

Radioactive iodine treatment for an overactive thyroid

Information and advice for patients

Endocrinology

You have a condition called “thyrotoxicosis” or “hyperthyroidism”. This means that your thyroid gland is overactive and is over-producing thyroid hormone; excess thyroid hormone is harmful to the body.

What is the treatment?

Radioactive iodine (commonly referred to as radio-iodine) is one treatment for this condition that uses a form of iodine that is radioactive, to stop the gland from making excess thyroid hormone. Iodine is present in salt, sea food etc. and many other foodstuffs that we consume on a regular basis. The thyroid gland takes up iodine present in the blood and uses it to make thyroid hormone and so iodine is not usually harmful to the body in small quantities.

When your thyroid gland is overactive, the demand for iodine in the gland increases and so the radio-iodine medication will be taken up by the gland. The radio-iodine inside the gland reduces the function of the thyroid permanently. In this way the overactive gland is controlled and it can no longer produce excess of hormone. This prevents it from becoming overactive again, although in some cases you may need a repeat dose for this to be completely effective.

How is radio-iodine given?

You are likely to have a scan before the dose. Following this, you will be asked to swallow one or two capsules with water. If you are taking other medications, your doctor will advise you on what is best for you to do before having this treatment; this may mean you have to stop taking your thyroid medication before you have the radio-iodine for 1-2 weeks. In most cases, it is an out-patient procedure and once you have had the dose you can go home

Would I need to have more than one-treatment of radio-iodine?

In some cases a second or third dose may be needed but this will depend on how effective the first treatment has been.

Where does the radioactivity go?

It is taken up mostly by the thyroid gland; the rest is lost in the urine and saliva. The majority of the radioactivity is lost over the first few days and then the rest is lost in small amounts over the next few weeks.

What are the benefits?

As the excess production of thyroid hormone decreases, your symptoms (such as hyperactivity, mood swings and difficulty sleeping etc.) for hyperthyroidism will decrease and eventually go.

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What are the risks?

What are the risks to me?

This form of treatment is considered safe and effective. It has been studied over 40 years and there has not been any increased risk of cancer. It can be given to young adults and women of child-bearing age. Radio-iodine is generally free from side-effects, however there are some risks:

- **Iodine allergy:** If you have an iodine allergy, you should not have this treatment.
- **Radiation thyroiditis:** There is a less than 1% chance of developing a condition called "radiation thyroiditis" which can cause pain and swelling in the thyroid gland but can be resolved quickly. If this does develop please contact your specialist. You may be prescribed painkillers, and in some cases steroid tablets.
- **Thyroid medication:** Your doctor may advise you to stop your thyroid medication for 2 weeks before you have the radio-iodine treatment. As a result of this, you may experience symptoms of not taking this medication such as:
 - Sweating
 - Tiredness
 - Feeling too hot
 - Irregular heartbeat

If you feel unwell, you should contact your specialist doctor or your GP.

- **Pregnancy:** Women who are pregnant cannot take this treatment. If you are a woman of child-bearing age, you will need to have a pregnancy test and the treatment will be given only if you are found not to be pregnant. Women are advised not to conceive for 4 months after radio-iodine treatment. This treatment will not have any effect on subsequent pregnancy provided your thyroid function is normal at the time of conception.
- **Breastfeeding:** If you are breastfeeding, you must stop this when you have the treatment.

Are there any long-term effects?

As we cannot measure the exact dose your thyroid gland needs, but want to ensure treatment is effective, you end up with more of the gland getting destroyed than would be necessary. This makes it more likely for you to develop an underactive gland after treatment.

- If your thyroid gland becomes underactive, you will need to be on thyroxine (your natural thyroid hormone) for the rest of your life. Once you are stable on thyroxine, you may need a blood test once every 4-6 months. It is much easier to treat an underactive gland than an overactive one.

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- There is still a chance that the gland will not be destroyed completely and the remaining cells will return the thyroid gland's function back to normal. This will mean you will not require thyroxine replacement.

Are there any risks of having children afterwards?

There have been no risks to children of parents who have had radio-iodine but we advise to avoid pregnancy or fathering children for 4 months after radio-iodine treatment. Birth defects are not any more common in women who have had radio-iodine than those who have not.

What are the risks of not having the treatment?

By not having this treatment, your symptoms due to hyperthyroidism may continue if you are not taking tablets. However your specialist should have discussed this with you.

Are there any alternatives to this treatment?

Your specialist is likely to have covered these options with you already; however other options include tablets or surgery. You can discuss these more in detail with your specialist.

Precautions

You will be given simple advice to avoid unnecessary radiation to others during a restricted period. This is because there is a potential to expose home and household contacts from the radiation emitted from your thyroid, as well as from some radioiodine in your saliva and urine. In particular to note the following:

- On the day of the treatment you should avoid journeys by public transport lasting over 1 hour. You may drive yourself to your appointment but you should not have more than one other person in the car. They should sit in the seat diagonally opposite
- Do not share cups or utensils
- Avoid sleeping in the same bed as another adult for at least a week, and longer (3-4 weeks) for pregnant women, infants or children
- No sexual contact for at least the first week
- Take care with hygiene, washing hands frequently, and flushing the toilet twice for the first week
- Avoid prolonged close contact with adults, children and pregnant women for periods of up to 3-4 weeks.
- If you are working at the time of the treatment, you are likely to have to take time off. This may be up to 25 days if you work closely with small children.

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- You should avoid public places for 6 days such as clubs, pubs, cafes, church, temple, cinema, etc. These are all places where you might be in prolonged, close contact with others.
- You may also need to avoid travelling by plane for a time so let us know if you have a holiday planned for just after your treatment date.

Follow-up

Your specialist will arrange to see you once you have had the treatment. This will usually be about 6 – 8 weeks after your treatment. You will have a blood test a week or two before your appointment.

Contact details

If you have any queries, you can contact your consultant (specialist doctor) who saw you in clinic and advised this treatment. For specific queries about the dose and precautions please call the Medical Physics Department at City Hospital.

Diabetes and Endocrine consultants' secretaries via hospital switchboard: 0121 554 3801
(9am - 5pm, weekdays)

Medical Physics: 0121 507 4427 (9am - 5pm, weekdays)

Further information

For further information please look at the following websites:

The British Thyroid Foundation at <http://www.btf-thyroid.org/>

The British Thyroid Association at <http://www.british-thyroid-association.org/info-for-patients/>

For more information about our hospitals and services please see our websites www.swbh.nhs.uk and www.swbhengage.com, follow us on Twitter @SWBHnhs and like us on Facebook www.facebook.com/SWBHnhs.

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Sources used for the information in this leaflet

- Ross DS., "Radioiodine therapy for hyperthyroidism" 2011
- Berg GE, Nyström EH, Jacobsson L, et al. "Radioiodine treatment of hyperthyroidism in a pregnant woman" 1998

If you would like to suggest any amendments or improvements to this leaflet please contact the communications department on 0121 507 5495 or email: swb-tr.swbh-gm-patient-information@nhs.net



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