

# Lanzalaco-Vanoosthuyze's bromhidrosis: Treatment with sunflower plus sufflower oils and other plant derivatives

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Dear Sir,

Bromhidrosis, also known as osmidrosis or ozochrotia, is an unpleasant or offensive body odour due to any cause including poor hygiene, infections, diet or medications, or inherited metabolic disorders and may be often associated with hyperhidrosis.

Bromhidrosis can affect all age groups, races, and both sexes. Bromhidrosis is more common in adults than children as sebaceous glands and apocrine sweat glands do not become active until puberty. The elderly have a different body odour from babies, pre-pubescent children, teenagers, and adults. It has a male predominance, and can be a particular issue in hot humid tropical climates. There may be a genetic predisposition, with studies suggesting axillary malodour is more common in Europeans and Africans than Asians.

Body odour is normal and is primarily produced by the breakdown of sweat, sebum, and keratin by bacteria on the skin surface (skin microbiota). What is regarded as acceptable is determined by cultural influences including race and social upbringing.

Bromhidrosis may be classified as eccrine or apocrine, exogenous or endogenous:

The category of the exogenous types of bromhidrosis is characterised by several skin microbiota as:

*Corynebacterium species*, *Staphylococcus hominis*, *S. epidermidis*, *Cutibacterium avidum*, *Acinetobacter schindleri*.

Or provoked by skin infections as:

Erythrasma, pitted keratolysis, trichomycosis, *Sphingomonas paucimobilis*.

The endogenous types of bromhidrosis may be caused by:

Foods — garlic, onion, asparagus, curry, alcohol.

Medications and toxins, penicillin, bromides, dupilumab.

Systemic and skin disorders, obesity, diabetes mellitus, liver disease, renal failure, skin disorders of palms/soles and flexures.

Metabolic disorders as trimethylaminuria, phenylketonuria, hypermethioninaemia.

Bromhidrosis presents as a bad body smell which the patient may be unaware of.

Malodour may be the reason for the consultation, raised by a mother or partner, or be obvious during a medical consultation for other reasons. The odour may be worse after exercise, often adhering to clothing.

Apocrine bromhidrosis is the most common form of bromhidrosis in adults and is localised, usually to the armpits and/or anogenital area.

Eccrine bromhidrosis presents as a generalised malodour, and may be associated with bad breath (halitosis), anogenital odour, and smelly urine.

**How to cite this article:** Martini L. Lanzalaco-Vanoosthuyze's bromhidrosis: Treatment with sunflower plus sufflower oils and other plant derivatives. Our Dermatol Online. 2023;14(e):e59

**Submission:** 15.02.2023; **Acceptance:** 30.10.2023

**DOI:** 10.7241/ourd.2023e.59

Potential causes of bromhidrosis are generally considered:

Exaggerated underarm sweating, trichomycosis axillaris, macerated skin over the toes and ball of the foot in pitted keratolysis [1-6].

Bromhidrosis is a clinical diagnosis, but careful history and examination is required to determine the underlying cause. Investigations should be considered in children, if the smell is generalised also involving urine and breath, or if it is of recent onset unrelated to hygiene habits.

The clinician who notices a strong body odour is wise to suggest to the patient to follow these rules:

- a) Good hygiene with regular washing using soaps and cleansers, deodorant, antiperspirant, removal of sweaty clothing;
- b) Hair removal by shaving, electrolysis, or lasers;
- c) Topical antiseptics;
- d) Exfoliation of areas of keratin degradation;
- e) Avoidance of odour-causing foods and medications;
- f) Treatment of skin infections;
- g) Treatment of hyperhidrosis;
- h) Removal of nasal foreign body;
- i) Removal of apocrine glands — laser, surgery, liposuction curettage, microwave-induced fibrosis;
- j) Dietary modification for metabolic disorders.

Fixing bromhidrosis due to poor hygiene or other treatable causes can be life-changing. However not all cases of malodorous body odour can be completely suppressed.

Just in this present epoch of the Ukrainian conflict one has observed in more than one year that the price of sunflower seed oil has been growing more and more for two specific reasons:

- 1) Difficulty of exportation from a country in state of war (and Ukraine used to represent the exporter of more than 60% of sunflower oil in all the states of the Old Continent)
- 2) The initial frightening at the very beginning of the conflict that sunflower oil could have embodied an excellent surrogate for biofuels, since the paucity of gas and oil evoked the rising of its price to discourage to purchase this kind of edible oil in order not to exhaust the original supplies.

After several months from the beginning of the world it has been noticed that sunflower seed oil may be

imported frankly from other countries as Bulgaria, The Netherlands or Hungary, that all together import the 40% of the aforesaid oil.

Price of sunflower seed oil is fallen and an avalanche of sunflower seed oil is available.

A magnificent Chinese Patent discloses the usage of an edible seed oil added with black tea powder, Weeping Forsythia extract, Pepper oil, garlic and bamboo vinegar as valuable skin antiseptic and antimicrobial agent.

We have evaluated this report and eliminated garlic and vinegar (because of the unpleasant odour) and proposed another recipe that included sunflower seed extract (*Carthamus tinctorius*) and Hyssopus oil.

Weeping Forsythia is extremely rich in Phenylethanoid Glycosides derivatives [5,6] that reveal extraordinary anti-inflammatory, antioxidant, antibacterial and even antiviral functions and activities, Black tea powder (it has been very recently discovered) contains large amounts of L-theanine, the best skin hydrator and TEWL preventing agent, Pepper oil is rich in  $\beta$ -caryophyllene that has always demonstrated elevated analgesic, antioxidant, antimicrobial and anti-inflammatory activities and finally Huile d'Hysope that contains luteolin, reputed the first line skin defense.

We had prayed a splendid Caucasian mannequin (33 y. old) who is greedy of asparagus with Tahini sauce (sesame, tumeric, curry and honey) truffles and Sazerac to spread this magma whenever she could do it during the day in her thigh flexures where a very repugnant smell came out at the beginning of the treatment for 10 days.

After this period of treatment the beautiful girl did not show any malodour at all.

## Consent

The examination of the patient was conducted according to the principles of the Declaration of Helsinki.

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**Source of Support:** This article has no funding source.

**Conflict of Interest:** The authors have no conflict of interest to declare.