

Why Thyroid Issues?

Human race has evolution challenges...

and is both caught in and emerging from a primitive consciousness... the source of most illness.

Thoughts, emotions, actions that often trigger a

Chronic, super-ramped-up, over-active

biologically consequential

Stress response

Leading eventually to

Lessened ability to put out youthful hormone levels

Subclinical thyroid disease: scientific review and guidelines for diagnosis and management.

CONTEXT: Patients with serum thyroid-stimulating hormone (TSH) levels outside the reference range and levels of free thyroxine (FT4) and triiodothyronine (T3) within the reference range are common in clinical practice. The necessity for further evaluation, possible treatment, and the urgency of treatment have not been clearly established.

STUDY SELECTION AND DATA EXTRACTION: A total of 195 English-language or translated papers were reviewed. Editorials, individual case studies, studies enrolling fewer than 10 patients, and nonsystematic reviews were excluded. Information related to authorship, year of publication, number of subjects, study design, and results were extracted and formed the basis for an evidence report, consisting of tables and summaries of each subject area.

CONCLUSIONS: Data supporting associations of subclinical thyroid disease with symptoms or adverse clinical outcomes or benefits of treatment are few. The consequences of subclinical thyroid disease (serum TSH 0.1-0.45 mIU/L or 4.5-10.0 mIU/L) are minimal and we recommend against routine treatment of patients with TSH levels in these ranges. There is insufficient evidence to support population-based screening. Aggressive case finding is appropriate in pregnant women, women older than 60 years, and others at high risk for thyroid dysfunction. 

[JAMA. 2004 Jan 14;291\(2\):228-38.Surks MI, et al.](#)

Patients with serum thyroid-stimulating hormone (TSH) levels outside the reference range and levels of free thyroxine (FT4) and triiodothyronine (T3) within the reference range are common in clinical practice.

The necessity for further evaluation, possible treatment, and the urgency of treatment have not been clearly established.

STUDY SELECTION AND DATA EXTRACTION: A total of 195 English-language or translated papers were reviewed

CONCLUSIONS: ...The consequences of subclinical thyroid disease (serum TSH 0.1-0.45 mIU/L or 4.5-10.0 mIU/L) are minimal and **we recommend against routine treatment of patients with TSH levels in these ranges.**

“...it is not certain whether it is necessary to treat subclinical hypothyroidism at all. The study in this issue of *JAMA* suggests that treatment might be warranted, especially if the blood TSH level is above 10 mU/L.”

Subclinical Hypothyroidism Ryszard M. Pluta, MD, PhD;
Alison E. Burke, MA; Richard M. Glass, MD
JAMA. 2010;304(12):1402. [http://jama.jamanetwork.com/
article.aspx?articleid=186627](http://jama.jamanetwork.com/article.aspx?articleid=186627)

The Colorado thyroid disease prevalence study.

Participants in a statewide health fair in Colorado, 1995 (N = 25,862).

RESULTS:The prevalence of elevated TSH levels (normal range, 0.3-5.1 mIU/L) in this population was 9.5%, and the prevalence of decreased TSH levels was 2.2%. Forty percent of patients taking thyroid medications had abnormal TSH levels. Lipid levels increased in a graded fashion as thyroid function declined. Also, the mean total cholesterol and low-density lipoprotein cholesterol levels of subjects with TSH values between 5.1 and 10 mIU/L were significantly greater than the corresponding mean lipid levels in euthyroid subjects. Symptoms were reported more often in hypothyroid vs euthyroid individuals, but individual symptom sensitivities were low.

CONCLUSIONS:The prevalence of abnormal biochemical thyroid function reported here is substantial and confirms previous reports in smaller populations. Among patients taking thyroid medication, only 60% were within the normal range of TSH. Modest elevations of TSH corresponded to changes in lipid levels that may affect cardiovascular health. Individual symptoms were not very sensitive, but patients who report multiple thyroid symptoms warrant serum thyroid testing. These results confirm that thyroid dysfunction is common, may often go undetected, and may be associated with adverse health outcomes that can be avoided by serum TSH measurement.

Arch Intern Med. 2000 Feb 28;160(4):526-34.

Canaris GJ, Manowitz NR, Mayor G, Ridgway EC.



...prevalence of elevated TSH levels (normal range, 0.3–5.1 mIU/L) in this population was 9.5%

...the mean total cholesterol and low-density lipoprotein cholesterol levels of subjects with TSH values between 5.1 and 10 mIU/L were significantly greater than the corresponding mean lipid levels in euthyroid subjects.

Symptoms were reported more often in hypothyroid vs euthyroid individuals

Among patients taking thyroid medication, only 60% were within the normal range of TSH.

These results confirm that thyroid dysfunction is common, may often go undetected, and may be associated with adverse health outcomes that can be avoided by serum TSH measurement.

Thyroid hormone is affected by Sex Steroids:

Abstract

- Thyroid function is modulated by genetic and environmental causes as well as other illnesses and medications such as gonadal or sex steroids. The latter class of drugs (sex steroids) modulates thyroid function. Gonadal steroids exert their influence on thyroid function primarily by altering the clearance of thyroxine-binding globulin (TBG). While oestrogen administration causes an increase in serum TBG concentration, androgen therapy results in a decrease in this binding protein. These effects of gonadal steroids on TBG clearance and concentration are modulated by the chemical structure of the steroid being used, its dose and the route of administration. Despite the gonadal steroids-induced changes in serum TBG concentrations, subjects with normal thyroid glands maintain clinical and biochemical euthyroidism without changes in their serum free thyroxine (T4) or thyroid-stimulating hormone (TSH) levels. In contrast, the administration of gonadal steroids to patients with thyroid diseases causes significant biochemical and clinical alterations requiring changes in the doses of thyroid medications. Similarly, gonadal steroid therapy might unmask thyroid illness in previously undiagnosed subjects. It would be prudent to assess thyroid function in subjects with thyroid disease 6–8 weeks after gonadal steroid administration or  withdrawal.
- **Sex steroids and the thyroid.** [Tahboub R, Arafah BM. Best Pract Res Clin Endocrinol Metab. 2009 Dec;23\(6\):769-80. doi: 10.1016/j.beem.2009.06.005.](#)

Gonadal steroids exert their influence on thyroid function primarily by altering the clearance of thyroxine-binding globulin (TBG).

Oestrogen administration causes an increase in serum TBG concentration, androgen therapy results in a decrease in this binding protein.

Despite the gonadal steroids-induced changes in serum TBG concentrations, subjects with *normal thyroid glands* maintain clinical and biochemical euthyroidism without changes in their serum free thyroxine (T4) or thyroid-stimulating hormone (TSH) levels.

In contrast, the administration of gonadal steroids to patients with thyroid diseases causes significant biochemical and clinical alterations requiring changes in the doses of thyroid medications.

Similarly, gonadal steroid therapy might unmask thyroid illness in previously undiagnosed subjects. It would be prudent to assess thyroid function in subjects with thyroid disease 6–8 weeks after gonadal steroid administration or withdrawal.



*After Treating with Estrogen
for a few months...
Consider checking
Thyroid functions*