

Lower risk of death, cardiovascular events in hyperthyroid patients treated with surgery than with medication

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Hyperthyroidism, or overactive thyroid, happens when your thyroid gland makes more thyroid hormones than your body needs. Excessive

thyroid hormones from hyperthyroidism elevate cardiovascular risks.

While [hyperthyroidism](#) can be treated with anti-thyroid drugs, [radioactive iodine](#) ablation or surgery, evidence comparing long-term benefits and risks of the three treatment modalities presents a challenge for informed decision-making and likely contributes to variations in treatment.

In a new study from Boston University Chobanian & Avedisian School of Medicine, researchers have found that hyperthyroid patients treated with surgery had a 47% lower risk of death and a 24% lower risk of major adverse cardiovascular events than patients treated with medication. They also found that patients treated with radioactive iodine had a 55% lower likelihood of major adverse cardiovascular events compared to the patients treated with medication.

"While there are three main treatment options for this condition, the selection of therapy needs to be individualized—this is not one-size-fits-all," explains co-corresponding author Elizabeth Pearce, MD, MSc, professor of medicine at the school. "Our study suggests that it may be important to consider an individual's cardiovascular risk in making decisions about hyperthyroidism treatment."

The researchers used data from 114,062 patients from Taiwan's National Health Insurance Research Database who were diagnosed with hyperthyroidism between 2011 and 2020. They compared rates of major cardiovascular events ([acute myocardial infarction](#), stroke, [heart failure](#), and death from cardiovascular disease) and death from all causes in patients treated with each of the three types of hyperthyroidism treatment.

According to the researchers, thyroid surgery or radioactive iodine treatment may be better treatment options than long-term anti-thyroid

drug use in patients with hyperthyroidism who are also at high risk for cardiovascular diseases.

"The improved outcomes observed in our study with [surgery](#) or radioactive iodine may have been related to more prompt and complete resolution of hyperthyroidism than was achieved with medication. However, future prospective studies will be needed to understand these risks better," added Pearce who also is an endocrinologist at Boston Medical Center.

These finding appear online in *JAMA Network Open*.

More information: Elizabeth Pearce et al, Major cardiovascular outcomes of hyperthyroidism treated with medication, radioactive iodine, or thyroidectomy: Taiwanese nationwide cohort, *JAMA Network Open* (2024).

Provided by Boston University School of Medicine

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