

RADIOIODINE THERAPY FOR AN OVERACTIVE THYROID GLAND

What is radioiodine therapy?

Radioiodine therapy uses a form of iodine that is radioactive. The radioactive iodine is taken up by the thyroid gland and the radioactivity will 'slow down' the thyroid's production of certain hormones. Radioiodine therapy has been used for over 40 years and is a well-established technique.

Where else in the body does the radioiodine go?

The majority of the radioiodine will pass from the body, mostly in the urine, during the first few weeks. For this reason you will be encouraged to drink plenty of fluids during the first few weeks. Your urine will become slightly radioactive and it is recommended that you flush the toilet twice after using it.

How is the radioiodine given?

The radioiodine is usually given as a capsule to swallow with water. It is easy to swallow and does not normally cause any problems. If you have difficulty swallowing medication, please discuss this with the Medical Physics staff when you attend for your pre-therapy assessment.

Will my thyroid become under-active?

There is a very good chance (around 80%) that your thyroid will become under-active following radioiodine therapy. This may happen in a few months or might be many years. If your thyroid becomes under-active, you will be treated with levothyroxine. It is much easier to treat an underactive thyroid than an over-active one. You will continue to have regular blood tests after your therapy to monitor the levels of your thyroid hormones. Your consultant will decide how frequently you need blood tests.

What if it doesn't work?

Radioiodine therapy has a very good success rate of curing thyrotoxicosis (about 90%). Occasionally, the thyroid remains slightly over-active and if this happens, your consultant may recommend further radioiodine therapy after about six months. Again, your blood tests will show how your thyroid is responding to the radioiodine.

Will radioiodine increase my chances of developing cancer?

There is little evidence that radioiodine causes cancer. The risk has been shown to be very low and may be associated with the disease rather than the radiation dose. Large studies have been conducted comparing the rates of thyroid and non-thyroid cancer in those who have and those who have not had radioiodine. There is a small difference between the two groups in terms of the incidence of both thyroid and non-thyroid cancer.

Does everybody get the same dose of radioiodine?

No. There are a range of doses, and the dose that is prescribed is dependent on several factors, such as the type and size of the thyroid. Your consultant may want you to have an isotope scan of your thyroid to help with assessing the dose required. This is done in the Medical Imaging Department and involves a small injection of a radioactive tracer to enable us to obtain a 'picture' of your thyroid gland. This scan is usually arranged immediately after your pre-therapy assessment interview. Following this scan, the pictures will be returned to your consultant, who will prescribe the necessary dose of radioiodine. If your consultant does not require you to have a scan, you will still have to attend the Medical Physics Department for a pre-therapy Interview.

Can I have the therapy if I am pregnant or breast-feeding?

No. Women who are pregnant or breast-feeding cannot be given radioiodine. If there is a possibility that you may be pregnant, or you are trying to get pregnant, then you must tell us. You are advised not to become pregnant for at least six months after radioiodine therapy. You must take adequate contraceptive precautions.

Does the radioactivity affect sperm and consequent conception?

Radioiodine therapy can affect fertility and male patients are advised that they should not father a child for at least six months after treatment.

Do I need to do anything before I have the radioiodine therapy?

Yes. If you are taking carbimazole or propylthiouracil for your condition, you will need to stop this before the radioiodine therapy. This is usually seven days before, although your consultant may wish to change this. A small number of patients may also be taking levothyroxine, and, if you are one of these people, you may need to stop taking this for a much longer period before therapy (possibly four weeks). You will be given full instructions by the Medical Physics Department. This is important, as these drugs will affect the amount of radioiodine that will be taken up by your thyroid. It is also recommended that you do not eat fish or seafood for two days before the radioiodine therapy. Apart from that, you may eat and drink as normal, and take all other medication unless instructed not to.

Are there any side-effects?

Very occasionally, after receiving radioiodine, some patients get a sore throat. This should last for only a few days, and it can be relieved by drinking plenty of fluids and sucking boiled sweets. Sometimes your thyroid activity may increase slightly for a few days and you may notice the symptoms of an over-active thyroid returning. If these symptoms prove troublesome, please contact your consultant or your own doctor. Please do not re-start your thyroid medication unless your consultant tells you to.

Your therapy and interview

What happens next?

You will receive an appointment from the Medical Physics Department to discuss and plan the next step. If your consultant wishes you to have an isotope scan it will be arranged immediately after your interview. This does not normally take longer than two hours. If you are not having a scan, you will be here for about 30 minutes. You will have the opportunity to ask questions.

All the above precautions will be discussed in detail when you attend for your pre-therapy assessment interview in the Medical Physics Department. If you have any questions or queries, please telephone the Medical Physics Department on 01302 366666 ext 3313, or contact your consultant.

If you do not require a scan we can usually arrange a date for the radioiodine therapy at the interview. If you do require a scan, we will contact you to arrange an appointment when your consultant has decided on the necessary dose of radioiodine. A date can be arranged for a day when it is mutually convenient, bearing in mind that you may need time to arrange work/family commitments, etc. As the radioiodine is delivered from Germany, we may be restricted to certain days of the week. You will be given instructions about when to stop any medication and any other instructions your consultant may decide on.

What happens at my appointment?

When you attend for the radioiodine therapy, we will again go through the precautions you will need to take to ensure that you understand what is necessary. You will be asked to swallow a capsule with a drink of water. This appointment usually only takes about 20 minutes; however, you may need to remain in the department for an hour after swallowing your capsule. This is simply to ensure that you do not vomit and that the capsule has been absorbed. The capsule will not make you feel sick. If you were to vomit within an hour of swallowing the capsule, you may not have absorbed the full amount of the intended dose of radioiodine and your consultant would need to be aware of this. Most patients do not need to remain for more than one hour after therapy.

Will there be any danger to my family or friends?

We wish to keep radiation exposure levels to other people as low as is reasonably practicable. We aim to ensure that your family and friends will not receive radiation above the levels experienced by members of the public in their daily lives. When you attend the Medical Physics Department for your pre-therapy assessment, we will discuss in detail

how you can achieve this. The main precautions to reduce radiation are:

- avoid non-essential close contact with babies, young children, and pregnant women. For people with whom you are in frequent contact, this could be for a period of about 24 days, but may be slightly shorter or longer depending upon the dose of radioiodine prescribed. By 'close contact', we mean at a distance of less than 1 metre (3 feet) for more than 15 minutes
- depending on your specific job, you may need to take time off work, especially if you have close contact with children or pregnant women. This could be for up to 27 days, depending on the dose of radioiodine you have been given. If you have close contact with other people at work on a daily basis, or work in the food preparation industry or with radiosensitive materials (for example, in a film-processing laboratory), this could be for up to 10 days for the largest dose of radioiodine
- you will need to avoid close contact with other people as far as possible for a few days. This could include not visiting places of entertainment (such as, for example, the cinema), where you might be sitting close to someone else for a lengthy period
- you may need to sleep alone for a few days (this applies only if you have had one of the larger doses of radioiodine)
- you may need to avoid travelling on public transport for a few days
- to ensure that you are not already pregnant, you may be required to have a pregnancy test.

For further information please contact:

Head of Department of Medical Physics, tel: 01302 381347 or 01302 366666 ext 3313.