

# Mild increases in thyroid-stimulating hormone not harmful in the elderly

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There is no evidence to link mildly elevated thyroid-stimulating hormone (TSH) levels to an increase in mortality among the elderly, according to a recent study accepted for publication in The Endocrine Society's *Journal of Clinical Endocrinology & Metabolism (JCEM)*. The findings suggest that reflexively treating mild elevations of TSH in those of advanced age is unnecessary.

TSH is a sensitive, commonly measured test to check [thyroid function](#). TSH levels are inversely related to thyroid hormone levels – thyroid hormone levels below a set-point trigger an increase in TSH. Levels of TSH gradually increase during the aging process, which means that elderly patients are likely to be outside of standard reference ranges and could be labeled with the diagnosis of subclinical hypothyroidism.

"As increasing numbers of people live into their 80s and 90s, it is important to know how to manage their health, including thyroid function," said Anne R. Cappola, MD, ScM of the University of Pennsylvania in Philadelphia, and lead author of the study. "Our study shows that a gradual increase in TSH occurs during healthy aging and that mild increases in TSH are not harmful in the oldest old."

The study began in 1989-1992 and examined 5,888 men and women aged 65 and older. In 2005, 843 surviving participants who had thyroid function testing were examined for changes in physical and cognitive functions. Between 1992 and 2005, participants who were not taking thyroid medication at either visit had a 13 percent increase in TSH.

Older participants (mean age 85 years) with increased TSH and subclinical hypothyroidism did not have a higher [mortality](#) rate; on the contrary, data suggested that having subclinical hypothyroidism could be protective. In addition, higher levels of [thyroid hormone](#) itself were associated with a higher risk of death.

"Our research presents the first data demonstrating longitudinal changes in thyroid function in a cohort of the oldest old," said Cappola. "Our findings suggest that treating mild elevations in TSH in the elderly is unnecessary. Further studies are needed to determine the threshold levels of [thyroid](#) function that would benefit from intervention."

**More information:** The article, "Longitudinal Changes in Thyroid Function in the Oldest Old and Survival: the Cardiovascular Health Study All-Stars Study," appears in the November 2012 issue of *JCEM*.

Provided by The Endocrine Society

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