

Subclinical Thyroid Disease

This statement was developed by an AACE Rapid Response Team comprised of:

Hossein Gharib, MD, FACE
Rhoda H. Cobin, MD, FACE
H. Jack Baskin, MD, MACE

Subclinical thyroid disease is common and its management remains controversial. To update proper diagnosis and management of subclinical thyroid disease, the American Association of Clinical Endocrinologists (AACE), the American Thyroid Association (ATA), and The Endocrine Society (TES), cosponsored a Consensus Development Conference which was held September 2002; the recommendations from the conference were recently published (JAMA 2004; 291:228-238).

The consensus report acknowledges that the continued controversy on conventional practices is mainly due to the paucity of evidence-based data and, therefore, recommends large, randomized prospective studies to determine outcome of treatment. The report maintains that the upper limit of TSH should remain at 4.5 mIU/L, rather than 3.0-3.5 as some other organizations have suggested. The authors recommended neither routine testing for nor routine treatment of subclinical disease, a position at variance with what several medical organizations including AACE and ATA had previously published. It is clear from several published studies that subclinical hypothyroidism can result in clinical symptoms, hyperlipidemia and cardiac dysfunction. The paper states that since available data do not convincingly show clear-cut benefit from early thyroxine therapy, routine T4 treatment for patients with TSH between 4.5 and 10 mIU/L is not warranted.

This report does not support routine TSH testing in pregnancy but recognizes the need for aggressive case finding in pregnancy as well as in others at high risk for thyroid dysfunction. It suggests pregnant women or those planning to become pregnant with elevated TSH be treated with thyroxine to normalize serum TSH. With regard to hyperthyroidism the authors concluded that given the potential harm from suppressed TSH, it is reasonable to treat patients with TSH <0.1. Those with serum TSH between 0.1 and 0.45 mIU/L should be monitored but not treated.

The panelists based their recommendations on a requirement for large, randomized clinical trials, while AACE guidelines, in the absence of such studies, rely on clinical expertise in evaluating the current literature

The AACE Clinical Practice Guidelines for the Evaluation and Treatment of Hyperthyroidism and Hypothyroidism 2002 Update, as outlined below, differ in several areas to the conference recommendations.

1. AACE used an upper limit of normal for TSH of 3.0mIU/L established in a population of patients carefully screened for thyroid disease by the National Academy of Biochemistry in 2002. The panelists chose a higher upper limit of normal.
2. AACE feels that thyroid antibodies should be measured in patients having subclinical hypothyroidism and used as a clinical tool in deciding upon treatment.
3. AACE guidelines recommend treatment of patients with TSH>5mIU/L if the patient has a goiter or if thyroid antibodies are present. The presence of symptoms compatible with hypothyroidism, infertility, pregnancy or imminent pregnancy would also favor treatment.
4. AACE feels that the physician who has performed a comprehensive history and physical examination should decide on treatment of each individual patient.

The authors of the consensus paper should be commended for an in-depth analysis of a confusing area in endocrine practice. AACE believes that integrating current best evidence with clinical expertise and experience, improves patient care. In our opinion, until adequate data are available, best practice combines clinical judgment with patient preferences.