

Treating Hyperthyroidism with Radioactive Iodine

How to prepare

This handout gives instructions for patients who will receive radioactive iodine therapy after having a thyroid uptake and scan for hyperthyroidism (overactive thyroid).

What is radioactive iodine treatment?

You and your doctor have decided to treat your thyroid condition with radioactive iodine. The type of iodine you will receive is called Iodine-131 (I131). This treatment will destroy some of your thyroid tissue so that it will produce less thyroid hormone.

Our goal is to destroy just enough thyroid tissue so that, over time, your thyroid will produce the correct amount of thyroid hormone. Once in a while, not enough thyroid tissue is damaged during the first treatment, and a second treatment is needed.

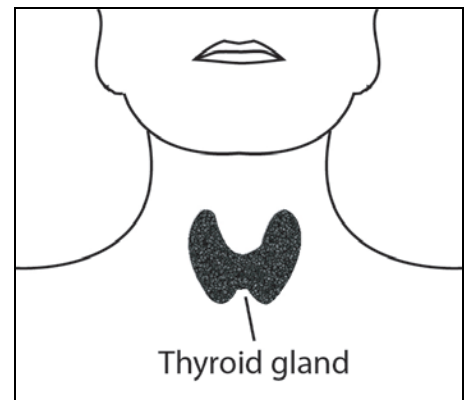
If too much thyroid tissue is destroyed, your doctor will prescribe a thyroid hormone called *levothyroxine*. It is a pill that you would take by mouth. Levothyroxine is a man-made version of the hormone that your thyroid produces.

Even if the treatment is completely successful, your thyroid condition will be changing. You will need to keep seeing your doctor after treatment.

How does I131 work?

We will give you your dose of I131 in a capsule for you to swallow. Your intestines will absorb the I131 very quickly. Then it will go into your bloodstream. From your bloodstream, much of the I131 will go into your thyroid.

Most of the I131 that does not go into your thyroid will leave your body in your urine. This will occur in the first 24 hours after your iodine dose. Some I131 also leaves your body in your saliva, sweat, and stool.



Much of the I131 will go into your thyroid gland.

The I131 that goes into your thyroid stays in your body for a longer time. It sends out radioactive particles that stay in your thyroid.

These radioactive particles destroy the thyroid tissue they touch, and this will cause your thyroid to stop making thyroid hormone. This change to your thyroid will most likely last the rest of your life.

I131 also releases *gamma rays*, which are like X-rays. These gamma rays can expose people who are near you to radiation for a short time after your treatment. Follow the precautions on pages 4 and 5 to reduce the radiation others are exposed to after your treatment.

Much of the radioactive iodine you receive will go into your thyroid. To lessen radiation to other parts of your body, especially your bladder, we advise you to drink plenty of fluids and empty your bladder often in the first 48 hours after your dose.

We expect to see changes in your thyroid function 6 to 12 weeks after your treatment with I131.

What is involved in radioactive iodine treatment?

First, you will have a thyroid uptake and scan test. This test will help us determine your therapy dose of I131. If you have not received it, please ask for our handout, “Thyroid Uptake and Scan.”

We will order your I131 therapy dose from a local pharmacy that prepares radioactive medicines. It will take about 1 hour for the pharmacy to deliver your dose to the hospital.

The Nuclear Medicine doctor will talk with you about the therapy and review the radiation safety precautions.

I131 Treatment Instructions

Before Your Treatment

4 Weeks Before

- Most people will stop taking thyroid hormone medicine (such as synthroid, cytomel, lerothyroxine, or lityronine) 4 weeks before their tests. **Check with your doctor before you stop taking this medicine.**

5 Days Before

- Do **not** take any oral iodides (such as Lugol’s solution or SSKI) for 5 days before your tests. Remain off them until all of your tests have been done.
- Do **not** take vitamins that contain iodine for 5 days before your tests.

4 Days Before

- Most people will stop taking anti-thyroid hormones, Propothyouracil (PTU), Methimazole, or Tapazole thyroid medicine 4 days before their tests. **Be sure to check with your doctor before you stop taking these medicines.**

Instructions for Women

- Pregnant women cannot receive the therapeutic radioactive iodine, since it will harm the fetus. You **must** tell us if you are pregnant, even if you are not planning on completing the pregnancy.
- If you are a woman of childbearing age, we will ask you to have a blood test to check for pregnancy the day before treatment. It usually takes 60 to 90 minutes to get results of the blood test.
- **Tell us if you are breastfeeding.** If you are breastfeeding, you may **not** receive radioactive iodine, since it may be passed to your child through your breast milk. You must stop breastfeeding for 3 months before your I131 dose. This also prevents your breast tissue from receiving extra radiation exposure from I131 in your breast milk.

On the Day of Your I131 Therapy

- Do **not** eat any solid foods for 2 hours before your I131 therapy. You may drink water, but do not drink anything else.
- You must bring 2 forms of ID. One of these must show your photo, such as a driver's license.
- If you are a woman of childbearing age, you must have a pregnancy blood test before your I131 therapy.

After Your Treatment

- Do **not** eat any solid foods for 2 hours after your I131 therapy. You may drink water.

For the First 48 Hours

- Drink plenty of clear fluids.
- Empty your bladder every hour during the first 8 to 12 hours after your I131 dose. This means you will need to get up at least once during the night on the first night after your treatment to do this.
- Flush the toilet 2 times to rinse away any radioactivity from your urine.
- 12 hours after your treatment dose, or as soon as you wake up in the morning, suck on sour hard candy such as lemon drops. This will help your salivary glands secrete some of the radioactive iodine.
- If you were taking PTU or Methimazole thyroid medicine before your treatment, ask your doctor when you should start taking them again.



Drink plenty of clear fluids for the first 48 hours after your I131 treatment.

Radiation Precautions After Your I131 Dose

When You Are Around Other People

Follow each precaution for the number of days shown:

Follow this precaution:	For this many days after your I131 dose:
Do not travel by airplane or other mass transportation such as a bus or train. <ul style="list-style-type: none"> If your flight will be longer than 4 hours, you may need to wait more than 3 days after your dose. Talk with radiation safety before you plan your trip. 	3 days or longer
Do not travel on car trips longer than 4 hours with others in the car.	3 days
Sleep in a separate bed or at least 6 feet away from other adults.	6 days
Minimize the time that you are within 3 feet of any adult. Allow only short periods of closer contact.	3 days
Stay at least 6 feet away from pregnant women and infants or young children.	1 day
Sleep in a separate bed from a pregnant woman, infants, or children.	15 days

Body Fluid Precautions

This table gives **basic precautions** for most people who receive I131 treatment. Your precautions may be different. Ask your doctor what precautions you should follow.

Follow each radiation safety precaution for the number of days shown:

Follow this precaution:	For this many days after your I131 dose:
Because there may be radioactivity in your saliva: <ul style="list-style-type: none"> Do NOT share silverware, glasses or cups, plates, or food, with anyone, especially children. Do NOT let others handle your dishes or silverware. Rinse all of the silverware, glasses, cups, and dishes you use apart from dirty dishes others in your household use. After your dishes are rinsed, they can be washed in a dishwasher with other dishes and silverware. Do not use disposable plates, utensils, cups, etc. 	1 day



Wash your hands carefully and often for 7 days after your I131 treatment.

Follow this precaution:	For this many days after your I131 dose:
The bathroom you use should be for your use ONLY . No one else should use this bathroom. (<i>Exceptions can sometimes be made for an adult-only household.</i>) For men: Sit down to urinate.	2 days
Avoid any intimate contact with others, including kissing and sexual relations.	7 days
Wash your hands carefully and often. Use soap and warm running water for at least 20 seconds.	7 days

Side Effects

You may have side effects after your I131 treatment. We will give you tips on how to lessen these symptoms:

- Nausea. Avoid fatty or rich foods to help ease any nausea. We suggest taking an antacid like Zantac or Prilosec for nausea. You can buy these without a prescription at most drugstores
- Soreness in your neck and salivary glands, which can last about 1 week. This is not serious and can usually be managed with acetaminophen (Tylenol and other brands), aspirin, or ibuprofen (Advil, Motrin, and other brands). If your pain becomes severe and these medicines do not help, call your doctor or the Nuclear Medicine clinic.
- A metallic taste in your mouth, which may last 2 to 3 weeks.

Special Precautions for Women

- **Do not get pregnant for 1 year after treatment with I131.** This is in case you need to be treated with I131 again. Also, your thyroid replacement medicine level will need to be adjusted and stabilized before you get pregnant.
- If you are breastfeeding, stop nursing for 3 months before your dose of I131. I131 will collect in your breast milk and cause high radiation exposure to your breasts.
- Do not breastfeed a child after your I131 dose. It will harm your baby.

Follow-Up Visits

You will need to have a follow-up visit with the doctor who referred you for I131 treatment 4 to 6 weeks after your treatment. You will need to schedule this visit. Your doctor will do a blood test to check your thyroid function. This is the soonest we would expect changes after treatment.

Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

- University of Washington Medical Center Imaging Services: 206.598.6200
- Harborview Imaging Services: 206.744.3105