

# Levothyroxine information for patients who have had treatment for thyroid cancer



## This leaflet aims to give you information about your doses of levothyroxine after your treatment for thyroid cancer.

Sometimes it can be difficult to get your dose of levothyroxine (Levothyroxine) just right. It takes time to adjust the dose until it is right for you. The aim is for you to feel good without symptoms of too little or too much levothyroxine. We also need the blood test results to be in the range required, which is part of your long term treatment for thyroid cancer.

Until you have your follow up scan, 9 to 12 months after your treatment, we will try to keep your Thyroid Stimulating Hormone (TSH) level below or at 0.1 and your T4 (thyroxine levels) in the normal range. With some people the T4 level needs to be a slightly higher than normal to suppress (lower) the TSH reading by the required amount.

After your radioiodine treatment and your 9 to 12 month scan and thyroglobulin blood test, your doctor will review your results and advise on the level of TSH suppression you need. In most cases at this point, TSH suppression can be reduced to the lower half of normal, meaning you will not need to be on as much levothyroxine. Occasionally there is a need to continue fully suppressing your TSH. If you are told this, the reason will be fully explained to you.

## By how much is my thyroxine dose altered?

Levothyroxine dose is usually adjusted in 12.5 or 25 microgram steps. The smallest tablets of levothyroxine are 25 microgram (mcg) tablets. To adjust the dose by 12.5 mcg we suggest alternate day dosing for example taking 100 mcg of levothyroxine one day and 125 mcg of levothyroxine the next day.



## What time of day should my blood tests be done?

Ideally thyroid function blood tests should be done at least four hours after the morning dose of levothyroxine i.e. in the afternoon. A high Free T4 level can occur if the blood tests are taken soon after the levothyroxine tablet has been swallowed.

## When should my blood tests be repeated after changing the dose?



After adjusting the dose of levothyroxine the thyroid function tests (TSH and Free T4 levels) should be done at least six weeks after changing the dose. If thyroid function tests are done earlier than six weeks then they may not have had time to settle down to the levels expected for the new dose of levothyroxine (GPs may not always know this and sometimes ask for thyroid function tests to be done earlier than we recommend).

## What is the usual dose of levothyroxine for a patient who has had thyroid cancer?

The usual dose of levothyroxine to produce a TSH of less than 0.1 is usually about 2mcg per kilogram of body weight, but this varies from person to person. When the TSH suppression requirement is reduced we will adjust your dose according to your blood results.

### Reasons that may have an effect on how much thyroxine you need:

- Significant weight gain or loss may result in the need for you to increase or decrease your dose.
- Pregnancy. It is important to tell a health professional if you become pregnant as you will need more thyroxine and close monitoring of your thyroxine levels during pregnancy.
- Activity e.g. the start of vigorous exercise such as training for a marathon, or a change in your circumstances that means you are much less active than in the past.
- Age. As we get older our metabolism slows down and we often need less levothyroxine.
- A change in the brand of levothyroxine may mean your dose needs changing as it may be absorbed by the stomach differently from another brand. Avoid switching brands if possible.

**Too much as well as too little levothyroxine can cause tiredness and weight gain. Too much levothyroxine taken over many years may be a cause of osteoporosis and heart trouble.**

## What are the causes of a high TSH blood test?

If the TSH is higher than wanted then we may ask the patient to increase their dose of levothyroxine. The most common cause of a slightly high TSH is that sometimes patients forget to take their tablets first thing in the morning at least 15 minutes before breakfast. Another cause of a high TSH is due to the levothyroxine not being absorbed from the gut into the bloodstream.

### Absorption of levothyroxine is reduced by:

- food in the stomach,
- calcium tablets,
- iron tablets,
- multi vitamins,
- soya milk,
- liquids and tablets given for indigestion
- coffee.

### Drugs can also interfere with levothyroxine, such as:

- colestipol,
- colestyramine,
- antibiotics,
- anti-epileptic and
- oestrogen (Oestrogen is often in the contraceptive pill and in Hormone Replacement Tablets (HRT)).

If all drinks and medication mentioned overleaf are taken at least an hour after the levothyroxine tablets then we do not think that they reduce the absorption of levothyroxine (because after an hour, levothyroxine is probably totally absorbed from the stomach). Food can be eaten 15-20 minutes after swallowing the levothyroxine tablet. Levothyroxine should be taken with a *drink of water* rather than coffee or a milky drink.

As you can see it can be quite a challenge to find the ideal dose of levothyroxine and we have a Thyroid Cancer Nurse Specialist Team to give advice if you have any problems.







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