

**SUBCLINICAL THYROID DISEASE****Does subclinical thyroid disease increase the risk for blood clots?****BACKGROUND**

Subclinical, or mild, thyroid disease is defined as a condition in which the TSH level is abnormal but the actual hormone levels in the blood are normal. Subclinical hyperthyroidism is diagnosed when the TSH is low and subclinical hypothyroidism is diagnosed when the TSH is increased. This condition is considered more common in patients above the age of 65 years. Venous thromboembolism (VTE), is a condition caused by formation of blood clots in the circulation. These may involve the legs and can have serious outcomes if the clots travel to the lungs, a condition called pulmonary embolism. VTE occurs nearly 1% annually among individuals 65 years of age or older and VTE is associated with an increased risk of dying. Both overt and subclinical hyperthyroidism are associated with elevated levels of clotting factors in the blood and one study found that both low and high TSH values were associated with an increased risk of VTE. The goal of this study was to determine the relationship between thyroid status and recurrent VTE risk

THE FULL ARTICLE TITLE

Segna D et al. Association between thyroid dysfunction and venous thromboembolism in the elderly: a prospective cohort study. *J Thromb Haemost.* January 27, 2016 [Epub ahead of print].

SUMMARY OF THE STUDY

The study looked at patients who were at least 65 years old. A total of 41% of participants were female, the mean age was 74 years, 7% were smokers, 30% had a history of VTE, 11% had active cancer, 17% had diabetes, and 65% had hypertension. Over 500 patients were studied. These patients were admitted to the hospitals with VTE and

their risk for getting another similar illness or pulmonary embolism was studied.

At baseline, a total of 35 (6%) of study participants had subclinical hypothyroidism and 26 (5%) had subclinical hyperthyroidism. Over an average follow-up of 20.8±9.1 months, 52 (9%) of subjects experienced recurrent VTE. The incidence of recurrent VTE was 7.2 per 100 patient-years in participants with subclinical hypothyroidism and 5.85 per 100 patient among euthyroid participants. Recurrent VTE was not observed in the subjects with subclinical hyperthyroidism. Levels of some clotting factors were higher in patients with subclinical hyperthyroidism than in euthyroid subjects. A total of 56 (10%) of participants died over the course of the follow-up period. TSH and thyroid status were not associated with mortality.

WHAT ARE THE IMPLICATIONS OF THIS STUDY?

This study suggests that among elderly patients with a history of VTE, patients with subclinical hyperthyroidism had lower rates of recurrent VTE than those who were euthyroid. Thus, subclinical hyperthyroidism may not increase the risk of VTE; however, the authors recommend larger studies to further understand the link.

—Vibhavasu Sharma, MD

ATA THYROID BROCHURE LINKS

Hyperthyroidism: <http://www.thyroid.org/hyperthyroidism/>

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

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

ABBREVIATIONS & DEFINITIONS

Venous thromboembolism (VTE): this is a condition caused by formation of blood clots in the circulation.

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

Subclinical hypothyroidism: a mild form of

hyperthyroidism where the only abnormal hormone level is a decreased TSH.

Hyperthyroidism: a condition where the thyroid gland is overactive and produces too much thyroid hormone. Hyperthyroidism may be treated with antithyroid meds (Methimazole, Propylthiouracil), radioactive iodine or surgery.



SUBCLINICAL THYROID DISEASE, continued

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