

ABOUT THE AAES

The **American Association of Endocrine Surgeons** (AAES) is dedicated to the advancement of the science and art of endocrine surgery. Our members have clinical expertise in and research interests that focus on endocrine surgical diseases. They are certified by either the American Board of Surgery of the United States, the Royal College of Surgeons of Canada or the equivalent governing boards in Mexico and South America.

The goal of the AAES is to discover and promote the best treatments for endocrine disease to help improve our patients' lives.

To find an experienced surgeon, please visit the **AAES Surgeon Finder**:

www.search.endocrinesurgery.org/Membership/Find-a-Surgeon

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American Association of Endocrine Surgeons

Dedicated to advancing the science and art of endocrine surgery

THYROTOXICOSIS

To learn more, please visit the AAES Patient Education website:

www.collectedmed.com/aaespatienteducation

or follow this QR code:



Developed by Dr. Patricia Cronin and the American Association of Endocrine Surgeons Education Committee

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Thyroidectomy scar
6 weeks after surgery

SUMMARY

- Thyrotoxicosis is when you have too much thyroid hormone in your body and is typically caused by an overactive thyroid gland
- Blood tests and a thyroid scan and uptake may be needed to confirm the diagnosis and find out the underlying cause
- Anti-thyroid medication, radioactive iodine and surgery are possible treatment options depending on the cause of your thyrotoxicosis

BACKGROUND

- Thyrotoxicosis can occur at any age, and it is more common in women (2%) compared to men (0.2%)
- The main thyroid causes of thyrotoxicosis are Graves' disease, thyroid nodule (toxic solitary nodule), or nodules (toxic multinodular goiter)
- Thyrotoxicosis may also happen if a person takes too much thyroid hormone medication, or even some supplements that contain thyroid-like substances

SIGNS AND SYMPTOMS

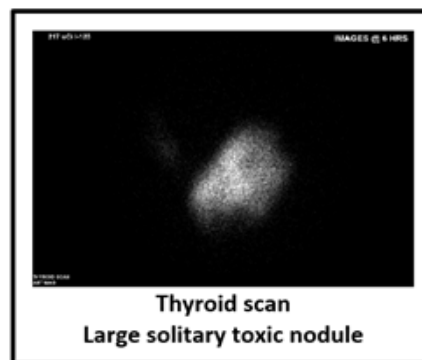
- The symptoms of thyrotoxicosis include: restlessness, anxiety, fast heart rate, weight loss, sweating, shaking/tremor, and difficulty sleeping
- In women thyrotoxicosis can cause irregular periods and affect fertility
- One may also notice an enlarged thyroid gland or bulging of one or both eyes



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| Lab test | Result |
|----------|--------|
| TSH | low |
| Free T3 | high |
| T4 | high |

TYPICAL RESULTS IN THYROTOXICOSIS



DIAGNOSIS

- Blood tests including triiodothyronine (T3) and thyroxine (T4) and TSH are checked
- A high level of thyroid hormones and a low level of TSH indicate hyperthyroidism
- A radioactive iodine uptake scan and thyroid ultrasound may also be helpful

TREATMENT

- There are three main treatments for thyrotoxicosis: anti-thyroid medication, radioactive iodine (RAI), and surgery
- Anti-thyroid medication (e.g. methimazole) works to block the thyroid's ability to make thyroid hormone. Beta-blockers are a medication which can help with the symptoms of hyperthyroidism
- RAI is taken up by thyroid tissue. It then slowly destroys thyroid tissue so that it cannot make thyroid hormone
- Surgery involves removing half the thyroid (lobectomy) for toxic solitary nodule or all of the thyroid (total thyroidectomy) for Graves' disease or toxic multinodular goiter
- There are pros and cons to all treatments and should be discussed with your doctor and surgeon to find the most suitable treatment for you based on the cause of your thyrotoxicosis