/news/2013-08-statins-human-aging-telomere-shortening.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--