



THYROID DISEASE IN THE ELDERLY

Abnormal thyroid function is associated with disability risk, but not with increased risk of death, in individuals 85 years of age or older

BACKGROUND

It is clear that patients with overt hypothyroidism and hyperthyroidism (abnormal TSH and abnormal T₄ levels) are at increased risk of heart problems. It is less clear that subclinical hypothyroidism and hyperthyroidism (abnormal TSH and normal T₄ levels). In some studies, abnormal thyroid function has been associated with an increased risk of death related to heart problems.

Adults in their 80s or older are more likely to have abnormal thyroid function, especially higher TSH values, than younger adults. Heart problems are also more common in elderly patients. However, it is unclear whether abnormal thyroid function is associated with increased risk of heart problems and death in these oldest individuals. The objective of this study was to determine whether abnormal thyroid function is associated with disability and death in a group of 85-year-olds.

THE FULL ARTICLE TITLE

Pearce SH et al Serum thyroid function, mortality and disability in advanced old age: the Newcastle 85+ study. *J Clin Endocrinol Metab* 2016. August 23, 2016 [Epub ahead of print].

SUMMARY OF THE STUDY

This was a prospective study that used data from the Newcastle 85+ study. Participants in the study were all born in 1921 and recruited at the age of 85 in 2006-2007. A fasting blood draw, physical exam and health

questionnaires were conducted at baseline. Disability scores were based on assessments of daily living at baseline, 18, 36 and 60 months. Causes of death were obtained from the national registration system.

A total of 643 individuals participated in the study. Of these, 83% had normal thyroid function tests, 12.5% had subclinical hypothyroidism, 0.9% had overt hypothyroidism, 2.9% had subclinical hyperthyroidism and 0.8% had overt hyperthyroidism. Lower TSH levels were associated with greater degrees of disability in both men and women, but there was no association between thyroid status and risk for death in this group of individuals aged 85 years or older.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study provides reassurance that abnormal thyroid function was not associated with an increased risk for death in elderly patients. Moreover, the lower rates of disability associated with higher TSH levels seen in this study adds to the growing evidence that it may be inappropriate to treat mild TSH elevations in very elderly patients.

— Maria Papaleontiou, MD

ATA THYROID BROCHURE LINKS

Thyroid Disease in the Older Patient: <http://www.thyroid.org/thyroid-disease-older-patient/>

ABBREVIATIONS & DEFINITIONS

Subclinical Hypothyroidism: a mild form of hypothyroidism where the only abnormal hormone level is an increased TSH. There is controversy as to whether this should be treated or not.

Subclinical Hyperthyroidism: a mild form of hyperthyroidism where the only abnormal hormone level is a decreased TSH.

TSH: thyroid stimulating hormone — produced by the pituitary gland that regulates thyroid function; also the best screening test to determine if the thyroid is functioning normally.

Prospective study: a research study in which a group of individuals who have one or more common characteristics are followed over time.



THYROID DISEASE IN THE ELDERLY, continued

Overt Hypothyroidism: clear hypothyroidism with an increased TSH and a decreased T_4 level. All patients with overt hypothyroidism are usually treated with thyroid hormone pills.

Overt Hyperthyroidism: clear hyperthyroidism with a decreased TSH and an increased T_4 level and/or T_3 level.



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