

Subclinical Hypothyroidism and Incident Depression in Young and Middle Age Adults

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Background: The role of subclinical hypothyroidism in the development of depression remains controversial. We examined the prospective association between subclinical hypothyroidism and incident depressive symptoms.

Methods: We conducted a prospective cohort study in 220,545 middle age adults without depression who underwent at least 2 comprehensive health exams between January 1, 2011 and December 31, 2014. Thyroid-stimulating hormone (TSH), free triiodothyronine (FT3) and free thyroxin (FT4) levels were measured by an electrochemiluminescent immunoassay. The study outcome was incident depressive symptom defined as a CES-D score >16.

Results: During a median follow-up of 2 years, incident depressive symptoms occurred in 7,323 participants. The multivariable-adjusted hazard ratio (HR) for incident depressive symptoms comparing subclinical hypothyroid to euthyroid participants was 0.97 (0.87 to 1.09). Similarly, among euthyroid participants (n = 87,822), there was no apparent association between thyroid hormone levels and increased risk of incident depressive symptoms.

Discussion: There was no apparent association between subclinical hypothyroidism and incident depressive symptoms in a large prospective cohort of middle-aged men and women.