



## HYPOTHYROIDISM

# Thyroid hormone therapy does not improve symptoms in subclinical hypothyroidism

### BACKGROUND

Subclinical hypothyroidism is diagnosed when TSH levels are high but the thyroid hormone levels are still normal. It represents a mild form of hypothyroidism. Whether or not to treat subclinical hypothyroidism is controversial as benefits of treating have not been proven in many cases. One area particularly controversial is with patient symptoms. Overt hypothyroidism can cause symptoms such as tiredness, constipation, unexplained weight gain and may be associated with heart disease, elevated blood pressure, or high cholesterol. While some patients with subclinical hypothyroidism do not have symptoms, many do have significant symptoms that may seem out of proportion to their thyroid hormone abnormalities. Multiple studies were done in the past to answer whether treatment would help patients with subclinical hypothyroidism with significant symptoms, but they had looked at different outcomes using very different methods.

The aim of this study was to review and analyze the results of previously published studies on subclinical hypothyroidism to determine the association of thyroid hormone therapy with quality of life and thyroid related symptoms.

### THE FULL ARTICLE TITLE

Feller M et al 2018 Association of thyroid hormone therapy with quality of life and thyroid-related symptoms in patients with subclinical hypothyroidism: a systematic review and meta-analysis. JAMA 320:1349–1359. PMID:30285179.

### SUMMARY OF THE STUDY

Nonpregnant adults with subclinical hypothyroidism were studied. Researchers identified randomized clinical trials that compared thyroid hormone therapy with no therapy. The studies were evaluated for the quality of information, design, and results. A total of 21 studies, with a total of 2192 individuals were included in the analysis. The age range was 32 – 74 years. Baseline TSH values were 4.4 – 12.8 mIU/L and were in the normal range in the thyroid hormone treated groups after 3-18 months of therapy while they remained elevated in the groups that were not treated. There was no improvement in general quality of life, hypothyroid symptoms, depressive symptoms, blood pressure, body mass index (BMI), or cognitive function (memory, thinking).

### WHAT ARE THE IMPLICATIONS OF THIS STUDY?

The results of this study showed that thyroid hormone therapy to normalize the TSH in patients with subclinical hypothyroidism did not improve general quality of life or thyroid related symptoms. These findings are important for patients diagnosed with subclinical hypothyroidism since routine treatment may not be necessary for everyone. Patients and physicians should carefully discuss whether to start thyroid hormone therapy and set treatment goals.

—Ebru Sulanc, MD, FACE

### ATA THYROID BROCHURE LINKS

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

Thyroid Function Tests: <https://www.thyroid.org/thyroid-function-tests/>

Thyroid Hormone Treatment: <https://www.thyroid.org/thyroid-hormone-treatment/>





**HYPOTHYROIDISM, continued**

**ABBREVIATIONS & DEFINITIONS**

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

**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.

**Overt Hypothyroidism:** clear hypothyroidism an increased TSH and a decreased T4 level. All patients with overt hypothyroidism are usually treated with

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 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.

FEBRUARY  
**Hypothyroidism**  
*Awareness Month*



AMERICAN THYROID ASSOCIATION®  
ATA | [www.thyroid.org](http://www.thyroid.org)

