HYPERHIDROSIS

What are the aims of this leaflet?

This leaflet has been written to help you understand more about hyperhidrosis. It tells you what it is, what causes it, what can be done about it, and where you can find out more about it.

What is hyperhidrosis?

Hyperhidrosis means excessive sweating. It can be localised or affect the whole body.

Sweating is controlled by the brain, which sends signals along nerves called “sympathetic nerves” to the small sweat glands in the skin. These nerves are part of the “autonomic nervous system” which controls many unconscious body functions.

Increased sweating is a normal response to a rise in body temperature, and to emotions such as anxiety.

A treatment which reduces sweating is called an antiperspirant. This is different from a deodorant, which reduces odour, usually through an antibacterial effect. The two are often combined in the same product.

What causes hyperhidrosis?

Localised symmetrical hyperhidrosis (primary hyperhidrosis) is the most common type of hyperhidrosis, this affects certain body sites *(localised)*, and both sides equally *(symmetrical)*. The palms, soles, under arm skin, face and scalp, or a combination of these, can be affected. The cause is not known. It usually begins in childhood or adolescence, and may improve with age. This type of hyperhidrosis is also called *focal* or *primary hyperhidrosis*.

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Generalised hyperhidrosis (affecting the whole body) can be caused by some illnesses including infections, and by hormonal conditions including the menopause, diabetes and an overactive thyroid gland. This type of hyperhidrosis is called *secondary hyperhidrosis*. Some medicines can also cause excessive sweating, including fluoxetine (Prozac) and similar antidepressants. Sometimes no cause can be found.

Disease or irritation of the sympathetic nerves is a rare cause of increased sweating, either generally or in localised areas (typically just on one side).

Anxiety can trigger or worsen hyperhidrosis, but this does not necessarily mean that the affected person is unusually anxious or stressed. Sometimes worry about sweating can create a vicious circle making the problem worse.

Is hyperhidrosis hereditary?

Hyperhidrosis is a feature of some rare inherited conditions. There is a trend for the common localised symmetrical type to run in families and up to a third of sufferers may have a family member with the condition.

What are the symptoms of hyperhidrosis?

Visible sweat, wet clothes and a clammy handshake can be embarrassing, and can interfere with work and personal relationships. Some people find hand sweating produces problems writing on paper, using keyboards, playing musical instruments and playing racquet sports.

Hyperhidrosis affects the water-producing ("eccrine") sweat glands, and not the "apocrine" sweat glands which produce the more oily type of sweat which causes odour, especially under the arms. Therefore bad odour is not a direct result of hyperhidrosis; however, if sweaty feet get soggy inside shoes, overgrowth of harmless skin bacteria can cause an unpleasant smell.

How will it be diagnosed?

Your doctor will assess which kind of hyperhidrosis you have. You might have tests for an infection, diabetes, thyroid overactivity or other conditions.

Can hyperhidrosis be cured?

When there is an underlying cause which can be treated, the hyperhidrosis can be cured. Surgical treatment can help some people, but is often

associated with serious side effects, so is not usually recommended unless other treatments have failed. Otherwise, the aim is to control the condition.

How can it be treated?

Most people suffering from hyperhidrosis will have tried commercial antiperspirants. If these fail, and if the sweating is bad enough to interfere with your work or social activities, you should ask your doctor for advice. The doctor will assess whether there might be an underlying cause, and may start treatment. If necessary you may be referred to a dermatologist.

Localised hyperhidrosis

- *Aluminium chloride* is the usual active ingredient in commercially available antiperspirants. Stronger preparations of aluminium chloride can be prescribed for excessive sweating, and are mostly used under the arms but can be used on the hands and feet. They should be applied at night only, to dry skin. However, sore red skin is a common problem. This can be reduced by making sure the skin is completely dry before applying the solution, by using hydrocortisone cream, and by using the treatment less frequently and then trying to build up. There are now newer aluminium chloride antiperspirants which contain aloe vera and cause less sensitivity.
- *Formalin solutions* harden the skin and can block the tubes leading from sweat glands to the skin surface. They are suitable only for the soles of the feet and not commonly used nowadays.
- *Solutions of the anticholinergic drug glycopyrrolate* can reduce sweating in localised areas such as the scalp and forehead. However, this is rarely available on the NHS in the UK.
- *Iontophoresis* is a method of passing a small electric current through areas of skin immersed in a dish of water. It is used for the armpits, palms and soles. It was originally developed as a way of getting glycopyrrolate into the skin. This can be effective, but can cause side effects. The same method using only water, without any added medication, is often helpful but without side effects. The treatment needs to be done regularly and lasts 10-20 minutes. Iontophoresis does tend to cause a tingling sensation; if this causes a problem then the current can be reduced. Equipment for home use can be bought for a few hundred pounds. Some hospitals offer a trial of the treatment so that you can see if it works for you.
- *Botulinum toxin* derived from bacteria (one brand name is “Botox”) can be injected into the skin in very small carefully controlled doses to block the action of the nerves which activate the sweat glands. This

treatment usually works very well, is quite widely available privately, but is only available in a few NHS centres in the UK. The effect usually lasts 2-6 months, although some patients may continue to benefit for 12 months, and the treatment can be repeated. Botulinum toxin is only licensed for underarm sweating and not for large areas. The skin can be numbed with an anaesthetic cream or injection, but this is often not needed as underarm skin is not very sensitive. Botulinum toxin is not commonly used in the palms and soles because it can cause temporary weakness of hand and foot muscles and is painful.

- Endoscopic thoracic sympathectomy may be considered for localised hyperhidrosis when other treatments have failed. It is most useful for severe hyperhidrosis of the palms and face. This is a major operation, performed under general anaesthetic and which carries a number of risks. These include nerve and lung damage during the surgery, as well as the risks of any general anaesthetic. In addition, many patients go on to develop compensatory sweating at other body sites. In a proportion of patients this is more severe than the original problem and is very difficult to treat. Careful selection and counselling of patients before surgery is essential.
- Other surgical methods apply only to the underarm skin, especially when only a small area is involved. They include the removal of a wedge of skin containing the overactive sweat glands, or the scraping away of the sweat glands from a flap of skin or from the underside of the skin through a small hole, which is then replaced.

Generalised hyperhidrosis is too widespread to treat with lotions, injections or surgery. However, some medicines taken as tablets can reduce sweating.

The most reliable are those which block the chemical signal between the nerves and the sweat glands. Propantheline is the only anticholinergic drug licensed for hyperhidrosis; however, although unlicensed, other anticholinergic drugs are widely used (such as oxybutynin and glycopyrrolate). Unfortunately, anticholinergics sometimes cause side effects including a dry mouth, blurred vision, tummy cramps, constipation, and difficulty in passing urine. They may be harmful for people with glaucoma and some other conditions. A small dose is used at first and gradually increased. Some people get relief from sweating before significant side effects occur, but for others the side effects begin before they reach a dose high enough to control sweating.

Self care (What can I do?)

If treatment is not possible or is unsuccessful, there are still a number of ways you can help yourself. You should try to avoid situations which you find trigger

your sweating, such as hot places or rushing about. Alcohol and spicy foods can also bring on an episode of hyperhidrosis.

Absorbent underlayers such as T-shirts can help hyperhidrosis of the body. Adhesive absorbent underarm pads for clothing are available on the internet. Loose fitting clothes made of natural fibres and leather shoes are beneficial. Changes of clothes may be necessary during the day. If your feet are the main problem, you may need to change socks and shoes during the day. You may be able to slip your feet out of your shoes even for short periods. You should have several pairs of daytime shoes so that each pair has a few days to dry out. There are many good, absorbent insoles available that will also help. It is best to avoid soap-based products and to use an emollient instead. Silver and copper socks are also helpful for many.

Where can I get more information?

Web links to detailed leaflets:

http://dermnetnz.org/hair-nails-sweat/hyperhidrosis.html

Links to patient support groups:

Hyperhidrosis Support Group (UK)
Web: www.hyperhidrosisuk.org

International Hyperhidrosis Society (USA)
Web: www.sweathelp.org

For details of source materials used please contact the Clinical Standards Unit (clinicalstandards@bad.org.uk).

This leaflet aims to provide accurate information about the subject and is a consensus of the views held by representatives of the British Association of Dermatologists: individual patient circumstances may differ, which might alter both the advice and course of therapy given to you by your doctor.

This leaflet has been assessed for readability by the British Association of Dermatologists' Patient Information Lay Review Panel

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