



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 parts of the brain which send signals along nerves to the small sweat glands in the skin. These nerves are part of the autonomic nervous system, which controls many unconscious body functions. Some of these functions, including sweating, are called sympathetic. (This is different from the everyday use of the word and does not suggest any emotional meaning).

Increased sweating is a normal response to a rise in body temperature, and to emotions like 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 is the commonest type of hyperhidrosis, this affects certain body sites (*localised*), and both sides equally (*symmetrical*). The palms, the soles, the skin under the arms, the face and scalp, or combinations of these can be affected. The cause of this type is not known. It often begins in the teens, and tends to improve slowly as you

get older. This type of hyperhidrosis is also called focal or primary hyperhidrosis.

Generalised hyperhidrosis (affecting the whole body) can be caused by some illnesses including infections, and by some 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 part of the sympathetic nerve pathway is a rare cause of increased sweating, either generally or in localised areas (usually on one side rather than both).

Anxiety can trigger or worsen hyperhidrosis, but this does not necessarily mean that the affected person is unusually anxious or stressed.

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.

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 a bad smell.

How will it be diagnosed?

Your doctor will assess which kind of hyperhidrosis you have. Depending on the type, 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 cure some people, but is often associated with side effects and is therefore considered only if other modalities 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 which are based on aluminium chloride or similar chemicals. If these fail, and if the sweating is bad enough to interfere with your work or social activities, you should ask your GP 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 specialist.

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 nerve and the sweat gland (anticholinergic drugs such as propantheline and glycopyrrolate). Unfortunately, anticholinergics also affect other body functions, resulting in unwanted effects including a dry mouth, blurred vision, tummy cramps, constipation, and difficulty in passing urine. They may be harmful for people with glaucoma. A small dose is used at first and gradually increased. Some people get relief from sweating before significant side effects occur, but for many the side effects begin before they reach a dose high enough to control sweating.

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. They should be applied twice daily for best effect. 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. These solutions are sometimes also useful on hands and feet.
- *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.

- *Solutions of the anticholinergic drug glycopyrrolate* can reduce sweating in localised areas. Enough may be absorbed to cause the unwanted effects mentioned above, but this is less common than with the tablets. Glycopyrrolate solutions are most likely to be effective for excessive sweating of the scalp and forehead.
- *Iontophoresis* is a method of passing a small electric current through areas of skin immersed in a dish of water, and is used mainly for the palms and soles. Pads for the underarms are now available with these machines. It was originally developed as a way of getting glycopyrrolate into the skin. This can be effective, but sometimes enough is absorbed to cause side effects. The same method using only water, without any added medication, is generally helpful too. Equipment for home use can be bought for a few hundred pounds. Some hospital clinics offer a trial of the treatment so that you can see whether 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. The effect usually lasts between two and six months, although some patients may continue to benefit for 12 months, and the treatment can be repeated. Botulinum toxin is most commonly used for underarm sweating, but it is not suitable for large areas. The skin can be numbed with an anaesthetic cream or injection, but underarm skin is not very sensitive and many people do not need this. Botulinum toxin is less commonly used in the palms and soles because it can cause temporary weakness of the hand and foot muscles and is painful to have administered.
- The *sympathetic* nerves which supply the sweat glands can be interrupted surgically, a method called *sympathectomy*. This treatment is used mainly for excessive sweating affecting the palms, where it works well but can leave the hands feeling hot and dry. A very common and more serious side effect is an increase in sweating in other body areas (*compensatory hyperhidrosis*) and is usually permanent and sometimes seems worse than the original condition. Sympathectomy is not used for hyperhidrosis of the feet because other nerves can be damaged.
- 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.

Self care (What can I do to help myself?)

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. 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. It is best to avoid soap-based products and to use an emollient instead.

Where can I get more information?

Links to patient support groups:

International Hyperhidrosis Society www.sweathelp.org

Hyperhidrosis Support Group www.hyperhidrosisuk.org

Other helpful information can be found at:

<http://dermnetnz.org/hair-nails-sweat/hyperhidrosis.html> (includes photographs)

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: its contents, however, may occasionally differ from the advice 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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