## Subclinical Hypothyroidism Linked to Heart Failure

## BY MIRIAM E. TUCKER Senior Writer

WASHINGTON — Elderly adults with subclinical hypothyroidism and a thyroid stimulating hormone level at or above 7 mIU/L are at increased risk for heart failure, Nicolas Rodondi, M.D., reported at a conference on cardiovascular disease epidemiology and prevention sponsored by the American Heart Association.

However, adults aged 70-79 with subclinical hypothyroidism with TSH values below 7 mIU/L are not at increased risk.

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gardless of TSH level, said Dr. Rodondi of the University of California, San Francisco. Previous studies have shown that subclinical hypothyroidism—in which T<sub>4</sub> is normal but TSH is elevated (4.5 mIU/L or above-is associated

with elevated total cholesterol, LDL cholesterol, and C-reactive protein. But data on cardiovascular outcomes are conflicting, he noted at the conference, also sponsored by the National Heart, Lung, and Blood Institute.

The current study included 2,740 men and women aged 70-79 participating in the Health, Aging, and Body Composition Study, funded by the National Institute on Aging. Subjects with abnormal  $T_4$  levels or TSH levels at or below 0.1 mIU/L had been previously excluded.

The 339 individuals who had subclinical hypothyroidism at baseline were less likely than the 2,401 euthyroid subjects to be black (25.4% vs. 41.8%), but did not differ significantly by age or gender.

At baseline, total cholesterol was significantly higher among those with subclinical hypothyroidism (211.5 vs. 204.5 mg/dL). About 30% of both groups had



You have FREE access to articles from this issue and past issues of family Practice News at www.familypracticenews.com prevalent cardiovascular disease (CVD) at baseline, while 8.3% of the subclinical hypothyroid and 6.2% of the euthyroid groups had preexisting heart failure.

Rates of heart failure were 17/1,000 person-years in the euthyroid group, compared with 22/1,000 person-years in the subclinical hypothyroid group.

Among subjects who had TSH levels of 10 mIU/L or greater, the mean rate of heart failure was 37/1,000 person-years, with a hazard ratio of 3.10 after adjust-

ment for demographics, socioeconomic characteristics, thyroid hormone use, cardiovascular risk factors, and prevalent cardiovascular disease.

For those with TSH of 7-9.9 mIU/L, the rate was 37/1,000 person-years and the adjusted hazard ratio 2.88. The heart failure rate among subjects with TSH levels of 4.5-6.9 mIU/L was just 15/1,000 person-years, not significantly different from the euthyroid group, and none of the subclinical hypothyroid group had signifi-

cantly elevated rates of CHD, stroke, peripheral artery disease, or mortality.

Among the 2,558 subjects without heart failure at baseline, the hazard ratio for developing heart failure during the 4-year follow-up among those with TSH at or above 7 mIU/L was 2.49, compared with those who were euthyroid.

Among the 182 who already had heart failure at baseline, the risk for recurrent heart failure was even greater, with a hazard ratio of 7.62.



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