

Hyperhidrosis

What is hyperhidrosis?

Hyperhidrosis is the name given to excessive or uncontrollable sweating.

The main types of hyperhidrosis are:

- Axillary (sweaty underarms)
- Palmar (sweaty hands)
- Plantar (sweaty feet)
- Compensatory (rebound sweating)

Axillary (sweaty underarms)

What is axillary hyperhidrosis?

Axillary hyperhidrosis, or excessive underarm sweating, is a common condition affecting up to 3% of the population. Axillary hyperhidrosis usually starts in childhood or adolescence but some people first experience it as adults. The impact of this condition is often underestimated – it can affect work and social situations and may cause significant psychological distress. Fortunately, effective treatments are readily available

What causes axillary hyperhidrosis?

Many factors can contribute to axillary hyperhidrosis including genetic influences as well as physical and emotional stress. A family history is present in up to 30% of cases.

What does axillary hyperhidrosis look like?

It may be mild with occasional sweaty patches or severe with constant sweating throughout the waking hours of the day. Severe cases are very distressing and can significantly affect a person's quality of life.

Axillary hyperhidrosis is often associated with sweating elsewhere on the body including the hands (palmar hyperhidrosis), feet (plantar hyperhidrosis) and face (craniofacial hyperhidrosis).

How is axillary hyperhidrosis diagnosed?

The diagnosis is usually made based on a history of excessive sweating. No investigations are needed.

Further investigations are considered when larger areas of the body are affected or if hyperhidrosis occurs during sleep.

How is axillary hyperhidrosis treated?

The choice of treatment will depend on how severe the sweating is, affordability of treatment and whether a permanent solution is desired.

- ***Topical treatments***

Mild cases can respond to topical treatments such as aluminium chloride hexahydrate (Driclor).

Driclor should always be applied to skin that is as dry as possible in order to maximise the benefit and minimise potential side effects. Ideally, it should be applied just after a shower prior to bedtime. Dry the area off with a hairdryer on the cool setting then apply Driclor. Wash off the area first thing in the morning with plain water (no soap). If irritation develops, applying a corticosteroid cream intermittently can be useful (this needs to be used under the guidance of a health professional).

Anticholinergic creams such as glycopyrolate (0.5-3%) can also be effective. A compound pharmacist can make up these creams. Side effects are uncommon.

- ***Botulinum toxin type A (botox) injections***

Botox has been approved for treating severe cases in people who have had no improvement after two months using Driclor. It is effective in up to 95% of cases.

Treatment takes less than five minutes. Botox is injected into the areas of excessive sweating. It typically controls sweating for 4 to 7 months.

Side effects are exceedingly rare but include temporary pinpoint bleeding, bruising and redness in the injected sites. Individuals can resume normal activities after the procedure but exercise should be limited for 24 hours after treatment.

Under Medicare and PBS guidelines, up to 3 treatments are subsidised per year with a minimum of 4 months between treatments, provided patients meet eligibility criteria.

- ***Oral medication***

Anticholinergic tablets (such as oxybutynin and propantheline bromide) can be useful for axillary hyperhidrosis. However, side effects such as blurred vision, constipation, dry mouth and excessive drowsiness are common.

Other medications reported to be useful include glycopyrrolate orally (not available in Australia), propranolol, clonazepam and gabapentin.

Medication can be a viable short-term option for treating sweaty underarms for several days to weeks and give people a “break” from their sweating.

- ***miraDry***

This is a relatively new treatment option which uses microwave energy to heat and destroy the sweat glands. It is a non-surgical treatment performed under local anaesthetic in the doctor’s surgery for moderate to severe underarm sweating. Two treatments, spaced 3 months apart, may permanently reduce sweating by over 80%.

Some people will also have sweating in other areas of the body such as the hands,

feet and face but miraDry cannot be used to treat these areas.

- ***Endoscopic thoracic surgery***

Endoscopic thoracic sympathectomy (ETS) is a surgical treatment option for various forms of hyperhidrosis. It is conducted by a vascular or neurosurgeon under general anaesthesia. The main risk to be considered is the chance of compensatory or rebound hyperhidrosis, which may occur in 25-50% of cases. However, ETS is rarely considered as a treatment for axillary hyperhidrosis nowadays, due to other treatments such as Botox or miraDry having better results and safety profile.

What is the likely outcome of axillary hyperhidrosis?

Axillary hyperhidrosis tends to be a chronic condition, though the level of sweating may diminish in older adult life.

Palmar (sweaty hands)

What is palmar hyperhidrosis?

Palmar hyperhidrosis, or excessive hand sweating, is a common condition affecting 1-3% of the population. It usually starts in childhood or adolescence. Sweaty hands can significantly affect a person socially and emotionally.

What causes palmar hyperhidrosis?

Many factors can contribute to the condition, including genetic influences as well as physical and emotional stress. A family history is present in up to 30% of cases.

What does palmar hyperhidrosis look like?

Palmar hyperhidrosis affects both hands equally and can range from mild clammy hands to severe sweating. It stops when sleep.

What other problems can occur with palmar hyperhidrosis?

Most cases are not associated with an underlying illness. Sweaty hands can be associated with increased sweating in other parts of the body including underarms (axillary hyperhidrosis), face and scalp (craniofacial hyperhidrosis) and feet (plantar hyperhidrosis).

The condition can be very distressing due to its impact on quality of life.

How is palmer hyperhidrosis diagnosed?

The diagnosis is usually made based on a history of excessive sweating. No investigations are needed. Further investigations are considered when larger areas of the body are affected or if hyperhidrosis occurs during sleep.

How is it palmer hyperhidrosis treated?

Treatment will depend on how severe the sweating is and which previous treatments have been successful.

- **Topical treatments**

- Some mild to moderate cases can respond to topical treatments such as aluminium chloride hexahydrate (Driclor).

Driclor should always be applied to skin that is as dry as possible in order to maximise the benefit and minimise potential side effects. Ideally, it should be applied just after a shower prior to bedtime. Dry the area off with a hairdryer on the cool setting then apply Driclor. Wash your hands first thing in the morning with plain water (no soap). If irritation develops, applying a corticosteroid cream intermittently can be useful (this needs to be used under the guidance of a health professional).

Anticholinergic creams such as glycopyrrolate (0.5-3%) can also be effective. A compounding pharmacist can make up these creams. Side effects are uncommon. How often the cream is applied will depend on the individual.

- **Iontophoresis**

Iontophoresis may be considered for cases which do not respond to topical treatments. Treatments are individualised. The affected area is immersed in tap water, salty water or glycopyrrolate solution. Then a gentle electric current is passed across the skin surface for 10 to 20 minutes.

Glycopyrrolate iontophoresis has the highest success rate – up to 80% of affected people respond well to this treatment. The time between treatments will vary. Treatments will need to be repeated every 2 to 14 days.

- **Botulinum toxin type A (botox) injections**

- Botox injections can treat sweaty hands safely and effectively. However, the treatment is not subsidised under Medicare-PBS and the cost limits its wider use.

Most treatment is performed under a nerve block. Approximately 100 units of botox will be needed in each hand. The treatment is usually effective for 3 to 5 months. Side effects include temporary muscle weakness.

- **Oral medications**

Anticholinergic tablets (such as oxybutynin and propantheline bromide) can be useful in treating palmar hyperhidrosis. However, side effects such as constipation, dry mouth and drowsiness are common.

Other medications reported to be useful include oral glycopyrrolate (not available in Australia), propranolol, clonazepam and gabapentin.

Medications can be a viable short-term option for several days to weeks and give people a “break” from their sweating.

- **Surgery**

Endoscopic thoracic sympathectomy (ETS) is a surgical treatment option for various forms of hyperhidrosis. It is conducted by a vascular or neurosurgeon under general anaesthesia. It has a very high success rate for treating palmar hyperhidrosis but carries a significant risk of compensatory or “rebound” sweating. Compensatory sweating occurs in areas such as the back or lower limbs weeks to months after ETS surgery. Compensatory hyperhidrosis can be difficult to treat and usually persists for life.

An in-depth discussion with your vascular surgeon or neurologist is needed prior to considering ETS

surgery.

What is the likely outcome of palmar hyperhidrosis?

Palmar hyperhidrosis will often need ongoing and persistent treatment. However, some people may notice the amount of sweating decreases as they get older.

Plantar (sweaty feet)

- **What is plantar hyperhidrosis?**

Plantar hyperhidrosis is a common condition affecting 1-3% of the population. The condition usually starts in childhood or adolescence. It can cause significant physical limitations and predispose to bacterial and fungal infections and friction blisters.

What causes plantar hyperhidrosis?

Many factors can contribute to plantar hyperhidrosis including genetic influences, as well as physical and emotional stress. A family history is present in up to 30% of cases.

What does plantar hyperhidrosis look like?

Plantar hyperhidrosis affects both feet equally. The condition can range from mild sweating through to severe constant sweating, but which stops when asleep.

What other problems can occur with palmar hyperhidrosis?

Plantar hyperhidrosis can occur on its own or in combination with other conditions. Severe cases can lead to infections such as tinea pedis, pitted keratolysis and other bacterial infections.

The condition can be very distressing due to its impact on quality of life.

Plantar hyperhidrosis can also be associated with increased sweating in other parts of the body including underarms (axillary hyperhidrosis), face and scalp (craniofacial hyperhidrosis).

How is plantar hyperhidrosis diagnosed?

Most cases are not associated with an underlying illness. The diagnosis is usually made based on a history of excessive sweating. No investigations are needed.

When there is evidence of tinea or bacterial infection a skin scraping and bacterial swab may be needed. Depending on the results, an anti-fungal or antibiotic cream or tablet may be recommended.

Further investigations are considered when excessive sweating affects larger areas of the body or if hyperhidrosis occurs during sleep.

How is plantar hyperhidrosis treated?

- **General measures**

The use of absorbent inner soles (summer soles) can help preserve your shoes. Double layered white cotton socks can help soak up excessive sweating. Changing socks frequently can help reduce the incidence of infections. The use of talc and powders can also help absorb excessive sweating. Shoe driers can help increase the lifespan of your shoes.

- **Topical treatments**

- Mild cases of plantar hyperhidrosis can respond to topical treatments such as aluminium chloride hexahydrate (Driclor). Driclor should always be applied to skin that is as dry as possible in order to maximise the benefit and minimise potential side effects. Ideally, it should be applied just after a shower prior to bedtime. Dry the area off with a hairdryer on the cool setting then apply Driclor. Rinse your feet first thing in the morning with plain water (no soap). If irritation develops, applying a corticosteroid cream on alternate days can be useful (this needs to be used under the guidance of a health professional).

Anticholinergic creams such as glycopyrrolate (0.5-3%) may be effective in managing plantar hyperhidrosis. A compounding pharmacist can make up these creams. The skin will absorb more cream if a foot scrub is used first.

- ***Iontophoresis***

Iontophoresis may be considered for cases which do not respond to topical treatments. Treatments are individualised. The affected area is immersed in tap water, salty water or glycopyrrolate solution. Then a gentle electric current is passed across the skin surface for 10 to 20 minutes.

Glycopyrrolate iontophoresis has the highest success rate – up to 80% of affected people respond well to this treatment. The time between treatments will vary. Treatments will need to be repeated every 2 to 14 days.

- ***Botulinum toxin type A (botox)***

Botox injections can treat sweaty feet safely and effectively. However, the treatment is not subsidised under Medicare-PBS and the cost limits its wider use.

Botox treatment is usually performed under a nerve block. The amount of botox needed depends on the size of the feet. Usually 130 to 200 units of botox are needed in each foot.

The treatment is usually effective for 3 to 4 months.

Side effects include temporary muscle weakness.

- ***Oral medication***

Anticholinergic tablets (such as oxybutynin and propantheline bromide) can be useful for plantar hyperhidrosis. However, side effects such as blurred vision, constipation, dry mouth and excessive drowsiness are common.

Other medications reported to be useful include oral glycopyrrolate (not available in Australia), propranolol, clonazepam and gabapentin.

Medication can be a viable short-term option for treating sweaty feet for several days to weeks and give people a “break” from their sweating.

- ***Surgery***

- Endoscopic thoracic sympathectomy is not a treatment option for plantar hyperhidrosis.

What is the likely outcome of plantar hyperhidrosis?

Plantar hyperhidrosis will often need ongoing and persistent treatment. However, some people may notice the amount of sweating decreases as they get older.

Compensatory (rebound sweating)

Also known as rebound sweating, post endoscopic thoracic sympathectomy (ETS) sweating, paradoxical sweating, reflex sweating

What is compensatory hyperhidrosis?

Compensatory hyperhidrosis is a common, post-surgical complication of endoscopic thoracic sympathectomy (ETS surgery).

The condition occurs mainly on the trunk and can affect large areas of the body.

What causes compensatory hyperhidrosis?

Compensatory hyperhidrosis most often occurs after ETS surgery. It generally occurs in areas such as the back or lower limbs, weeks to months after the operation.

Compensatory hyperhidrosis can also occur because of nerve damage in conditions such as diabetes, brain injury and syringomyelia. It is sometimes called “phantom sweating” in nerve damage following accidents and amputation surgery.

Compensatory hyperhidrosis has been reported following botox (botulinum toxin A) injections for axillary hyperhidrosis. However, it is extremely rare and usually resolves within 4 to 6 months.

What does compensatory hyperhidrosis look like?

The areas affected can be small or large. The most frequently affected areas include the chest, flanks, abdomen and back. The lower limb and buttock areas can also be involved.

What other problems can occur with compensatory hyperhidrosis?

Most cases of compensatory hyperhidrosis occur as the result of ETS surgery. Other rare causes include:

- Diabetes
- brain injury
- spinal cord disease
- limb amputation.

How is compensatory hyperhidrosis diagnosed?

The diagnosis is made when there is a clear history of ETS surgery prior to the presentation of sweating.

How is compensatory hyperhidrosis treated?

Compensatory hyperhidrosis can be difficult to treat. The chosen method of treatment will depend on how localised and severe the sweating is.

- ***Topical treatments***

Mild cases can respond to topical treatments such as aluminium chloride hexahydrate (Driclor). Driclor should always be applied to skin that is as dry as possible in order to maximise the benefit and minimise potential side effects. Ideally, it should be applied just after a shower prior to bedtime. Dry the area off with a hairdryer on the cool setting then apply Driclor. Wash the area with plain water in the morning. If irritation develops, applying

a corticosteroid cream can be useful (this needs to be used under the guidance of a medical professional).

Anticholinergic creams, lotions and sprays such as glycopyrolate (0.5-3%) can be effective in managing compensatory hyperhidrosis. A compounding pharmacist can make up these creams.

- ***Botulinum toxin type A (botox) injections***

Botox injections can be used safely and effectively to treat certain, localised cases of compensatory hyperhidrosis or rebound sweating. This treatment is not subsidised under Medicare-PBS.

- ***Oral medication***

Anticholinergic tablets (such as oxybutynin and propantheline bromide) can be useful in treating compensatory hyperhidrosis. However, side effects such as constipation, dry mouth and drowsiness are common.

Other medications reported to be useful include oral glycopyrrolate (not available in Australia), propranolol, clonazepam and gabapentin.

Taking medications for a few weeks can give people “a break” from the psychological and physical distress of compensatory sweating.

What is the likely outcome of compensatory hyperhidrosis?

Compensatory hyperhidrosis will often need ongoing and persistent treatment. However, some people may notice the amount of sweating decreases as they get older.