I131 Radioactive Iodine to Treat Thyroid Cancer

Information, instructions, and precautions

This handout gives instructions for patients who will receive radioactive iodine to help treat thyroid cancer.

What is radioactive iodine?
Radioactive iodine (also called Iodine-131 or I131) is a substance that is used to treat thyroid cancer. Both thyroid cancer and thyroid tissue absorb iodine. This helps us locate and treat sites of active thyroid cancer.

How does the treatment work?
We will ask you to swallow a capsule that contains a dose of I131. It will enter your bloodstream very quickly.

The I131 will then go to your thyroid and to any thyroid cancer sites, where it will be absorbed. Most of what your thyroid tissue does not absorb will leave your body in your urine over the next 24 to 48 hours.

The iodine taken up by your thyroid or thyroid cancer will stay in your body for a longer time.

The I131 in your thyroid tissue will give off beta particles (tiny particles that some radioactive atoms give off). The beta particles will go to your thyroid tissue or cancer sites, very close to where they are given off (within about 1 millimeter). They damage tissue, and this damage will cause your thyroid and any thyroid cancer cells to die over time.

It takes up to a few months for this treatment to have its full effect.

What can I expect?
Before you have I131 therapy, you must have a thyroid cancer survey. (Please see the handout “Thyroid Cancer Survey Using I123” or “Thyroid Cancer Dosimetry Using I131.”)
If you are having residual thyroid tissue or residual sites of thyroid cancer treated:

- We usually schedule you to come back on the same day or within 3 days of your thyroid cancer survey scan. At that time, you will swallow 1 or more small capsules that contain a therapeutic dose of I\textsubscript{131}.

- This treatment can be done as an outpatient procedure. But, you may have to stay in the hospital if it will be hard for you to follow proper radiation safety precautions at home. If you live with many people, it may be hard to protect them from the radiation that will be in your body and body fluids. We will talk with you about what will work best for you.

What should I know about I\textsubscript{131} treatment?

This treatment has some side effects. You may have:

- Nausea
- Soreness in your neck and salivary glands
- A metallic taste in your mouth, which may last 2 to 3 weeks

We will give you tips on how to lessen these symptoms. If you stay overnight in the hospital, medical staff will treat any symptoms you might have. If you are an outpatient, we will give you prescriptions for anti-nausea medicine.

Special Notes for Women

- Pregnant women cannot receive radioactive iodine, since it would harm the unborn baby. Women of childbearing age must have a pregnancy blood test before taking I\textsubscript{131}. You must tell us if you are pregnant, even if you do not plan to complete the pregnancy.

- Please tell us if you are breastfeeding. Women who are breastfeeding may not receive radioactive iodine, since it may be passed to your child in your breast milk. Women who will have I\textsubscript{131} therapy after their thyroid cancer survey must stop breastfeeding for 3 months before they take the I\textsubscript{131} dose.

How to Prepare for I\textsubscript{131} Treatment

1 Week Before

You must be on a low-iodine diet for 1 week before your diagnostic thyroid cancer survey and I\textsubscript{131} therapy.

For low-iodine diet instructions, visit this website: \textit{www.thyca.org/rai.htm#diet}. If you do not use the Internet, please ask for a printed copy of these instructions.
On the Day of Your I\textsubscript{131} Dose

- Do not eat any solid foods or drink anything but water for 2 hours before and after your dose.
- Water is OK to drink. We encourage you to drink it.
- You may have breakfast before you come to the hospital.
- Go to Nuclear Medicine at your scheduled time. Nuclear Medicine is on the 2nd floor of the hospital, just west of the Pacific elevators.
- You will meet with a Nuclear Medicine doctor and Radiation Safety officer the morning of your I\textsubscript{131} treatment. They will talk with you about the details of your treatment and review radiation safety guidelines.
- If you receive your treatment as an outpatient (you will not stay overnight the hospital), you will be asked to return to Nuclear Medicine in about 1½ to 2½ hours. A Nuclear Medicine doctor will give you your dose at this time.
- If you receive your treatment as an inpatient (you will stay overnight in the hospital), check in at about 12 noon at the UWMC admitting desk on the main (3rd) floor of the hospital, in the lobby area. Be prepared to stay in the hospital up to 3 days. (See below for what to bring to the hospital.)
- Your room will be on the 6th or 7th floor. Your room looks exactly like any other hospital room, but it was specially designed to protect against radiation. Your door will be open, but visitors will not be allowed to come into the room. Visitors can bring you items and talk with you from the doorway.
- You will likely receive your I\textsubscript{131} dose in the afternoon.

What to Bring:

- You must have 2 forms of ID, including at least 1 with your photo, such as a driver's license.
- Any medicines you usually take. Bring only enough to last 3 days.
- Sour hard candy, such as lemon drops.
- A set of clothes to wear home.

You may bring your own laptop, cell phone, and other electronic devices (if other people do not use them). If you bring these things, cover them with plastic to keep them from being exposed to radioactive material. You may also bring your wedding ring, eyeglasses, contact lenses, and personal medical devices.
What to Leave at Home

- Do NOT bring valuable personal items.
- If other people often use your laptop, cell phone, or other electronic devices, do not bring them with you.

After Your Dose

Diet

- **For 2 hours after you swallow the iodine capsule:**
  - Do not eat any solid foods. An empty stomach helps your body absorb the radioactive iodine.
  - Do not drink anything but water.

- **For 3 days after receiving your I131 capsule:** Stay on your low-iodine diet. You may resume your normal diet after 3 days.

- **For 1 or 2 days after your dose:** Avoid fatty or rich foods. This will reduce any nausea you might have. Antacids like Zantac or Prilosec may help your stomach symptoms. These are available without a prescription at most drugstores. We recommend using them as needed in the week after your I131 treatment dose.

Other Guidelines

- **12 hours after your treatment dose:** Start eating sour hard candy, such as lemon drops. This will make your salivary glands secrete some of the radioactive iodine they might have picked up. This will help make your neck less sore. **Do not start earlier than 12 hours.**

- **For the first 24 hours after your dose:**
  - Drink at least 1 glass of clear fluids such as water or juice every hour. Keep drinking plenty of clear fluids such as water or juice for at least the first 3 days.
  - Flush the toilet 2 times every time after you urinate.

- **For the first 8 to 12 hours after your dose:** Empty your bladder every hour.

- **The first night after your dose:** Get up at least once during the first night after your treatment to empty your bladder. After this, no special bladder emptying is needed.

- **The first week after your dose:** It is important to have regular bowel movements in the week after your treatment to clear the I131 from your colon. Constipation often occurs when thyroid hormone is low. Most laxatives will work well and will not interfere with your low-iodine diet. Ask us about constipation and laxatives if you have any questions.
Radiation Precautions After Your I131 Dose
When You Are Around Other People

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

<table>
<thead>
<tr>
<th>Follow this precaution:</th>
<th>For this many days after your I131 dose:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not travel by airplane or other mass transportation such as a bus or train.</td>
<td>3 days</td>
</tr>
<tr>
<td>Do not travel on long car trips with others.</td>
<td>3 days</td>
</tr>
<tr>
<td>Sleep in a separate bed, at least 6 feet away from other adults.</td>
<td>4 to 6 days (depends on your dose)</td>
</tr>
<tr>
<td>Sleep in a separate bed, at least 6 feet away from pregnant women, infants, or children.</td>
<td>7 to 21 days (depends on your dose)</td>
</tr>
<tr>
<td>Stay at least 3 feet away from all adults. Allow only short periods of closer contact.</td>
<td>4 days</td>
</tr>
<tr>
<td>Stay at least 6 feet away from pregnant women and infants or young children. Limit how much time you are in the same room with them.</td>
<td>7 days</td>
</tr>
</tbody>
</table>

Body Fluid Precautions

Follow each radiation safety precaution the number of days shown:

<table>
<thead>
<tr>
<th>Follow this precaution:</th>
<th>For this many days after your I131 dose:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because there may be radioactivity in your saliva:</td>
<td>7 days</td>
</tr>
<tr>
<td>• Do NOT share silverware, glasses or cups, plates, food, etc. with anyone, especially children.</td>
<td>7 days</td>
</tr>
<tr>
<td>• Do not let others handle your dishes or silverware.</td>
<td></td>
</tr>
<tr>
<td>• Rinse all of the silverware, glasses, cups, and dishes you use apart from other dirty dishes. After they are rinsed, they can be washed in a dishwasher with other dishes and silverware.</td>
<td>7 days</td>
</tr>
<tr>
<td>• Do not use disposable plates, utensils, cups, etc.</td>
<td></td>
</tr>
<tr>
<td>The bathroom you use should be for your use ONLY. No one else should use this bathroom.</td>
<td>2 days</td>
</tr>
<tr>
<td>For men: Sit down to urinate.</td>
<td></td>
</tr>
<tr>
<td>Avoid any intimate contact, including kissing and sexual relations.</td>
<td>7 days</td>
</tr>
<tr>
<td>Wash your hands carefully and often. Use soap and warm running water for at least 20 seconds.</td>
<td>7 days</td>
</tr>
</tbody>
</table>
The Body Fluid Precautions table on page 5 gives basic precautions for most people who receive I131 treatment. You may have to follow special precautions if your situation is different.

**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 before you get pregnant.

- Stop breastfeeding for 3 months before your dose of I131. I131 will collect in your breast milk. It will harm your baby and cause high radiation exposure to your breasts.

- Do not breastfeed your child after your dose.

**Follow-Up Visits**

- You may need to have a blood draw for lab tests after you leave the hospital. Check with your Endocrine Clinic treatment coordinator.

- You will need to schedule a **follow-up thyroid cancer survey** 7 to 10 days after your I131 dose. You do not need to prepare for this study. We will take images of your body to see where the I131 dose collected. This appointment will last 1 to 2 hours.

- You will need a **follow-up visit with your endocrinologist** 4 to 6 weeks after your treatment. This is the soonest we would expect your thyroid hormone levels to become stable. Your endocrinologist will monitor your thyroid hormone replacement dose. Be sure to make this follow-up appointment. If you are a patient at UWMC or SCCA, we can help you schedule this appointment.

- You may need a follow-up I131 diagnostic thyroid cancer survey in 6 to 12 months. If you do, your endocrinologist will refer you for this scan.

**To Learn More**

Visit the Thyroid Cancer Association website at [www.thyca.org](http://www.thyca.org).

**Who to Call**

**University of Washington Medical Center (UWMC) Patients**

UWMC Imaging Services ....................................................... 206-598-6200
UWMC Nuclear Medicine ...................................................... 206-598-4240

After hours and on weekends and holidays, call 206-598-6190 and ask for the Nuclear Medicine Resident on call to be paged.

**Seattle Cancer Care Alliance (SCCA) Patients**

SCCA Endocrine Clinic ........................................................... 206-288-1160

After hours and on weekends and holidays, call 206-598-6190 and ask for the Nuclear Medicine resident on call to be paged.