

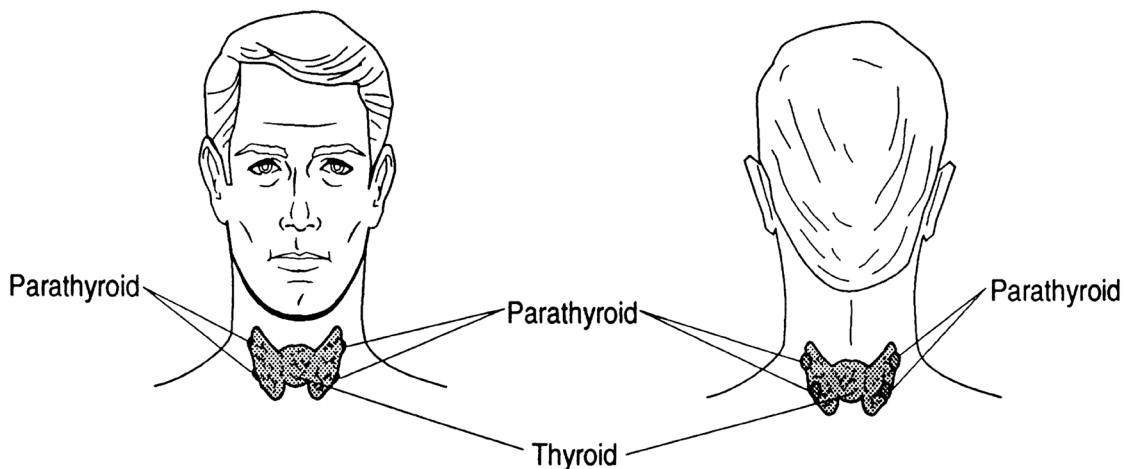
# Patient Guide to Radioactive Iodine Treatment for Thyroid Cancer

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## What is the Thyroid Gland?

The thyroid is a small butterfly-shaped gland in the neck. Your thyroid gland makes and stores thyroid hormones to help control your heart rate, blood pressure, body temperature and metabolism (how food is changed into energy).

Iodine is a mineral in your body that helps the thyroid gland work properly. The thyroid gland collects and saves iodine from the foods you eat. The thyroid gland uses iodine to make thyroid hormones.



## What is Nuclear Medicine?

Nuclear Medicine is a radiology specialty that uses very small amounts of radioactive materials to see areas inside your body. The radioactive material may be given as a pill, liquid, or through an IV (intravenous) or through inhalation. Special cameras are used to track the radioactive material in your body to help diagnose or treat a disease or condition. The Nuclear Medicine Department is located on the 2<sup>nd</sup> floor of Doan Hall at The Ohio State University Wexner Medical Center (410 W. 10th Avenue, Columbus, OH 43210).

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**This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.**

## **How is radioactive iodine used for this treatment?**

Radioactive iodine is used to diagnose and treat thyroid diseases, such as, hyperthyroidism, goiter or to destroy thyroid cancer cells. When you drink a liquid or swallow a capsule that contains radioactive iodine, it collects in the thyroid tissue and destroys thyroid cells. This treatment also helps get rid of any remaining thyroid tissue.

## **Types of Radioactive Iodine Procedures**

### **Iodine-123 (I-123)**

An Iodine-123 test is used to check your thyroid function. This test is often done when blood tests show that you have an overactive thyroid.

- A Nuclear Medicine technologist will give you a small amount of I-123 to take by mouth. The iodine will be drawn into your bloodstream where it will be absorbed by the thyroid gland or any thyroid tissue left after surgery.
- You will be scheduled to return to the Nuclear Medicine Department to have a radioactive iodine uptake scan, 24 hours after your dose of I-123. This test helps your doctor find problems with your thyroid gland and determine what treatment is best for you.
- Since just a small amount of I-123 is used for this test, you do not need to follow any special precautions.

### **Iodine-131 (I-131)**

Iodine-131 is given to patients with a variety of thyroid conditions. It can be given to destroy an overactive thyroid (hyperthyroidism), to shrink the thyroid (goiter) or used to destroy thyroid cancer cells.

- Iodine-131 is harmful to normal thyroid cells.
- When I-131 is absorbed by thyroid tissue, tiny radioactive particles are released from the I-131 and destroy thyroid cells and tissue over time.
- If you are treated with I-131, you will have special instructions to follow before and after your treatment. These instructions are included in this handout.

## Why do I need to follow a low iodine diet?

You will need to follow a low iodine diet for a short time before your I-131 treatment is given. A low iodine diet limits the amount of iodine in your everyday food choices. You need to follow this diet because it is important to “starve” the thyroid cancer cells of iodine. Your thyroid cells do not know the difference between iodine that is radioactive and iodine that is non-radioactive. This lets the radioactive iodine go into the thyroid cells to help the treatment work. Your doctor will tell you how long you should follow this diet and will give you information about the foods you should **not** eat during this time.

## What should I do to prepare for my care after treatment?

**It is important for you to understand** the difference between radioactive contamination and radiation exposure.

**Radioactive Contamination** happens when radioactive material is placed on, or in, an object or person. I-131 stays in your body fluids for a period of time after your treatment. It is important to keep your body fluids cleaned up to prevent others from coming in contact with the radioactive material in your body fluids.

- After you take the I-131, it will be drawn into your blood stream and will be absorbed by thyroid cells. Any I-131 that does not get absorbed by your thyroid cells will leave your body through your body fluids (urine, stool, sweat, saliva, vaginal secretions, semen, and tears).
- **Your urine will have the largest amount of I-131.**

**Radiation Exposure** is the amount of radiation given off by your body after the I-131 treatment. This amount can only be measured by radiation detection equipment. When you are near other people, they may be exposed to this radiation. To limit the radiation exposure for your family, friends and co-workers, it is important for you to make plans for your care after treatment.

- After you take the I-131, your body will be giving off radiation. It is important to keep a safe distance (3 to 6 feet) between you and others to lower their risk of exposure to this radiation.

Here is a list of things that you need to do **before** you come to the hospital for your I-131 treatment:

- **Complete the Therapeutic Radioactive Iodine (I-131) Patient Questionnaire.**
- **Tell your doctor if you have any of the following:**
  - ▶ Urinary incontinence
  - ▶ A catheter or colostomy device
  - ▶ Pregnant or could be pregnant
  - ▶ Breastfeeding or lactating for less than 2 months
  - ▶ Infants or small children at home
  - ▶ Trouble swallowing pills
- **Child Care – If you have children under the age of 16, make plans, if possible, for them stay at someone else's home for at least 7 days after your treatment.** If that is not possible, you should stay 6 feet away from any children in the home.

**NOTE: Staying in a hotel after your treatment is not recommended. If you have any questions about staying in a hotel, call Radiation Safety (614) 561-7969.**

- **Bathroom** – You will need to use your own bathroom and linens. If that is not possible, you must follow the special instructions about body fluids found later in this handout.
- **Bedroom** – Arrange to sleep alone in a separate room.
- **Dishes** – Buy disposable dishes and utensils to use for your meals.
- **Cleaning Products** – Buy Clorox disinfectant wipes, or Lysol to clean surfaces that may become contaminated with your body fluids containing I-131.
- **Latex (or similar) Gloves** – Buy a box of gloves for you and your family members to use. Gloves must be worn any time you clean or handle anything that has come into contact with your body fluids. Always wash your hands with soap and water after you remove the latex gloves.
- **Garbage** – Set up a separate garbage can or bag for your trash. Any items that come in contact with your body fluids, such as Kleenex, feminine products, dishes, eating utensils, cleaning products, and gloves should be thrown away in this can or bag.

- **Work or School** – You should plan to be off work or school for as long as directed by your doctor (usually 7 days). Tell your doctor or a member of the Radiation Safety team if your job involves working with food, infants and small children, or if you work in a place where you are close to your co-workers for long periods of time.

## **What will happen on the day of my I-131 Treatment?**

- You should plan to arrive early at the Nuclear Medicine Department (2<sup>nd</sup> floor of Doan Hall) on the day of your treatment.
- Your doctor will give you information about what you can eat and drink on the morning of your treatment. Normally, patients are asked not to eat or drink for at least 4 hours before their appointment. Drinking small amounts of water is okay, if needed.
- Talk with your doctor about taking your normal daily medicines before this treatment.
- You will have several images and a radioactive iodine uptake scan done by a Nuclear Medicine technologist before the treatment.
- The images and information from the scan will help your doctors determine the I-131 dose that is right for you. This process will take some time to complete, so you will have a period of time to wait before your treatment can be given. Once the I-131 dose amount is determined, an order will be sent to the Nuclear Pharmacy to make your capsule or liquid dose.
- If you have to urinate, you should go to the bathroom before your I-131 treatment is given.
- While the doctors are determining your I-131 dose amount, a member of the Radiation Safety team will come to talk with you about the special instructions you must follow after your treatment. They will also answer any questions you may have about radiation and radiation safety.
- The Nuclear Medicine doctor will also talk to you about your I-131 dose and answer any other questions you may have about your treatment.
- A Nuclear Pharmacist along with a member of the Radiation Safety team will be with you when your treatment is given. The I-131 dose can be given to you in a capsule or liquid form.
- You will be given a bottle of water to help you swallow the capsule.

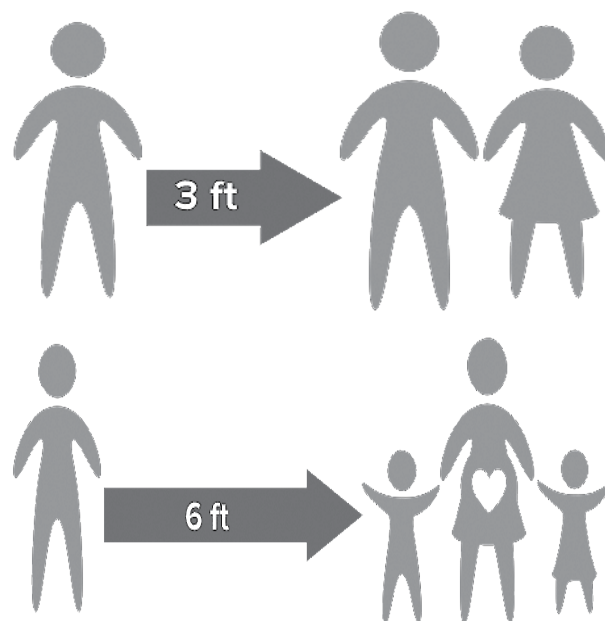
- A member of the Radiation Safety team will measure the amount of radiation being given off from your body and prepare your discharge instructions.

## What special precautions will I need to follow after I leave the hospital?

After your treatment, you will have small amounts of radioactive I-131 in all of your body fluids and you will be giving off radiation. **The following precautions will limit the radiation exposure to those around you and reduce the risk of transferring I-131 to others.** The time limit for these precautions may vary based on your I-131 dose and the radiation measurement done by the Radiation Safety team.

### For at least 7 days after your treatment:

- **Do not** have close contact with anyone. This includes hugging, kissing or sexual activity of any type.
- Stay **at least 3 feet** away from adults.
- Stay **at least 6 feet** away from children under 16 years old and pregnant women for as long as directed. If possible, arrange for children under age 16 and pregnant women to stay out of the home.



- **Sleep alone** in a separate room.
- Stay off work for as long as directed.
- **Wash your hands often using soap and water.**
- Shower or take a tub bath and wash your hair each day.
- Use a separate bathroom from others. If this is not possible, rinse the shower/tub and sink after use.
- Flush the toilet **at least 3 times** after each use. Men should sit down to urinate.

- **Use your own toiletries** (toothbrush, razors, hairbrush, etc.).
- **Do not** prepare food for others or share food with others. Use disposable plates and eating utensils or wash your dishes separately.
- Wash all of your clothing and linens separately from other laundry. Any clothing or linens soiled with feces or urine should be washed right away and separately from other laundry.
- **Do not go to public places or use public transportation** (bus, cab, train, airplane).
- **Do not** do activities that make you sweat.
- Wear latex or similar gloves when handling bodily fluids. Wash your hands after you remove the gloves.
- Use a separate garbage can or bag for your trash. Any items that may have come in contact with your body fluids (Kleenex, feminine products, dishes, disposable eating utensils, gloves, etc.) should be thrown away in this can or bag.
- Double bag any items soiled with body fluids that can be thrown away. Keep the bagged items **for at least 2 weeks** before putting them in the regular trash.
- Drink plenty of fluids starting 24-48 hours after your treatment.
- Stop all breast-feeding as directed by your doctor. Breast milk production should be stopped 3 months prior to treatment.
- **For at least 12 months after your treatment:** Use an effective type of birth control to prevent pregnancy.

## What should I know after I have my I-131 Treatment?

- If you feel sick and vomit within 48 hours of your I-131 treatment, call your doctor.
- For 2 hours after your I-131 treatment:
  - ▶ **Do not** eat any solid food.
  - ▶ You may drink normal amounts of water.
- Continue your low iodine diet as directed by your doctor.
- Start drinking more fluids 24 hours after your I-131 treatment.
- The first several days after your treatment, empty your bladder regularly.

- Call your doctor if you have any medical concerns.
- For questions or concerns about radiation safety, call Radiation Safety at (614) 561-7969. This phone is staffed 24 hours, 7 days per week.
- Radiation Safety will give you a patient release card with information about your treatment. **Please carry this card in your purse or wallet as directed.**

Patient: \_\_\_\_\_

Date: \_\_\_\_\_

Radionuclide: \_\_\_\_\_

Activity: \_\_\_\_\_

Test: \_\_\_\_\_

Note: This card should be carried by the patient for \_\_\_\_\_ days and presented to authorities as needed.



THE OHIO STATE UNIVERSITY

WEXNER MEDICAL CENTER

Nuclear Medicine Departments

Main: 614-293-5774 OSU East: 614-257-3670

Documentation of a Nuclear Medicine Procedure

(See Reverse for patient specific information)

The person carrying this card is a patient of a medical facility that is serviced by OSUWMC Nuclear Pharmacy. This patient received a small amount of NRC approved medical use radioactivity, and poses no threat to the public safety.