



A modern SweatTech™ approach for hyperhidrosis (excessive sweating)

Approximately 4.8% of Americans (15.3 million) report having hyperhidrosis, and about two-thirds of them (~10 million) experience sweating under the arms, the most frequently reported site.¹ However, many hyperhidrosis experts believe these numbers are an underestimation because the condition is underreported and underdiagnosed.¹ In fact, the International Hyperhidrosis Society (IHHS) estimates one in three U.S. adults (85.2 million^{2,3}) are bothered by their excessive underarm sweating.²

Candesant Biomedical is a clinical stage company dedicated to the development and commercialization of non-invasive treatments for excessive sweating. Focused first on axillary hyperhidrosis (excessive underarm sweating), Candesant has developed a novel, single-use, disposable sweat control patch designed to be applied by a health care provider. The investigational sweat control patch consists of a sodium sheet with an adhesive overlay. Its mechanism of action utilizes Candesant's patented SweatTech™ technology, which is based on the scientific principle that heat is generated when sodium comes in contact with water in sweat. The thermal energy created by the sweat control patch is precisely localized, microtargeting sweat glands to significantly reduce sweat production. Candesant's investigational sweat control patch is the first clinical application to harness and target this well-established scientific principle, and is the only patented medical device based on it.^{4,5} Clinical studies show that the sweat control patch significantly reduces sweat, and is well tolerated, with no serious adverse events reported at any time by any study participant.⁶ The patch is currently undergoing review by the U.S. Food and Drug Administration.

Founded in 2016, Candesant is led by President and CEO Niquette Hunt – an entrepreneur and successful executive with over 25 years of general management experience and extensive experience in medical aesthetics and consumer marketing. Hunt, along with Candesant's leadership team, has been focused on developing and commercializing innovative treatments to control sweat for decades.

SweatStress: The unseen impact of excessive sweat

Excessive sweating can affect people in many and often significant ways. Some of these impacts are physical and can be seen, but others are invisible. The social, emotional, financial, and aesthetic toll of excessive sweating can hinder quality of life for those affected. New solutions are needed to help people control sweat and reduce the impact it has on their lives.

SweatTalks: Excessive sweat speaks volumes without words

Excessive sweating causes those affected to change behaviors, and may even affect how they are perceived by others. It is important everyone with excessive sweating speak with their health care providers about their personal experience and potential sweat control solutions that may be on the horizon.

To learn more about the impacts of excessive sweating and how Candesant is working to modernize sweat control, visit: **candesant.com**



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1. Doolittle J, Walker P, Mills T, et al. Hyperhidrosis: an update on prevalence and severity in the United States. Arch Dermatol Res 308, 743-749 (2016). <https://doi.org/10.1007/s00403-016-1697-9>. 2. International Hyperhidrosis Society. IHHS sweat survey reveals many are suffering in silence. Sweat Solutions. September-October 2008: 1-4. 3. Ogunwale SU, Rabe MA, Roberts AW, Caplan Z. Population Under Age 18 Declined Last Decade. August 12, 2021. Available: [https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html#:~:text=In%2020%2C%20the%20U.S.%20Census,from%20234.6%20million%20in%202010](https://www.census.gov/library/stories/2021/08/united-states-adult-population-grew-faster-than-nations-total-population-from-2010-to-2020.html#:~:text=In%2020%2C%20the%20U.S.%20Census,from%20234.6%20million%20in%202010.). Accessed Mar 7, 2023. 4. Kaufman J, Green JB, Cazzaniga A, Cauty DJ, Tims E, Waugh J. A Pilot Study of the Safety and Effectiveness of a Novel Device in Subjects With Axillary Hyperhidrosis. Dermatol Surg. 2022;48(11):1220-1225. doi:10.1097/DSS.0000000000003598. 5. Waugh JM, Elkins C, Rhee H, inventors. Candesant Biomedical, Inc., assignee. Medical devices for generating heat and methods of treatment using same. U.S. Patent 2021:11:425. 6. Glaser DA, Green L, Kaminer M, Smith S, Pariser D. Outcomes from the SAHARA Clinical Study on the TAT Patch for Excessive Axillary Sweating or Primary Axillary Hyperhidrosis (abstract). Late-breaking oral presentation at: American Academy of Dermatology annual meeting; March 17-21 (presented March 18, 10:10 am CT), 2023; New Orleans, Louisiana.

Sweating Through the Decades:

How SweatTech[™] has evolved^{1,2}



600 BCE

Egyptians regularly used **plants and food** to create perfumes that mask or alter odors.



1760 – 1840

During the Industrial Revolution, **perfume** became less expensive and more widely available for the masses to mask or alter odors.



1860 – 1880

In 1867, the first U.S. patent for deodorant was issued to **Henry D. Bird** of Petersburg, VA. The active ingredient was ammonium chloride.



1888

The first trademarked deodorant was launched called **Mum®**. It used the antiseptic **zinc oxide**.



1903

The first trademarked antiperspirant was launched called **Everdry™**. This was the first use of the now commonly used **aluminum chloride**.



1912 – 1919

Edna Murphey from Cincinnati, OH began commercializing an antiperspirant, **Odorono®**, created by her surgeon father and which could stain clothing red. Advertising for Odorono is credited as the first to openly discuss excessive sweating as an embarrassing medical condition that requires intervention. Most topical treatments used **aluminum salts**, particularly **aluminum chloride hexahydrate**.



1920s – 1930s

In 1920, **Anastas Kotzareff**, a doctor in Greece, successfully used **endoscopic thoracic sympathectomy (ETS)** to treat excessive sweating of the face. This surgery severs nerve fibers to stop sweating.



1939

The first modern **antiperspirant**, developed by chemist **Jules B. Montenier**, could be applied directly on the underarm and included **solvents** that reduced acidity, thereby reducing irritation.



1950s – 1960s

Developments during this time included **roll-on** and **aerosol spray** options, both of which dried quickly on the skin. The 1950s and 1960s were also when many physicians started using **oral anticholinergic medications** off-label to treat excessive sweating.



1968

The first known use is reported of **iontophoresis** – where a medical device passes a mild electrical current through water and the skin's surface to reduce excessive sweating.



1970s – Present

The U.S. FDA banned the active ingredient used in aerosols, **aluminum zirconium**, due to safety concerns over long-term inhalation. From then until the present, more options were developed using newer ingredients or formulations to reduce excessive sweat. Aluminum chlorohydrate and **aluminum zirconium tetrachlorohydrate glycine** have become the most frequent active ingredients in commercial antiperspirants.



2004

In the United States, **botulinum toxin injections (onabotulinumtoxinA; Botox®)** are approved for the treatment of severe **primary axillary hyperhidrosis (excessive underarm sweating)**.



2011

MiraDry® was cleared in the United States for the treatment of **primary axillary hyperhidrosis (excessive underarm sweating)**. The treatment uses **microwave energy** to destroy the sweat glands.



2018

Qbrexza® was approved in the United States as a topical anticholinergic for the treatment of **primary axillary hyperhidrosis (excessive underarm sweating)**.



The Future

Candesant® Biomedical is a private medical device company focused on the development of non-invasive treatments for hyperhidrosis or excessive sweating. Candesant has developed the first investigational sweat control patch utilizing its patented SweatTech technology for the treatment of primary axillary hyperhidrosis or excessive underarm sweating. The company is also exploring future potential indications, including facial hyperhidrosis, palmar hyperhidrosis, and plantar hyperhidrosis.

SweatTech is evolving. To find out more about the evolution of SweatTech and the latest advances, visit: www.Sweat.Tech

1. Everts S. *The Joy of Sweat: The Strange Science of Perspiration*. 2021: W. W. Norton & Company, Inc.; New York, NY).

2. Lee K YC, Levell N J. Turning the tide: a history and review of hyperhidrosis treatment. *JRSM Open*. 2014 Jan; 5(1): 2042533313505511.