A nuclear medicine thyroid uptake and scan is a 2-day test that studies the structure and function of the thyroid gland. Read this handout to learn how to prepare for the test, how it works, how it is done, what you may feel during the test, and how to get your results.

What is a nuclear medicine thyroid uptake and scan?

A thyroid nuclear medicine uptake and scan checks how your thyroid gland looks and works. The first uptake will be done on day 1. You will come back the next day for another uptake and the scan. Both parts of the test are done in the Imaging Services department at University of Washington Medical Center.

How do the tests work?

Uptake

For the uptake, you will swallow a small dose of radioactive material (tracer). This tracer collects in your thyroid gland and gives off gamma and beta rays. A sensor will detect how much of the tracer your thyroid absorbs.

Scan

In the second part of the exam, a small amount of tracer is injected into a vein, usually in your arm. Images of your thyroid are then taken with a camera.

How should I prepare for the uptake and scan?

6 Weeks Before

- You must NOT have had X-ray exams involving iodine contrast (such as IVP or CT) in the last 6 weeks.
4 Weeks Before
- Most people will stop taking thyroid hormone medicine (synthroid, cytomel, leothyroxine, lithyronine) 4 weeks before their tests. Check with your doctor before you stop taking this medicine.

In the Week Before
- Do not take any oral iodides (such as Lugol's solution or SSKI) for 5 days before your exam. Remain off them until tests are completed.
- Do not take vitamins that contain iodine for 5 days before your tests.
- Most people will stop taking anti-thyroid hormones, Propthiouracil (PTU), Methimazole, or Tapazole thyroid medicine 4 days before their tests. Be sure to check with your doctor before you stop taking these medicines.

Day of Scan
- Do not eat for 2 hours before your appointment. You may drink water.
- Bring 2 forms of identification (ID) with you to the scan.
- You must tell us if you are pregnant, even if you plan to end the pregnancy. If you might receive Iodine 131 (I131) therapy after the uptake and scan and you are a female of childbearing age, we may send you for a pregnancy blood test on Day 1 of the exam. Plan to be here 1½ extra hours to get the results of the pregnancy test.
- Tell us if you are currently breastfeeding. You cannot continue to breastfeed after you receive the radioactive tracers.

How is the scan done?
Day 1
- When you arrive at Imaging Services, you will swallow a capsule that contains a tracer.
- You must fast for 2 more hours after swallowing this capsule. You may drink water. You may eat after this 2-hour fasting period, before you return for your uptake study.
- You will return for an uptake study 3 to 4 hours after you swallow the tracer. This part of the visit will take 10 minutes.

Day 2
- You will return the next day for another uptake measurement.
- After this second uptake measurement, you will have a thyroid scan.
• For the thyroid scan, a tracer will be injected in your vein. You will then need to wait 10 to 15 minutes before imaging begins. The entire visit takes about 1 to 1½ hours.

• If you are going to be treated with a therapeutic dose of I\textsubscript{131} after the 24-hour uptake and scan, do \textbf{not} eat any solid foods for 2 hours before this appointment. Treatment with I\textsubscript{131} will add 1 more hour to your appointment time.

• After the uptake and scan, it will take about 1 hour for your therapy dose to arrive.

If you will be treated with a therapeutic I\textsubscript{131} dose after the uptake and scan, please review the radiation safety information. See “Instructions for Patients Receiving Radioactive Iodine Therapy for Hyperthyroidism.”

What should I expect during and after the exam?
• It may be hard for some patients to lie still on the exam table.

• Most of the tracer passes out of your body in your urine. The rest simply goes away over time.

Who interprets the results and how do I get them?
A doctor with special training in nuclear medicine will review the images and send a report to your doctor. Your doctor will share the results with you.