

Thyroid Cancer: Radioactive Iodine Therapy



What is radioactive iodine therapy?

Radioactive iodine therapy uses a form of iodine that sends out radiation to treat thyroid cancer. Radioactive iodine is also called I-131 or RAI. The thyroid gland absorbs nearly all the iodine in the blood. So when a large dose of radioactive iodine is taken, the radiation collects in thyroid cells. This way it can destroy the thyroid gland and thyroid cancer cells with little effect on the rest of the body.

When might radioactive iodine therapy be used?

After you've had surgery for thyroid cancer you may have this treatment. I-131 might also be used to treat thyroid cancer that has spread beyond the thyroid gland. Or has come back after treatment. The goal of this treatment is to kill any remaining thyroid cells or thyroid cancer cells anywhere in your body. It helps keep the cancer from coming back.

I-131 may be used to slow the growth of papillary, follicular, and Hurthle cell thyroid cancer. It is not used to treat medullary or anaplastic thyroid cancer. These types of cancer do not take up iodine.

You may be given a small test dose before the actual treatment to make sure that the I-131 is absorbed by the thyroid tumor.

I-131 treatment is not right for everyone. Be sure to talk with your healthcare provider about why you need this treatment and what you can expect over the long term.

Special precaution if you are or might be pregnant

Be sure to tell your healthcare provider if you might be pregnant before you have this treatment. Radioactive iodine can destroy the thyroid in an unborn baby. Also, be aware that your healthcare provider may encourage you to wait 6 months to a year after this therapy before you try to get pregnant.

Note: You should also not take I-131 if you are breastfeeding.

How is radioactive iodine therapy given?

Radioactive iodine is taken as a pill or liquid that you swallow. It's absorbed into your blood and travels through the blood to collect in thyroid cells.

Radioactive iodine therapy is most effective if you have high blood levels of thyroid stimulating hormone (TSH). This causes thyroid cells in the body, including thyroid cancer cells, to take up the iodine. Before treatment, you may be given a medicine to raise your TSH levels. TSH levels can also be raised by not taking thyroid hormone after surgery for a few weeks. But this can cause side effects, such as feeling tired and depressed.

You may be told to stop taking thyroid hormone replacement medicines and follow a low iodine diet for a few weeks before treatment.

What to expect after getting radioactive iodine therapy

You need to take a few safety measures after this type of treatment. For instance, you must limit contact with other people especially kids, people who are pregnant or trying to get pregnant, and pets for a few days after taking radioactive iodine. That's because your body will give off radiation for about 2 to 5 days after the treatment. You may need to stay in the hospital during this time. Your healthcare provider may also suggest that you drink a lot of fluids. Fluids will help flush the radioactive iodine out of your system.

Your healthcare provider may suggest that you flush the toilet twice after urinating. This helps rid the toilet of any radioactive material.

Most radiation from I-131 is gone in about 1 week. Ask your healthcare provider about any other safety measures you should take to protect others after treatment and how long you need to take them.

You also need to know that high doses of I-131 kill normal thyroid cells. These cells make thyroid hormone. After this therapy, you will need to take thyroid hormone replacement pills to supply the natural hormone that your body can no longer make on its own.

Be sure to ask your treatment center to give you a note documenting your radioactive iodine treatment if you plan to be traveling by air. The radioactive iodine will be detectable for several days by radiation detection machines.

What are the side effects of radioactive iodine therapy?

Radioactive iodine therapy does not often cause side effects right away. Some people may have neck pain, nausea, dry eyes, and dry mouth.

Swelling and tenderness in the salivary glands may also occur. Chewing gum or sucking on hard candy may help these symptoms.

Radioiodine decreases tear production. So if you wear contact lenses, don't use them for several days after this treatment.

In rare cases, men may become infertile. This happens most often when I-131 treatment is repeated many times. Radioactive iodine may also affect a women's ovaries. Irregular periods may happen for up to 1 year after treatment.

This therapy may also carry a very small risk of leukemia later in life. But more research is needed to determine exactly how much the risk is increased.

Working with your healthcare provider

Talk with your healthcare providers about the safety measures you need to take. Also ask about what signs of problems you need to look for and when to call them. Ask what you should do if you need help any time, including after office hours, on weekends, and on holidays. Also be sure you have a prescription for thyroid replacement hormones and that you know how to take this medicine.

It may be helpful to keep a diary of your side effects. Write down any physical, thinking, and emotional changes. A written list will make it easier for you to remember your questions when you go to your appointments. It will also make it easier for you to work with your healthcare team to make a plan to manage your side effects.

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