



HYPOTHYROIDISM

Levothyroxine treatment of subclinical hypothyroidism does not improve symptoms in patients 80 years of age or older

BACKGROUND

Subclinical hypothyroidism is a mild form of hypothyroidism in which the level of Thyroid Stimulating Hormone (TSH) is increased, but the thyroid hormone level is within the normal range. This is compared to overt hypothyroidism where the TSH is increased and the thyroid hormone levels are low. Subclinical hypothyroidism much more common than overt hypothyroidism in adults, and its rate increases with age. Some studies suggest that subclinical hypothyroidism may affect up to 25% of individuals over the age of 75. Treatment of subclinical hypothyroidism is controversial as beneficial effects are hard to show in many studies.

Studies have shown that many elderly patients with subclinical hypothyroidism complain of fatigue, poor memory, dry skin, depressed mood and other symptoms that are non-specific. Further, these symptoms may also be seen commonly in the elderly population who do not have a thyroid problem. Several studies had been conducted to evaluate if prescribing thyroid hormone in adults with subclinical hypothyroidism may improve these symptoms. The current study was designed to examine the effect of treating subclinical hypothyroidism in patients who are 80 or older.

THE FULL ARTICLE TITLE

Mooijaart SP et al 2019 Association between levothyroxine treatment and thyroid-related symptoms among adults aged 80 years and older with subclinical hypothyroidism. JAMA. Epub Oct 30:1–11. PMID: 31664429.

SUMMARY OF THE STUDY

The authors analyzed the data from two previous randomized clinical trials done in Europe, but focused their analysis specifically on individuals who were 80 or

older. They all had abnormal TSH levels, ranging from 4.6 to 19.9 mIU/L in two or more blood tests which were 3 months apart. People who were taking thyroid hormone, lithium and amiodarone or had recent thyroid surgery, radioactive iodine therapy as well as individuals with terminal illness and severe heart disease were excluded. Patients were divided into two groups; one received thyroid hormone therapy and the other placebo. The dose of thyroid hormone was increased gradually to achieve a normal TSH result.

A total of 2,989 individuals were screened for inclusion in this study. A total of 1883 individuals (63%) had an abnormal TSH result initially that returned to normal in future tests. A total of 251 patients with the average age of 85 years were included in the study. Almost half (47%) were women. After careful analysis, the rate of tiredness, other symptoms and heart related events were not different between the two groups.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study shows that the vast majority of individuals over the age of 80 with an initial increased TSH with normal thyroid hormone levels will have a normal TSH on follow up testing. In those patients with persistent subclinical hypothyroidism, treatment with thyroid hormone did not improve fatigue or other non-specific symptoms. This confirms prior studies that many symptoms like tiredness, problems with memory and changes in mood are common in older adults, but are not specific to thyroid disease. Thus, this study shows there is no clear benefit of treatment of elderly patients with subclinical hypothyroidism with thyroid hormone.

— Shirin Haddady, MD

ATA THYROID BROCHURE LINKS

Hypothyroidism (Underactive): <https://www.thyroid.org/hypothyroidism/>

Older Patients and Thyroid Disease: <https://www.thyroid.org/thyroid-disease-older-patient/>





HYPOTHYROIDISM, continued

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.

Hypothyroidism: a condition where the thyroid gland is underactive and doesn't produce enough thyroid hormone. Treatment requires taking thyroid hormone pills.

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.

Thyroid hormone therapy: patients with hypothyroidism are most often treated with Levothyroxine in order to return their thyroid hormone levels to normal. Replacement therapy means the goal is a TSH in the normal range and is the usual therapy. Suppressive therapy means that the goal is a TSH below the normal range and is used in thyroid cancer patients to prevent growth of any remaining cancer cells.



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