

ENDOSCOPIC THORACIC SYMPATHECTOMY

Information Booklet

Introduction

Hyperhidrosis is a condition where “an individual experiences excessive sweating beyond the amount needed for the body to maintain a constant internal temperature of 37°C.”

Excessive perspiration may mean different things to different people. Everybody sweats, but some people sweat larger amounts and more easily than others. However, sweating only really becomes an issue (and is termed hyperhidrosis) when it occurs in social situations or in parts of the body where it adversely affects the quality of life of the person with that sweating. Hyperhidrosis can have a severe psychological impact and can have debilitating effects on self-esteem and personal and professional relationships. At extremes, it can result in skin damage and infections.

In the past, the management options for hyperhidrosis have been limited and invasive. Treatment has improved in recent years and various new therapies have become available. However, there are still potential pitfalls if treatment types are not selected carefully and there is no, one perfect remedy for all patients. Each treatment type has advantages and disadvantages and choosing the correct one for each individual sufferer is vital. Due to our unique position, the team at VASC are able to offer **all** available proven therapies and are therefore not biased to towards any particular one. This ensures that our patients receive an individually tailored treatment regime.

What are the signs and symptoms of hyperhidrosis?



Hyperhidrosis can present at any age, but it tends to be highest among working-age adults. Sufferers may complain of different problems depending on the site of sweating. Individuals with under arm hyperhidrosis may need to change clothes regularly to avoid obvious staining. Those with sweating of the palms may avoid shaking hands and experience blotting of ink when handling printed documents. Facial sweating/flushing may be an embarrassment in social situations.

Due to the continual wetness some people may experience a softening and whitening of the skin; allowing it to become easily infected and painful. Bacterial or fungal overgrowth can occur.

Primary vs Secondary Hyperhidrosis

There is no obvious cause for excessive sweating in the vast majority of people. This is called **primary hyperhidrosis**. Rarely, the sweating occurs as a result of another medical condition. In this case it is called **secondary hyperhidrosis**. In secondary hyperhidrosis the sweating may be focal or generalised but is more likely to be generalised.

Focal vs Generalised Hyperhidrosis

Hyperhidrosis can occur in two forms: **Focal hyperhidrosis** is excessive sweating localised to particular areas of the body i.e. Palms of hands, soles of feet, under-arms (Axilla or Axillae) and face. Conversely, **generalised hyperhidrosis** is sweating simultaneously over most areas of the body. This form of the condition is more likely to be related to other medical conditions.

What causes hyperhidrosis?

The exact cause of hyperhidrosis is not known. In focal hyperhidrosis individuals already have a high production of sweat, and it has been found that an abnormal function of the central sympathetic nervous system also contributes. The sympathetic nervous system is the portion of the nervous system that controls the body's energy and resources during stress or arousal stimuli. Therefore, when a person with focal hyperhidrosis experiences such stimuli (e.g. excitement or fear) their sweat glands produce even more perspiration.

What are the treatment options?

- Treat any underlying illness
- Stop any medications that might be causing hyperhidrosis
- Antiperspirants (high dose aluminium compounds)
- Oral medication
 - Anticholinergic
 - Beta Blockers
 - Anti-Anxiety drugs
- Iontophoresis
- Botox
- Surgical skin excision
- Sympathectomy

Endoscopic thoracic sympathectomy (ETS) surgery

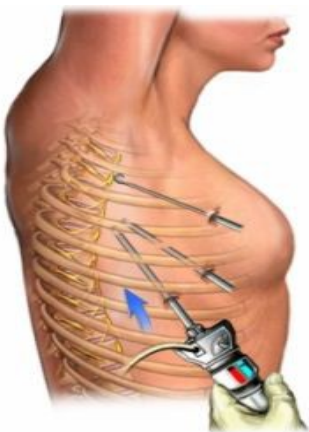
Thoracic sympathectomy is an extremely effective, long lasting, treatment for focal, primary sweating of the palms, when used in carefully selected patients. However, it can have extremely serious side effects that need to be discussed in great detail before any patient embarks on the treatment. If you are reading this document in preparation for surgery and have not yet discussed the advantages and disadvantages of the procedure to your satisfaction with your doctor, you should not proceed until you have.

What to expect

The operation is carried out in hospital. It requires a minimum of one night stay and occasionally two. You will arrive on the morning of the procedure. It is important to have read all information from the hospital regards fasting, preparation, etc. You should not eat or drink ANYTHING for SIX hours prior to admission to hospital. Usually this means from midnight the night before. If you have any doubt about taking normal medication, please ask your surgeon or anaesthetist.

Often, you will receive a pre-medication with a tablet called Pre-gabalin before the surgery. This may be given immediately prior to the surgery or in some cases it is prescribed for the week prior to the surgery. This medication helps reduce the risk of some specific types of post-operative pain.

The operation



The procedure involves cutting a nerve in the back of the chest cavity which stops the signal that tells the hands to sweat excessively.

The surgery is done under a general anaesthetic (asleep) and takes just over an hour. A special technique is used to allow one lung at a time to be deflated and allow a telescopic (key-hole) camera and instrument to be inserted into the chest.

The nerve is divided in two places using a diathermy probe. These two places specifically target the nerves that supply sweating to the hands and armpits and to a lesser extent, the face.

The lung is then re-inflated and a small tube left in the chest to allow any remaining air to escape.

The tube is often removed in the recovery room after surgery but may stay in place for 24hrs.

Several chest x-rays may be performed in the 24hrs post-surgery to check that the lungs have fully expanded.

The nurses will undertake regular observations to check you are recovering well and pain killers will be given as required.

It is normal to experience an immediate result from the surgery and you should wake with dry hands. One overnight stay is required and occasionally two.

Side effects. (side effects are common but not usually serious).

- **Rib tenderness.** It is normal to experience some pain at the site of surgery. Sometimes pain is also felt behind the sternum breast bone)
- **Surgical emphysema.** This is a bubbly or crackling sensation in the skin of the wall of the chest close to the operation site. This is painless but an unusual sensation. It is due to air leaking into the skin around the chest wound. It will almost always disappear after 2-3 days.
- **Arm/ shoulder pain.** This pain starts at around the 1st week and lasts until 5-6 weeks. It is a difficult to describe pain that affects the shoulder and inner upper arm area. It happens in about

half the patients having this surgery. It almost always resolves fully within 1-2 months. Specific pain killers may help improve or avoid this symptom.

- **Rebound sweating.** This is different to compensatory sweating which is described later. It is a sudden return of sweating of the hands after initial successful cessation of sweating after surgery. Don't Panic! It occurs on day 3 post operation and lasts for 24-48h. the sweating then goes away and doesn't come back. We are uncertain why this phenomenon occurs but see it in around 5% of people having surgery.

Complications (are uncommon but potentially serious)

- Immediate Surgical complications can be serious but are very uncommon. The most serious risks are **Lung injury** (pneumothorax) or **Blood vessel injury** (bleeding and haemothorax). In particularly severe cases these may require an urgent major operation on the chest to fix them and in exceedingly rare cases have been fatal.
- **Compensatory sweating**
Compensatory sweating (increased sweating in other parts of the body) is not uncommon following ETS and should be discussed in depth before undergoing the procedure. It is difficult to predict and can be extremely debilitating if it occurs.
- Horner's syndrome is drooping of the eyelid on the side of surgery and reduced ability of the pupil to dilate. Although a fully developed Horner's syndrome can be quite debilitating, it is uncommon after surgical sympathectomy for palm sweating and mild if it occurs. There is an increased risk in procedures done for facial sweating but this will be discussed by Dr Bond if such a procedure is planned.
- **Failure.** There is an approximate 5% Immediate failure rate of the procedure, even when carried out correctly and about a 5-10% long term failure rate.

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