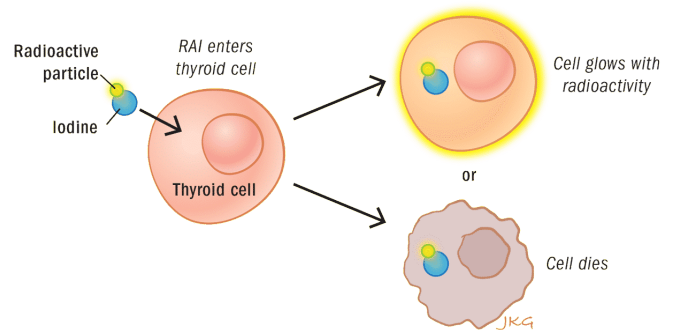




Radioactive Iodine (RAI) Uptake Scan

Radioactive iodine (RAI) whole body uptake scans help to evaluate changes in the thyroid gland, and are often done after thyroid removal surgery. They can determine how much thyroid tissue remains by demonstrating how much RAI accumulates in the thyroid gland.



What Are RAI Uptake Scans?

RAI is administered orally and is absorbed by any thyroid tissue that exists in the body. By entering thyroid cells and causing them to glow, the iodine identifies thyroid tissue that remains after surgery. It also identifies thyroid tissue present in lymph nodes in the neck and other possible spread throughout the body, even in patients without symptoms or evident masses.

When Are They Used?

- **After initial total thyroidectomy surgery:** RAI uptake scans help to determine whether more treatments, such as RAI ablation (use of RAI to destroy thyroid cancer cells), will be necessary following thyroid surgery.
- **Several days after RAI ablation therapy:** This will indicate whether the treatment was successful, or whether more RAI therapy is needed.
- **6 months to 1 year after the last RAI treatment:** This will indicate whether prior treatments were effective.
- **As needed based on thyroid blood tests:** Blood tests will indicate levels of thyroid stimulating hormone (TSH), thyroid hormone (T4), and thyroglobulin. If the levels of these hormones are abnormal, you may have an RAI scan to ensure that the thyroid cancer has not recurred or spread.



Please note that this information is intended for educational purposes. It does not replace consultation with your doctor, and it should not be interpreted as medical advice. We encourage you to speak to your health care provider if you have further questions or concerns regarding your medical care.

For more information scan this code or visit:

<https://thancguide.org/cancer-basics/diagnosis/imaging/rai-uptake/>

How To Prepare

You will consume a low-iodine diet before undergoing an RAI uptake scan. This allows thyroid cells to absorb the radioactive iodine. You must also undergo hormone stimulation, which involves increasing the levels of TSH in your blood. TSH plays a role in maintaining hormone balance and stimulating growth of thyroid tissues. It signals to the thyroid gland to absorb more iodine and produce more thyroid hormone.

How to Increase Your TSH Levels

- Stop taking your thyroid hormone for several weeks to lower the levels of thyroid hormone in your blood. Lower thyroid hormone levels will increase the release of TSH into the bloodstream.
- Receive injected synthetic TSH to artificially increase TSH levels.

What To Expect

RAI uptake scans are performed with one of two types of radioactive iodine: I-123 or I-131. Low doses of either of these two kinds of radioactive iodine will be administered.

I-131: Destroys thyroid cells. It stays in the body for approximately one week. 2–3 days later, you will return for a scan.

I-123: Harmless to thyroid cells. It stays in the body for several days. Scans are taken 4–6 hours after iodine administration, and another 24 hours after iodine administration.

Safety

Low doses of RAI administered for whole body imaging have no reported side effects, nor do they carry major risks. However, you should still follow these safety precautions for 7 days after RAI treatment to minimize exposure to radioactive material:

- Flush the toilet twice and wash your hands after using the bathroom, sneezing, coughing, and before handling food.
- Stay more than 3 feet away from adult caregivers and more than 6 feet away from young children and pregnant women.
- Take a pregnancy test just before undergoing a RAI uptake scan if you are of childbearing age.
- **Do not:** sleep in the same bed with other people, have sexual contact, or share eating utensils, towels, razors, or toothbrushes with other people.



Please note that this information is intended for educational purposes. It does not replace consultation with your doctor, and it should not be interpreted as medical advice. We encourage you to speak to your health care provider if you have further questions or concerns regarding your medical care.

For more information scan this code or visit:

<https://thancquide.org/cancer-basics/diagnosis/imaging/rai-uptake/>