

## Treating Hyperthyroidism with Radioactive Iodine

### *How to prepare and what to expect*

*This handout is for patients who will receive radioactive iodine therapy after having a thyroid uptake and scan for hyperthyroidism.*

### **What is hyperthyroidism?**

*Hyperthyroidism* is an overactive thyroid gland. It occurs when your thyroid makes more hormones than your body needs.

### **What is radioactive iodine treatment?**

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

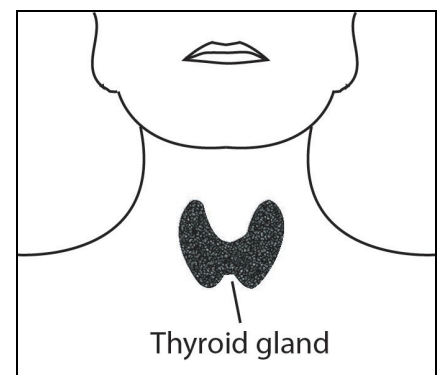
Our goal is to destroy just enough thyroid tissue so that, over time, your thyroid will produce the correct amount of thyroid hormone. Once in a while, not enough thyroid tissue is damaged during the first treatment. If this happens, a second treatment is needed.

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

Even if the treatment is a total success, your thyroid condition will change over time. You will need to keep seeing your doctor after this treatment.

### **How does I-131 work?**

We will give you a capsule that contains I-131. After you swallow this capsule, your intestines will absorb the I-131 very quickly. The iodine will then enter your bloodstream.



*The thyroid gland is shaped like a butterfly. It sits low on the front of the neck.*

From your bloodstream, much of the I-131 will go into your thyroid. Most of the I-131 that does not go into your thyroid will leave your body in your urine within the first 24 hours after your iodine dose. Some I-131 also leaves your body in your saliva, sweat, and stool.

The I-131 that enters 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.

We expect to see changes in your thyroid function 6 to 12 weeks after your treatment with I-131.

### **Will the radiation affect other parts of my body?**

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

### **Can the radiation affect other people?**

I-131 releases *gamma rays*, which are like X-rays. These gamma rays can expose people around you to radiation for a short time after your treatment. See pages 4 and 5 of this handout for precautions to follow.

### **What can I expect during this treatment?**

First, you will have a *thyroid uptake and scan test*. This test will help us know what your therapy dose of I-131 should be. If you have not received it, please ask for our handout, “Thyroid Uptake and Scan.”

We will order your I-131 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.

### **How do I prepare for this treatment?**

#### **4 Weeks Before**

- Most people stop taking thyroid hormone medicine (such as cytomel, synthroid, lerothyroxine, or lithyronine) 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). Do not take them again until all of your tests have been done.
- Do **not** take vitamins that contain iodine until all of your tests have been done.

## 4 Days Before

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

## Risks Related to Pregnancy

- You **must** tell us if you are pregnant, even if you are not planning on completing the pregnancy. Pregnant people cannot receive the therapeutic radioactive iodine, since it will harm the fetus.
- If you have a uterus and are age 60 or younger, we will ask you to have a blood test to check for pregnancy the day before treatment. It takes about 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 at least 3 months before your I-131 dose. This also prevents your breast tissue from receiving extra radiation from the I-131 in your breast milk.

## Therapy Day

- **Starting 2 hours before your I-131 therapy:** Do **not** eat any solid foods. Do not drink anything besides water.
- **Bring 2 forms of ID to your appointment.** One of these must show your photo, such as a driver's license.
- **If you have a uterus and are age 60 or younger:** You must have a pregnancy blood test before your I-131 therapy.

## After Your Treatment

- Do **not** eat any solid foods for 2 hours after your I-131 therapy. You may drink water.



*Drink plenty of clear fluids for the first 48 hours after your I-131 treatment.*

### For the First 48 Hours

- Drink plenty of clear fluids.
- Empty your bladder every hour during the first 8 to 12 hours after your I-131 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 to start taking them again.

### Radiation Precautions After Your I-131 Dose

#### When You Are Around Other People

Follow each safety precaution for the number of days shown:

Follow This Safety Precaution	For This Many Days After Your Dose
Do not travel by airplane or other mass transportation such as a bus or train. If your flight will last more 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 alone, 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 infants, young children, and anyone who is pregnant.	1 day
Sleep apart from infants, young children, and anyone who is pregnant.	15 days

## Body Fluid Precautions

This table gives **basic precautions** for most people who receive I-131 treatment. Your precautions may be different. Ask your doctor what precautions you should follow.

Follow each safety precaution for the number of days shown:

Follow This Safety Precaution	For This Many Days After Your Dose
Because there may be radioactivity in your saliva: <ul style="list-style-type: none"><li>• <b>Do NOT share silverware, glasses or cups, plates, or food, with anyone, especially children.</b></li><li>• <b>Do NOT let others touch your dishes or silverware.</b></li><li>• Rinse all of the silverware, glasses, cups, and dishes you use separately from the dishes others use. After your dishes are rinsed, they can be washed in a dishwasher with other dishes and silverware.</li><li>• Do <b>not</b> use disposable plates, utensils, cups, etc.</li></ul>	1 day
The bathroom you use should be for your use <b>ONLY</b> . No one else should use this bathroom. ( <i>Exceptions can sometimes be made for an adult-only household.</i> ) Sit down to urinate.	2 days
Avoid any intimate contact with others, including kissing and sexual relations.	7 days
Wash your hands well and often. Use soap and warm running water for at least 20 seconds.	7 days

## Side Effects

You may have side effects after your I-131 treatment. Here are some 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.** Some soreness is normal. It is usually managed with acetaminophen (Tylenol), aspirin, or ibuprofen (Advil, Motrin). If your pain is severe and these medicines do not help, call your doctor or the Nuclear Medicine clinic.



*Wash your hands well and often for 7 days after your I-131 treatment.*

- A metallic taste in your mouth, which may last 2 to 3 weeks.

### **Risks Related to Pregnancy**

- **Do NOT get pregnant for 1 year after treatment with I-131.** This is in case you need to be treated with I-131 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 I-131. I-131 will collect in your breast milk and cause high radiation exposure to your breasts.
- Do **not** breastfeed a child after your I-131 dose. It will harm your baby.

### **Follow-Up Visits**

Set up a follow-up visit with the provider who referred you for I-131 treatment 4 to 6 weeks after your treatment. This is the soonest we would expect changes after treatment. Your provider will do a blood test to check your thyroid function.

### **Questions?**

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

- UWMC - Montlake Imaging Services: 206.598.6200
- Harborview Nuclear Medicine: 206.744.4473