



Figure. (Left) Lucja Frey (1889 to 1942[?]). This photograph is from a document Frey completed in September 1941, which was used by German authorities to issue work permits in occupied Poland. (With permission of the U.S. Holocaust Memorial Museum). (Right) Figure used to illustrate Frey's description of the auriculotemporal syndrome (Frey L. *Le syndrome du nerf auriculo-temporal*. *Rev Neurol (Paris)* 1923;II:97-104. With permission, Masson, Paris, 1923).

VIDEO Gustatory sweating: Frey syndrome

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One year after resection of a parotid neoplasm, a 44-year-old man developed sweating over the left side of the face while eating (see video). He had to continuously dab his face with a cloth during a meal. He has been treated successfully with botulinum toxin. Gustatory sweating, known as Frey syndrome,¹ results from misdirected regeneration of parasympathetic fibers normally innervating salivary glands onto sympathetic receptors innervating sweat glands following injury to the auriculotemporal nerve. As a result, stimuli that cause salivation, such as eating, the aroma of food, or even the thought of food, simultaneously cause pathologic sweating in the preauricular area on the side of injury to the facial nerve. Local injection of botulinum toxin to the region of involved sweat glands is an effective treatment for gustatory sweating as it inhibits the presynaptic release of acetylcholine, the neurotransmitter that innervates sweat glands.^{2,3}

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The Polish neurologist Lucja Frey was not the first to describe gustatory sweating but she is credited with its first complete description (figure).¹ Frey received her medical diploma from the University of Warsaw in 1921 and subsequently worked in the neurologic clinic, publishing 43 articles between 1923 and 1928.⁴ She was described as "extraordinarily modest, quiet and as hard working as an ant."⁴ In 1928 she returned to her hometown of Lwow as deputy senior consultant at the Jewish Hospital. After German occupation, she practiced in the Lwow ghetto. Details about her death are not available, but she was a victim of the Holocaust, likely killed in 1942 along with 400 other members of the medical staff, or shortly thereafter, cutting short her promising career.⁴

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