

Thyroid problems linked to irregular heart rhythm

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People with an overactive thyroid gland (hyperthyroidism) carry a greater risk of developing irregular heart rhythm (known as atrial fibrillation) than those with normal thyroid function, finds a study published on *BMJ* today.

As such, the researchers suggest there should be an increased focus on atrial fibrillation in patients with raised thyroid function.

[Hyperthyroidism](#) occurs when the thyroid gland makes too much [thyroxine](#) ([thyroid hormone](#)), causing many of the body's functions to speed up. About 1 in 100 women and 1 in 1,000 men develop hyperthyroidism at some stage of their life and it can happen at any age.

It is well known that overt hyperthyroidism is associated with atrial fibrillation, but it's still not clear whether milder (subclinical) hyperthyroidism has a similar effect. Data on the risk of atrial fibrillation in patients with an underactive thyroid (hypothyroidism) is also limited.

So a team of researchers in Denmark set out to examine the risk of atrial fibrillation in relation to the whole spectrum of [thyroid disease](#) in a large group of patients.

Using nationwide registries, they identified 586,460 patients who had consulted a general practitioner in Copenhagen from 2000 to 2010 and had a thyroid function blood test. This measures the amount of thyroid-stimulating hormone (TSH) circulating in the blood. In people with hyperthyroidism the level of TSH will usually be low, whereas in people with hypothyroidism the level of TSH will usually be high.

During an average five and a half years follow-up, 17,154 (3%) of patients had a diagnosis of a first atrial fibrillation, 53% of whom were women.

Compared to patients with normal thyroid function,

the risk of atrial fibrillation increased with decreasing levels of thyroid-stimulating hormone. For example, patients with subclinical hyperthyroidism had a 30% increased risk of atrial fibrillation, while patients with high-normal [thyroid function](#) had a 12% increased risk.

In contrast, hypothyroidism was associated with a lower risk of atrial fibrillation.

The authors stress that, although atrial fibrillation was closely associated with thyroid activity, they cannot prove a direct cause-and-effect relationship. However, they say their study is "the first to assess the association between the whole spectrum of thyroid disease and the subsequent risk of atrial fibrillation in a population of primary care patients."

They conclude: "These results support long term screening for [atrial fibrillation](#) in patients with thyroid disease."

Provided by British Medical Journal

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