

Thyroid Testing and Therapy for Hyperthyroidism

Your doctor recommended you for diagnostic testing and therapy for **hyperthyroidism** (overactive thyroid). This is a condition where your thyroid makes too much of a hormone, causing symptoms like weight loss, fast heartbeat, anxiety, sweating, and more. The diagnostic tests (to see if you have hyperthyroidism) involve something called an **uptake study and pinhole scan**. If these tests find that you have hyperthyroidism, you will get therapy to treat your condition. This testing and therapy process will take 2 days to complete.

How do I prepare for my thyroid testing and therapy appointments?

- If you take methimazole (Tapazole®) or propylthiouracil (PTU), you must stop taking it for **1 week** before your first appointment.
- If you take amiodarone (Pacerone® or Cordarone®), please tell your scheduler immediately by calling (734) 232-6072.
- If you take a thyroid hormone medication like levothyroxine (Synthroid® or Levoxyl®), please contact our office at (734) 232-6072 for special instructions.
- We will send you instructions for a low iodine diet. Start eating the low iodine diet 1 week before your appointments.
- Avoid putting any extra iodine into your body, including x-rays or CT scans done with injections, for **at least 4 weeks** before your first appointment.
- Please tell your scheduler immediately if you are pregnant or breastfeeding (chestfeeding).

What happens on Day 1?

At your first appointment, you will do the first part of your uptake study and the pinhole scan.

- For the first part of your **uptake study**, we will take measurements of your neck with a radiation-sensitive probe (a medical tool that detects radiation). This probe is placed up to your neck while you are sitting in a chair. Then, you will drink a small amount of radioactive iodine.
- For your **pinhole scan**, we will inject a small amount of a different radioactive material into a vein in your arm. About 15 minutes later, we will scan your thyroid with a gamma camera. You will lie flat on a table and part of the camera, called a pinhole, will come close to your neck. This should take about 30 minutes.
 - If you have had another pinhole scan within 1 year, you may not need to have this scan done again.
- After your scan, you will need to stop at the lab in the hospital for blood and urine (pee) tests.
 - The blood tests will measure your thyroid levels.
 - The urine sample will check for iodine, making sure that your low iodine diet was successful.
 - If you old enough to have children, we will ask you to take a pregnancy test.

What happens on Day 2?

At your second appointment, you will do the second part of your uptake study, see the doctor, and possibly receive radioactive iodine therapy to treat your hyperthyroidism.

- We will take measurements of your neck using the same tool and process as we did on Day 1. We are measuring the amount of radioactive iodine that your thyroid absorbed from the day before, which will let us know

how well your thyroid is functioning. This appointment will take about 5 minutes.

- After all your measurements are done, you will have a clinic visit with a Nuclear Medicine thyroid doctor. The doctor will go over your scan results and let you know if they recommend radioactive iodine therapy.
 - If your doctor recommends therapy, you receive therapy after reviewing **radiation exposure precautions** (actions you should take to prevent or lower the risk of radiation exposure to others). These precautions will start when you get your therapy.
- Please do not bring small children to your appointment.
- Do not plan to stay in a hotel after this appointment. Plan to go directly home if you receive therapy, since this is part of your radiation exposure precautions.

Who do I call if I have questions?

If you have any questions, please call the University of Michigan Health System Nuclear Medicine department at (734) 232-6072.

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