Royal Berkshire
NHS Foundation Trust

Graves’ Disease

This leaflet is for patients diagnosed with Graves’ Disease and explains its symptoms, possible cause and what treatment options are available.

What is Graves’ Disease?

Graves' Disease, named after the surgeon who prescribed it, Mr Graves, is the most common type of hyperthyroidism. Hyperthyroidism is a condition in which the body produces too much thyroid hormone.

What causes Graves' Disease?

The precise cause of Graves’ Disease is still unknown. The disease appears to be an autoimmune disease. This means that the body's defences against infection attack the body's own tissue. In the case of Graves' disease, the body appears to be making antibodies that cause the thyroid gland to make more hormone than normal. As a result, the body has too much thyroid hormone.

The thyroid gland is key to maintaining normal metabolism. Metabolism regulates your heart rate, the amount of calories you burn when you are resting, your energy level, and other bodily functions. When thyroid function becomes abnormal, the effects on your body can be dramatic.

What are the symptoms?

The most common symptoms of Graves' Disease are:

- Weight loss
- Rapid heart rate
- Anxiety, tiredness, or sleeplessness
- Feeling shaky, having tremors
- Feeling sweaty and hot, even though others around you are comfortable
- Diarrhoea
- Shortness of breath
- Difficulty focusing your eyes
- A bulging of one or both of your eyes

Many people feel nervous or are not able to control their emotions. Some feel muscle weakness, especially in the thigh muscles when going upstairs. A few people notice a swelling in their neck because of an enlarged thyroid.

A proportion of people with Graves' disease develop eye symptoms. These symptoms include eyes that protrude more than usual from the sockets and eyelids that do not completely close over the eye. Dryness and irritation of the eyes are common. Sometimes the eye muscles are affected, which may limit movement of the eyeballs. Sometimes, just one eye has symptoms, but usually both eyes are affected.

How is it diagnosed?

The diagnosis is made by a simple blood test, measuring thyroid hormones. We will also check for antibodies in the blood that attack the thyroid gland.

Additional tests may be done. A test called a radioactive iodine uptake scan, shows if there are areas of the thyroid gland making more or less hormone than normal.

How is it treated?

- The usual initial treatment is with anti-thyroid medication. However, radioactive Iodine or surgery may be necessary in case of resistant, or recurrent hyperthyroidism.
- In addition, a medication called beta blocker, usually propranolol, can be used initially to control the symptoms until the anti-thyroid medications have worked.

Anti-thyroid medication: The two anti-thyroid medications commonly used to decrease the production of thyroid hormone are Carbimazole and Propylthiouracil (PTU). At first you may be started on a high dose of medicine. Your doctor will check the effect on your thyroid hormone levels every 6-8 weeks. After several weeks the dose of medication will be reduced. You will need to remain on antithyroid drugs for at least 12-18 months.

Rarely, the anti-thyroid medications can cause a decrease in your white blood cells. It is therefore important that if you develop a sore throat with ulceration or a fever while you are taking antithyroid drugs, **you seek medical help immediately** so that your white blood cell count can be checked

Beta-blockers: The medicines used only to control symptoms are a type called beta blockers. It slows heart rate, lowers blood pressure, and may help calm feelings of anxiety. Beta blockers do not affect the production of thyroid hormone.

These anti thyroid medications, given for at least 12-18 months, would lead to restoration to normal thyroid function in 40-50% of the times.

Further options if anti-thyroid medication does not work

If relapse occurs immediately or on further follow up, other definitive treatment options, such as radioactive iodine or surgery, need to be considered. Both treatment options will lead to reducing the thyroid hormone production, which can be treated easily with replacement.

- A pill containing **radioactive iodine** is commonly used to treat some types of hyperthyroidism, especially if you have had hyperthyroidism more than once. This is a non-invasive procedure, works in 90% of the time, and can take up to 6 months to start working. The main risk of this treatment is that your thyroid levels will become too low, but it is easily treated with drugs.
- **Surgery** can be done to remove part or all of the thyroid gland or a growth in the gland. Surgery is very affective in curing hyperthyroidism. However, surgery has certain risks, including nerve damage and low thyroid levels.

Useful patient information (thyroid support group websites):

BTF http://www.btf-thyroid.org/
TED http://tedct.org.uk/
BTA https://www.british-thyroid-association.org/

If you have any questions about this leaflet, please contact:

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