PRINTZLAU

PRIVATHOSPITAL

Information on sweat reductive surgery

Who is eligible for sweat reductive surgery?

Humans sweat all over the body. The face, the palms, the armpits, and the groin are areas with increased sweat tendency. The surgical treatment mainly revolves around the arm pits. There are, however, also a surgical treatments that can reduce sweating (and tendency to blush) in the face and the sweat tendency of the palms. During such a surgery, the chest cavity is accessed with keyhole surgery, and the sympathetic trunk is severed, sympathectomy. This stops the nerve signal to the sweat glands (and blood vessels). This type of surgical treatment is performed only by neurosurgeon and thoracic surgeons, and is not offered by Printzlau Privathospital.

Some patients have issues with recurring infection of the sweat glands. This is a condition on its own that has no connection to increased sweating. This condition is called hidrosadenitis suppurativa, and in some cases, it can treated by surgically removing the affected area.

The social stress of increased sweating is very individual. In part, the nature of your job may further add to the complications of accepting increased sweating, but there is also a psychological element in having consciousness of the sweating which might further worsen the problem. Sweating is stimulated by the sympathetic nervous system, which means that the thought of the inconvenience of sweating may actually increase sweating.

The other way around, sweating can be reduced through psychological guidance and mastering good coping skills. Sweating problems may seem very overwhelming during a sensitive

period of your life but completely indifferent later on. Therefore, we recommend patients to consider waiting to have surgery and instead work with the psychological part of the problem for a while, especially for younger patients.

Surgical treatment of increased sweating in the armpits is only available to people for whom medical antiperspirants have not been able to provide relief, and if the substantial sweating is a big social burden on a daily basis. Surgical treatment should only be offered if you feel the need to change your clothes during the work day.

Antiperspirant is different from deodorant in that it reduces sweating while deodorant merely reduces the smell. Before considering surgical treatment, you should try out stronger medical antiperspirant (aluminum chloride). Your general practitioner or a dermatologist will be able to advise you.

Temporary sweat reduction in the armpits and in other areas on the body can be achieved with botox injections. This may be well-suited for you if you experience the increased sweating as especially troublesome in shorter periods of your life. Botox treatment must be repeated with 3 – 9 months in between.

How is a sweat reductive surgery carried out?

Surgically removing the armpit

This used to be the most common surgical method of removing sweat problems in the armpits. The method is still used in difficult cases, where less invasive methods have not had the desired effect, or for patients that suffer from reoccurring infection of the sweat glands (hidrosadenitis suppurativa). In this surgery, the entire hair-bearing area is removed which also removes the area with the highest concentration of sweat glands. If the hairy area is large, it is necessary to replace the skin in the armpit in order to cover the defect. This surgery has a very high risk of complications, bad healing and discomfort from scarring. For this reason, we advise to initially consider less invasive surgical treatments. The advantage to the surgery is that sweating disappears completely (as long as the entire armpit is removed). The surgery is performed on one armpit at a time. The surgery is performed under local anesthesia but full anesthesia is recommended if redistributing of the skin around the arm

pit area is necessary.

Open removal of the sweat glands

Through a long incision in the armpit - or two short ones - the skin can be loosened from the deeper tissue and the inside of the skin can be accessed. Then, a large part of the sweat glands can simply be cut off with a scissor. This surgery cannot remove all the sweat glands, and some sweating will return. The risk of complications is considerably lower with this surgery than when removing the entire armpit, but the surgery still leaves a scar in the armpit.

The surgery is done on one armpit at a time and can be performed under local or general anesthesia.

Subdermal curettage, closed removal of the sweat glands

Through 2 small incisions of about ½ cm special syringes similar to those used for liposuctions can be inserted. With this method the sweat glands can be removed with suction. This surgery does not remove all of the sweat glands either, and some sweating will return. The risk of complications is lower than with the two other surgeries, which is why this method is recommended initially. Both armpits are treated simultaneously, and the surgery can be performed under local anesthesia.

The course from first consultation to follow-up

First consultation

During your first consultation, the plastic surgeon will consult with you based on your wishes and expectations to the surgery in regards to possibilities and limitations. It is important that you have sought out other forms of treatment before you proceed with surgery. Your armpits are examined to evaluate if there is any tendency for infection or signs of previous infection in the armpit. You will receive information about what is realistic to expect after the surgery and what consequences and risks the surgery may entail.

As a private patient you have the right to bring an assessor with you to your consultation, and we advise you do so. This provides you with an opportunity to discuss pros and

cons for the surgery even after you have returned home. Danish legislation on “cosmetic treatment” requires that you wait a minimum of seven days from your first consultation before you can make an appointment for the desired surgery. This serves to protect you by preventing any impulsive or rash decisions to undergo cosmetic surgery. Patient referred from a public hospital are not bound by this legislation, but are advised to take the same precautions.

The surgery

For this surgery, you will be admitted to the hospital for a shorter period of time, but you will return to your home later in the day of the surgery. Before any surgery under full anesthesia you are to be fasting for a minimum of 6 hours before the surgery, but you can drink water up until 2 hours before the surgery.

When you arrive, the nurse in the hospital ward will greet you, validate your identity and show you your room. The anesthesiologist will explain the anesthesia to you, and your plastic surgeon will make the guiding marks on your body and ensure that you agree and consent to the plan.

If the surgery is carried out under local anesthesia, you are of course awake and can follow the process. The surgery begins with the injection of local anesthesia. If the sweat glands are removed with subdermal curettage, additional liquid is injected under the skin, similar to the process of liposuction surgery. After about 10 minutes, the suction and removal of the sweat glands is performed. Next, the surgical staff proceeds to the other armpit. With the other types of sweat reduction surgeries, only one armpit is operated on during the surgery.

When the surgery is over, a light compression bandage is put on. The type of bandage is dependent of the type of surgery.

After the surgery

After the surgery you are transferred to the recovery room where the anesthetist nurse and the anesthesiologist will observe you until you are fully awake. Your heart rate and blood pressure is monitored, and pain-relieving treatment is initiated. Nausea can also be treated

if needed. When you are fully awake you are escorted back to your room in the ward. The plastic surgeon then comes to see you and inform you about the course of the operation. Either you will be ready for discharged directly from the recovery room, or you will be transferred to the hospital ward until you are ready to leave.

The compression bandage should be worn for 4 days after the surgery. After 4 days, you can do careful exercises to begin stretching the armpits. The nurse will instruct you on how to do the exercises before you return to your home.

After 14 days, you are scheduled to see the nurse for a follow-up and for removal of the stitches. With the two less invasive techniques you will experience a remarkable decrease in sweating right after the surgery. After some time, some of the sweating will return.

Follow-up

A follow-up consultation is scheduled for you 3 months after the surgery. At this point, the final results of the surgery can be evaluated.

Subsequent effects

Scars

With subdermal curettage the scars are very small, typically between 5-7 mm. During the first 3 months the scars are red and swollen before they slowly begin to lighten and flatten. The more invasive surgeries, leave longer scars, and when removing the armpit there may be scars outside of the armpit. The scars can cause the armpit to tighten which can cause discomfort when the shoulder is stretched all the way up. . It may be a full 2 years before the final result of the scars can be assessed.

Loss of sensitivity

It is common to experience decreased sensitivity in the armpit after the surgery. This can be very bothersome, especially right after the surgery. Over time, the sensitivity somewhat normalizes.

Complications

Bleeding and fluid retention(1%)

The compression bandages are put on to help prevent bleeding and fluid accumulation and edema. If fluid or blood accumulated under the skin, it may impair healing process. In rare cases, this needs to be treated with puncture and drainage or with surgery.

Poor healing (2%)

The armpit is an area with a lot of movement and moist heat, which is associated with the risk of poor healing, especially when removing the entire armpit. This is not a problem for the more gentle surgical techniques.

Infection (1%)

Infections after a subdermal curettage are very rare. In most cases it is a superficial infection of one of the smaller scars which can be treated with local care and antibiotics. In rare cases the infections can spread which makes it necessary to open up or to drain the infection. In these cases, the infection may cause poor healing.

Insufficient effect

It is difficult to measure sweat secretion. Because of this, the evaluation of increased sweating relies on your personal experience of the sweating and the issues related to it For the same reason it is hard to measure the effect of the different treatments. This means that for all treatments in which all the sweat glands are not fully removed, there is a risk that the result will be insufficient to the patient, as the sweating will still be potent enough to be the cause social problems.

If a subdermal curettage has been performed, the only possibility left to further improve conditions is to proceed with a removal of the entire hair bearing area of the armpit.

Dead tissue (necrosis) (<1%)

The blood circulation in the skin of the armpit can be disturbed by bleeding or infections that cause necrosis (dead tissue). In that case, a second surgery has to be carried out to remove the dead tissue or transplant new skin to the area. This will ruin the cosmetic result of the surgery.

Durability

As mentioned, the less invasive surgical techniques will reduce but not completely remove sweating. The sweat reduction achieved after 3 months can be seen as permanent.