Understanding Sweat

Sweat glands are small tubular structures in the skin that secrete sweat onto the skin via a duct. Eccrine sweat glands are distributed throughout almost the entire human body and they secrete directly onto the surface of the skin. Apocrine sweat glands are ten times larger than eccrine sweat glands. They are localized in the axilla (underarms) and perianal areas. Rather than directly opening onto the skin surface, these glands secrete sweat into the pilary canal of the hair follicle.

What is Hyperhidrosis?

We all sweat. It’s the body’s way of cooling itself and preventing ourselves from overheating. People living with hyperhidrosis, however, sweat when the body doesn’t necessarily need cooling. Their sweat is excessive, often visible to others and usually occurs without physical exertion or extreme heat.

There are two different types of hyperhidrosis - primary (also known as focal hyperhidrosis) and secondary hyperhidrosis. Primary hyperhidrosis often begins in childhood or adolescence and affects localized areas of the body, including the hands, feet, underarms or face. The condition may be inherited and many members of the same family may suffer from hyperhidrosis. Sometimes excessive sweating can be caused by another medical condition or is a side effect of a medication, so it’s important to speak to a dermatologist to understand the symptoms and causes.

Secondary hyperhidrosis is a type of excessive sweating that is caused by another medical condition or is a side effect of a medication. Secondary hyperhidrosis begins in adulthood, often can affect the entire body (vs. localized areas) and present symptoms during sleep.

Anxiety and Embarrassment Associated with Hyperhidrosis

Research shows that hyperhidrosis is associated with increased prevalence of anxiety and depression. Understandably, excessive sweating can be embarrassing and interfere with every day activities at school, work and other social situations. People who suffer from excessive sweating constantly worry about how much their sweating and spend hours each day dealing with sweat.

What Causes Us to Sweat?

The main reason we sweat is to control our body temperature. Sensors in our skin can detect changes in temperature and relay signals to our brain when we exercise or when it is hot outside. In turn, our brain signals the sweat glands that it’s time to start producing sweat. As sweat evaporates from the skin, it has a cooling effect on the body.

In people with hyperhidrosis, it is believed that overstimulation of nerve fibers in sweat glands causes excessive sweating.

Did You Know?

While many people don’t initially talk to their doctor about excessive sweating, more than 15 million people in the United States have hyperhidrosis.
Hyperhidrosis Treatment Options

There are many different ways to treat hyperhidrosis. Treatments can include:

- **Antiperspirants**
  A solid, gel or spray substance that is applied to the underarms, hands, feet or hairline. Antiperspirants form a gel plug, which will block the duct of a sweat gland, preventing sweat from reaching the surface of the skin. Antiperspirants, available in regular, clinical and prescription strength, are usually a dermatologist’s first treatment recommendation.

- **Thermolysis**
  Using targeted microwaves or lasers, this treatment causes the destruction of sweat glands through localized heating.

- **Iontophoresis**
  A medical device that sends an electric current through water to disrupt the activity of sweat glands in the hands or feet. The at-home device requires the hands or feet to be immersed in a shallow pan of tap water while a low-voltage current runs through the water.

- **Prescription Medications**
  Prescription medications look to inhibit the signaling pathway of sweat glands and block the body’s ability to produce sweat in localized areas or temporarily block the chemical signaling that stimulates sweat glands. These take many forms including topical products, a series of multiple injections or shots of medication and oral medications.

- **Surgical Procedures**
  An operation to surgically remove the sweat glands from the underarms or palms of the hands. Because surgery is permanent and carries risks, it is usually only considered when other treatments fail to bring relief to excessive sweating.

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**References:**


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