# Jury Out on Routine Thyroid Disease Screening

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WASHINGTON — Thyroid disease screening has not yet been proved useful in the general population, but the issue of early detection of thyroid dysfunction deserves further exploration, Dr. Paul Ladenson explained at a meeting jointly sponsored by the American Thyroid Association and Johns Hopkins University.

Dr. Ladenson, director of the division of endocrinology and metabolism at Johns Hopkins University, Baltimore, said that in general, screening programs should be for diseases:

► With significant prevalence.
► With significant clinical consequence.
► For which clinical diagnosis often is inaccurate.
► For which delayed diagnosis and treatment have consequences that could be avoided by earlier diagnosis.
► For which there is an accurate, safe, and inexpensive diagnostic test.
► For which there is a safe, effective, inexpensive therapy.

At first glance, mild thyroid dysfunction—particularly mild thyrotoxicosis and mild hypothyroidism—would easily meet many of these criteria, Dr. Ladenson said. "These are disorders with highly significant prevalences, particularly subclinical hypothyroidism."

In addition, data such as that from the Colorado Thyroid Disease Prevalence Study show that clinical diagnosis of these disorders lacks in specificity and sensitivity, "and certainly measurement of TSH and thyroxine therapy easily fulfill the final two criteria" of an accurate, safe, and inexpensive diagnostic test and having an effective, safe, and inexpensive therapy.

And thyroid testing has another thing going for it: It is relatively cheap in terms of cost effectiveness, according to Dr. Ladenson.

For example, studies have found that the cost of screening all women 35 years and older for thyroid dysfunction was $9,000 per each year of restoration to perfect health and life expectancy, which is inexpensive, compared with other interventions.

But Dr. Ladenson asked, "Are these disorders that have significant clinical consequences, and does it matter if we wait to diagnose and treat them [or] if we wait until patients come to us with complaints that might well be reversible?"

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Various groups have tried to address the issue.

The American Thyroid Association looked at the issue in 2000 and determined that adults should be screened every 5 years beginning at age 35; those with symptoms and signs of a possible thyroid problem should be screened more frequently (Arch. Int. Med. 2000;160:1573-5). Dr. Ladenson, who said the conclusions were "aggressive in retrospect," was the lead author of the guideline.

In 2003, a 13-member joint task force named by the American Thyroid Association, the Endocrine Society, and the American Association of Clinical Endocrinologists performed a structured literature review of 195 articles on thyroid disease screening; the group also attended a symposium on the topic with 12 expert presenters.

In its report, the task force concluded that there was insufficient evidence to support population-based thyroid disease screening, although they conceded that "aggressive case-finding" was recommended for pregnant women, women over 60 years, and others at high risk of thyroid dysfunction (JAMA 2004;291:228-38).

Just a month later, the U.S. Preventive Services Task Force published its recommendations on the issue—again using a literature review and deliberation by a panel of experts—and concluded that the evidence was insufficient to recommend for or against routine screening (Ann. Int. Med. 2004;140:125-7). ■