

First links between thyroid hormone and mortality

August 5 2013, by Louisa Frew



The group now plan to correlate thyroxine levels with cause-specific mortality categories in the same cohort of older men. Credit: Jeremy Heibert

DATA from The Health In Men Study (HIMS) has revealed a link between thyroid hormones and mortality in older men, revealing the first-ever association between high thyroxine levels within the normal range with all-cause mortality.

Conducted by researchers from the University of Western Australia's School of Medicine and Pharmacology, in collaboration with the WA Centre for Healthy Ageing (WACHA), the results will be published in the *European Journal of Endocrinology*.

"We know if your [thyroid](#) hormone levels are clearly abnormal you do

have worse outcomes as a result," lead author Dr Bu Yeap says.

"But there's also a category of people with what we call subclinical [thyroid dysfunction](#), where their levels are just slightly out of the normal range – in which there may be problems as well."

The research follows from previous studies in which the team found higher levels of free thyroxine to be associated with increased risk of [frailty](#) and [dementia](#) in older men.

"We just wanted to see whether or not there was an association between free thyroxine levels and mortality in older men," Prof Yeap says.

Using participants from the WACHA-based HIMS, the group analysed free thyroxine and thyrotrophin levels in the blood samples of 3885 men, aged 70–89 years and without [thyroid disease](#), who were then followed for mortality over a period of more than six years.

"We found that men with free thyroxine levels in the top 25 per cent of normal values had an increased risk of mortality," Prof Yeap says.

"This is the first time anyone has shown an association between thyroxine levels and mortality in this type of population within the normal range."

According to Prof Yeap, it is still unclear if thyroxine is a causal factor or a [biomarker](#) for an underlying process that increases mortality while incidentally increasing thyroxine.

"For practical purposes, free thyroxine levels high in the normal range in an older man might be a trigger to look carefully at all other health risk factors and see what can be done about those to ensure the patient is optimally managed."

The group now plan to correlate thyroxine levels with cause-specific mortality categories in the same cohort of older men.

"The important thing is that we've had a lot of men in WA who have been taking part in this research and we are getting some really good information out of the HIMS."

More information: www.ncbi.nlm.nih.gov/pubmed/23853210

Provided by Science Network WA

Citation: First links between thyroid hormone and mortality (2013, August 5) retrieved 9 April 2024 from <https://medicalxpress.com/news/2013-08-links-thyroid-hormone-mortality.html>

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