

## SPECIAL REVIEW

# Marathon of eponyms: 6 Frey syndrome (Gustatory sweating)

C Scully<sup>1</sup>, J Langdon<sup>2</sup>, J Evans<sup>1</sup>

<sup>1</sup>University College London, London, UK; <sup>2</sup>Kings College London, London, UK

The use of eponyms has long been contentious, but many remain in common use, as discussed elsewhere (Editorial: Oral Diseases. 2009; 15; 185). The use of eponyms in diseases of the head and neck is found mainly in specialties dealing with medically compromised individuals (paediatric dentistry, special care dentistry, oral and maxillofacial medicine, oral and maxillofacial pathology, oral and maxillofacial radiology and oral and maxillofacial surgery) and particularly by hospital-centred practitioners. This series has selected some of the more recognized relevant eponymous conditions and presents them alphabetically. The information is based largely on data available from MEDLINE and a number of internet websites as noted below: the authors would welcome any corrections. This document summarizes data about Frey's syndrome.

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## Also known as

Auriculo-temporal syndrome  
Baillarger syndrome  
Dupuy syndrome  
Frey–Baillarger syndrome  
Gustatory sweating

## The condition

Frey syndrome is characterized by warmth, flushing and sweating of the face in the territory of the facial nerve. It is initiated by any gustatory stimulus, such as thinking or talking about food, or by eating foods that produce a strong salivary stimulus. Flushing is more prevalent in females, sweating in males. The diagnosis is confirmed either by applying an oral stimulus, such as lemon, or by a positive starch-iodine test (a test for sweating in which

iodine in oil is painted on the skin, followed by dusting with a starch powder which turns blue-black in the presence of iodine).

Frey syndrome may follow damage in the parotid region by, for example, trauma, infection, parotid surgery or temporomandibular joint surgery. It has also been recorded after submandibular gland surgery, thoracic sympathectomy (used to treat hyperhidrosis), thyroidectomy, neck dissection and carotid endarterectomy. It is postulated that, after damage, regenerating autonomic fibres to salivary glands connect in error with the sweat glands. Onset is usually 12–18 months following the surgery or injury, but may be delayed for several years. Some cases are congenital and probably due to birth trauma. The term 'auriculotemporal syndrome' is misleading, as the skin innervated by the greater auricular nerve, the lesser occipital nerve, the long buccal nerve or any cutaneous branch of the cervical plexus may be involved. Frey syndrome can persist for life. Historically, treatment was with topical hyoscine as ointment or patch, topical glycopyrrolate or alcoholic solution of aluminium hydroxide. Systemic clonidine, oxybutynin chloride or propantheline bromide have also been used, as has tympanic neurectomy. None of these treatments has proved reliably successful and currently the most effective treatment is the subcutaneous infiltration of botulinum toxin in the affected area.

## Background to eponym

The first description of unilateral gustatory hyperhidrosis was in 1757 by M. Duphenix, a French surgeon, and about a century later by Jules-Gabriel-François Baillarger, a French neurologist and psychiatrist.

In 1923, Frey tried to explain the unusual physiological phenomena and used the term 'auriculotemporal syndrome'.

## The main person

Lucja Frey was born on 3 November 1889, in Lwów (Lemberg), Poland, now Lviv in Ukraine. She initially read philosophy at the University of Lemberg, changed to mathematics and then went to Warsaw in 1917 to

study Medicine, qualifying in 1923. She worked as an assistant to Professor Kazimierz Orzechowski, first at Lwów, later at the neurological clinic, Warsaw, until 1928. She described the condition in 1923. Her index patient was a Polish soldier who suffered a gunshot wound at the left angle of the mandible. She married and assumed the name Lucja Frey-Gottesman and from 1929 was deputy physician-in-chief at the prestigious Jewish Hospital in Lwów. In 1939, the Germans occupied Lwów and Lucja Frey was 'resettled' in the Lwów ghetto and worked at the second Ghettopoliklinik at ulica Zamarstynowska 112. She was probably deported to the concentration camp Belzec in 1942 and is thought to have died there in 1944.

### Associated persons

Jules-Gabriel-François Baillarger  
L.E. Dupuy  
Lucja Frey-Gottesman

### Source internet sites (accessed 21 February 2009) and further reading

- Burton MJ, Brochwicz-Lewinski M (1991). Lucja Frey and the auriculotemporal nerve syndrome. *J R Soc Med* **84**: 619–620.
- Moltrecht M, Michel O (2004). The woman behind Frey's syndrome: the tragic life of Lucja Frey. *Laryngoscope* **114**: 2205–2209.
- O'Neill JP, Condron C, Curran A, Walsh A (2008). Lucja Frey – historical relevance and syndrome review. *Surgeon* **6**: 178–181.
- Scully C, Langdon J, Evans J (2009). Editorial. *Oral Dis* **15**: 185–186.
- <http://www.whonamedit.com>, <http://rarediseases.about.com/>  
<http://medcosmos.blogspot.com/2008/09/1000-eponyms-in-medicine.html>  
<http://insidesurgery.com/index.php?itemid=264>  
[http://en.wikipedia.org/wiki/List\\_of\\_eponyms](http://en.wikipedia.org/wiki/List_of_eponyms)

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