

## **BRITISH ASSOCIATION OF ENDOCRINE AND THYROID SURGEONS . INFORMATION SHEET FOR PATIENTS WITH OVERACTIVE THYROID**

### THYROTOXICOSIS (OVER ACTIVE THYROID)

Investigations have shown you to have an overactive thyroid gland. Three treatment options are available for this:

- \* Antithyroid Drugs
- \* Radioiodine
- \* Surgery.

Most patients will need anti-thyroid drugs initially to control the thyroid over activity. These drugs may be continued for around 18 months to allow the thyroid to recover spontaneously but in many cases such recovery will not occur and a more permanent treatment will be needed using radio-iodine or surgery. Often the illness will recur even after a full length course of anti-thyroid drugs and in these circumstances treatment with radio-iodine or surgery will normally be advised.

#### Anti-thyroid drugs:

These are relatively slow acting and several months after withdrawal of treatment a significant number of patients will experience recurrence of the problem. There may be side effects associated with these drugs which may require them to be stopped.

#### Radioactive Iodine:

This is probably the simplest option for treating most overactive thyroid glands. It requires swallowing a capsule containing radioactive iodine which is taken up by the thyroid gland. The radioactivity destroys the thyroid cells that are causing the over activity.

Most patients are successfully treated with only one course of treatment but some require more than one. The major side effects of this treatment is that you have to keep a distance away from other people, particularly pregnant women and young children for several days until the level of radioactivity drops. This usually takes 2 to 3 weeks.

Radioactive iodine therapy is not recommended for young women who are or wish to become pregnant within the next few months. You must not take radioactive iodine if you are currently pregnant or breast feeding. There is no evidence of long-term harm from taking radioactive iodine although most patients who take it will develop an under active thyroid sooner or later and require to take thyroid tablets.

### Surgery:

Surgery is a suitable option for many patients with an overactive thyroid gland when anti-thyroid drugs do not work and a decision must be made between an operation and radioactive iodine. The advantages of an operation are that it removes an enlarged gland (goitre) and eases any symptoms caused by pressure of the gland on the other neck structures. It rapidly cures the over activity and can restore normal function to patients for many years. However a substantial number of patients will have an under active thyroid after the operation and other patients will become under active with each passing year. For this reason it is sometimes recommended that all or virtually all the thyroid is removed and replacement thyroid hormone is started just after the operation.

If some of the thyroid gland is left behind, then this can occasionally become overactive again in the future. Removing the whole of the gland has the great advantage of solving the problem once and for all with no risk of recurrence of the overactivity and no requirement for careful follow-up provided the thyroid tablets are taken once a day for the rest of your life.

### Preparation for surgery:

When a decision has been made to proceed with surgery it is important that the effects of thyroid over activity are controlled before hand. This requires you to take the prescribed medication up to the time of the operation. If you have been prescribed a beta blocker (e.g. propranolol or nadolol) you may need to continue to take these for a few days after the operation. Your doctors will advise you if this is necessary.

### Possible complications:

Most thyroid operations are straightforward and associated with few problems. However all operations carry risks which include postoperative infections (e.g. in the wound or chest), bleeding in the wound and miscellaneous problems due to the anaesthesia, but these are very rare. Bleeding in the wound can be a serious problem if it occurs but the chance of a significant bleed needing you to return to the operating theatre within a day or two after your operation to clear out the blood is small (in the region of 1`in 50).

### Scar:

The scar may become relatively thick and red for a few months after the operation before fading to a thin white line. Very rarely some patients develop a thick exaggerated scar but this is uncommon.

### Voice Change:

It is impossible to operate on the neck without producing some change in the voice; fortunately this is not normally detectable. A specific problem related to thyroid surgery is injury to one or both of the recurrent laryngeal nerves. These nerves pass close to the thyroid gland and control movement of the vocal cords. Injury to these nerves causes hoarseness and weakness of the voice.

It is uncommon for the nerve not to work properly after thyroid surgery due to bruising of the nerve but if this should occur, it recovers over a few weeks or months. The external laryngeal nerve may also be injured and this results in a weakness in the voice although the sound of the voice is unchanged. Difficulty may be found in reaching the high notes when singing, the voice may tire more easily and the power of the shout reduced.

Careful surgery reduces the risk of permanent accidental injury to a very low level but cannot absolutely eliminate it. Injury to both recurrent laryngeal nerves is extremely rare but is a serious problem and may require a tracheostomy (tube placed through the neck into the windpipe).

### Low blood calcium levels:

Patients undergoing surgery to the thyroid gland are at risk of developing a low calcium level if the four tiny parathyroid glands which control the level of calcium in the blood stop working after the operation. It is normally possible to identify and preserve some if not all of these glands and so avoid a long-term problem. Unfortunately even when the glands have been found and kept they may not function. If this happens then you will require to take extra calcium and/or vitamin D on a permanent basis. The risk of you needing long term medication because of a low calcium level is small (about 1 in 50). It is quite common to require calcium and/or vitamin D tablets for a few weeks or months after the operation.

### Thyroid function:

If it has been decided to remove all the thyroid gland then you will require lifelong replacement of thyroxine. Fortunately this is a straightforward once a day regimen with little requirement for adjusting dosage. There is a prescription charge exemption for patients requiring thyroxine tablets so you will not have to pay for these (or any other tablets as the law currently stands). If most, but not all, of the thyroid gland is removed then in the early weeks after the operation the remaining thyroid may not produce enough thyroxine and you may require replacement tablets temporarily until the retained thyroid produces enough hormone itself. This will be monitored.

### Swallowing difficulty:

Usually swallowing is improved following thyroid surgery, especially for large goitres or those which have extended down into the chest, but occasionally some mild difficulty may develop or be persistent. Similarly, if you are experiencing any difficulty with your breathing before the operation, then this may also be eased.

Pregnancy:

Once the thyroid hormone levels are normal after surgery, there is no reason not to become pregnant if desired. If you become pregnant during treatment with antithyroid medications such as carbimazole or propylthiouracil, it is not a major problem, but it is important to notify your hospital doctor as soon as possible.

We wish to emphasise that these potential side effects and complications are unusual, but we believe it is essential to tell you about these rather than have you develop a complication without having been forewarned. If you are unclear about the topics in this sheet or if you are unclear about any other details of your operation please ask one of the surgical team.