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Hyperthyroidism

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Who is this leaflet for?

This leaflet is for patients who have been diagnosed with hyperthyroidism. It aims to give you some background information about the condition, its causes and the possible treatment options.

What is hyperthyroidism?

Hyperthyroidism is a condition that occurs when your thyroid gland produces too much thyroid hormone. For this reason it is also known as having an over active thyroid.

What is the thyroid gland?

Your thyroid gland is located at the front of your neck. Its role is to release thyroid hormones, which are used to power the cells of your body and control your metabolism.

What causes hyperthyroidism?

The most common cause is usually due to an 'auto immune' condition called Graves' disease. This is where for some reason your body suddenly recognises your thyroid gland as foreign and starts to attack it. However, rather than destroying the gland the 'attack' usually stimulates the thyroid gland into overworking and producing excess thyroid hormone.

Other possible causes include:

- a solitary nodule - where a clump of cells develop which work independently from the rest of the gland. If this nodule then goes on to produce lots of thyroid hormone, hyperthyroidism may arise
- thyroiditis - an infection or inflammation of the thyroid gland
- over treatment of hypothyroidism (under active thyroid) with Levothyroxine.

How is hyperthyroidism diagnosed?

It is easily diagnosed by a simple blood test which measures the amounts of free circulating thyroid hormone (FT4) and thyroid stimulating hormone (TSH) that are circulating in your blood.

Your doctor will have recognised your symptoms and asked that you have a blood test. Some people may have hyperthyroidism without recognising or having any symptoms, and it may be identified only as part of a rountine check up.

What are the symptoms?

Your thyroid gland controls your body's metabolism (the set of chemical reactions that happen in our body all the time). This keeps our body working at the correct speed and enables it to function correctly.

When your thyroid is over active it increases your metabolism and can make you feel like you are having a speed up of mental and physical processes in your whole body. Symptoms may include:

- loss of energy, leading eventually to feeling exhausted
- tiredness and weak muscles
- nervousness, anxiety, anxiousness and irritability
- mood swings or aggressive behaviour
- tremor
- good appetite
- loss of weight
- looseness of the bowels, diarrhoea
- thirst
- increased heart rate, palpitations
- an enlarged thyroid gland
- sweating and heat intolerance.

If the cause of your hyperthyroidism is Graves' disease, you may also have some symptoms of thyroid eye disease:

- dry gritty eyes
- painful protrusion of the eyes
- double vision.

If you have any of these symptoms, your consultant or endocrine nurse specialist will give you more detailed information on thyroid eye disease.

What happens following diagnosis?

Your consultant endocrinologist may refer you for additional blood tests or a scan of your thyroid gland to help diagnose the cause of your hyperthyroidism.

Once your diagnosis is confirmed, your consultant will advise on the best treatment for you, taking into account your treatment preferences and your personal situation.

How is hyperthyroidism treated?

There are various treatments for hyperthyroidism depending on its cause. Your consultant or endocrine nurse specialist will discuss with you the treatment options that are available to you. Options include:

Anti-thyroid drugs - Carbimazole (Neo-Mercazole) or Propylthiouracil tablets

These drugs act directly on your thyroid gland to block the production of thyroid hormones. The starting dose will depend on your original levels of FT4 and TSH. You will need to take the tablets daily. Once the drugs start working, the doses may be reduced gradually. Treatment is usually given over a 12-18 month period then stopped to assess your normal thyroid function. During treatment and directly after stopping the tablets you will need to have regular blood tests to assess your thyroid function. You can arrange these at your GP's surgery. Your consultant or endocrine nurse specialist will advise you how often to have a blood test. Unfortunately hyperthyroidism tends to reoccur, in which case you may need an alternative permanent treatment.

Anti-thyroid drug side effects are uncommon but may include skin rashes, itching and hair loss. There is a rare but important side effect which is due to a lowering of your blood count (white cell count). If this occurs you may have a very sore throat or severe mouth ulceration. Most sore throats are coincidental and due to a viral infection, and have nothing to do with the tablets. However, if you do have a sore throat after starting anti-thyroid medication, contact your GP surgery or Emergency Dept (out of working hours) immediately and request a blood test for a full blood count.

Carbimazole treatment also carries the risk of acute pancreatitis. Acute pancreatitis is the inflammation of the pancreas which comes on suddenly. Symptoms of acute pancreatitis are as follows:

Severe pain especially in upper abdomen moving through to the back and relieved by leaning forward, it can be associated with vomiting and the pain tends to decrease over around 3 days. Immediate discontinuation of treatment with carbimazole is required in patients who develop acute pancreatitis, therefore should you develop these symptoms you should seek immediate medical advice.

Carbimazole and advice in relation to women planning pregnancy

If you have been diagnosed with an over active thyroid and want to become pregnant or find out you are pregnant, please tell your Consultant, GP or Endocrine Nurse immediately so your medication can be reviewed appropriately.

There has been new evidence from studies and case reports that state carbimazole is suspected to cause abnormalities to the foetus when administered during pregnancy at a dose over 15mg daily, particularly in the first trimester.

It is therefore recommended that effective contraceptive measures must be used for women of childbearing age on treatment with Carbimazole.

Propylthiouracil can be used as an alternative to Carbimazole to allow planning for pregnancy during treatment for thyrotoxicosis. But it is also advised that the thyroid hormone levels should be normalised before pregnancy occurs, otherwise you may be at increased risk of miscarriage.

Beta blockers - (eg Propanolol)

These may be given in the early stages of hyperthyroidism to help control your symptoms. They have no effect on your thyroid gland and do not control the cause of the problem. They can be stopped once your thyroid hormone levels are controlled with anti-thyroid drugs, which will then continue for the duration of your treatment.

You will probably be unable to take beta blockers if you suffer from asthma.

Radioactive iodine

If your hyperthyroidism persists, an effective treatment option is radioactive iodine. This involves swallowing a small amount of radio-active iodine liquid, which in time will slowly stop your thyroid gland from functioning (please see the separate radioactive iodine leaflet).

Following radioactive iodine treatment, you will need monthly blood tests to check your thyroid levels. Most people develop an underactive thyroid gland following treatment, but a small number of people may need a second treatment.

Surgery

If you have persistent hyperthyroidism, you may need an operation to remove your thyroid gland (thyroidectomy).

The operation involves a short 2-3 night hospital stay and requires a general anaesthetic. It will also result in a small scar on the front of your neck, but this does fade over time. Following thyroidectomy you will need to take thyroid hormone replacement tablets (Levothryoxine) daily for the rest of your life. You may also develop a low calcium level which will also need monitoring. Your consultant or endocrine nurse specialist will give you more information regarding this if appropriate.

How often will I need a blood test?

Whichever treatment option you choose, you will need to have regular blood tests to monitor your thyroid function and the effectiveness of your treatment. The frequency of these will range from monthly initially to every 2-3 months once your treatment is established or your thyroid function is stabilised. Your consultant or endocrine nurse specialist will advise you how often you should have a blood test. You will then be responsible for booking an appointment at your GP surgery to have your blood tests taken at the frequency recommended.

Contact us

We hope this leaflet has provided useful information about hyperthyroidism and answered some common questions.

Each case is treated individually and although you may know someone who suffers the same or a similar condition treatment may vary from person to person. Your individual circumstances and treatment preferences will be discussed with you by your GP, consultant or endocrine nurse specialist and decisions will be made to reflect your personal needs where possible.

Any questions?

If you have any questions or concerns please contact:

Endocrine Nurse Specialist
Cornwall Diabetes and Endocrine Centre
Royal Cornwall Hospital
Truro
TR1 3LJ

Tel: 01872 254561 / 07823326070

Further information

Further information and support regarding thyroid disease is available from:

The British Thyroid Foundation
2nd Floor
3 Devonish Place
Harrogate
HG1 4AA

Tel: 01423 709907 or 709448
Website: www.btf-thyroid.org

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

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