



HALITOSIS

Halitosis is a condition in which a person emanates an unattractive odor from their mouth. This is often called bad breath. In simple terms, it is a term which describes unpleasant odor exhaled during breathing.



CLASSIFICATION OF ORAL MALODOR / HALITOSIS

Based on Etiology

- **Local Factors of pathologic origin**
For eg :
Poor Oral Hygiene
Extensive Caries
Periodontal Diseases
Oral Cysts & Tumors
Pharyngeal Cavities

Based on patient's criteria

1. Genuine halitosis

Physiologic

Pathologic

Oral

Extra Oral



- **Local Factors of Non-Pathologic origin**

For eg :

Stagnation of Saliva
Dentures
Excessive Smoking

- **Systemic Factors of Pathologic Origin**

For eg :

Diabetes mellitus
Liver Failure
Lung Abscess
Tuberculosis

- **Systemic Factors of Non-Pathologic Origin**

For eg :

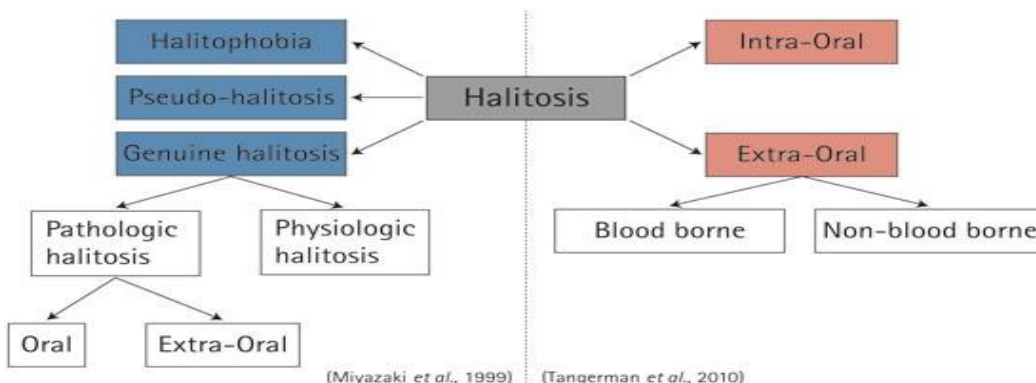
Food Substances like Garlic, onion, meat
Excessive alcohol consumption

- **Xerostomia** (Decreased Salivation)

2. Pseudo halitosis

3. Halitophobia

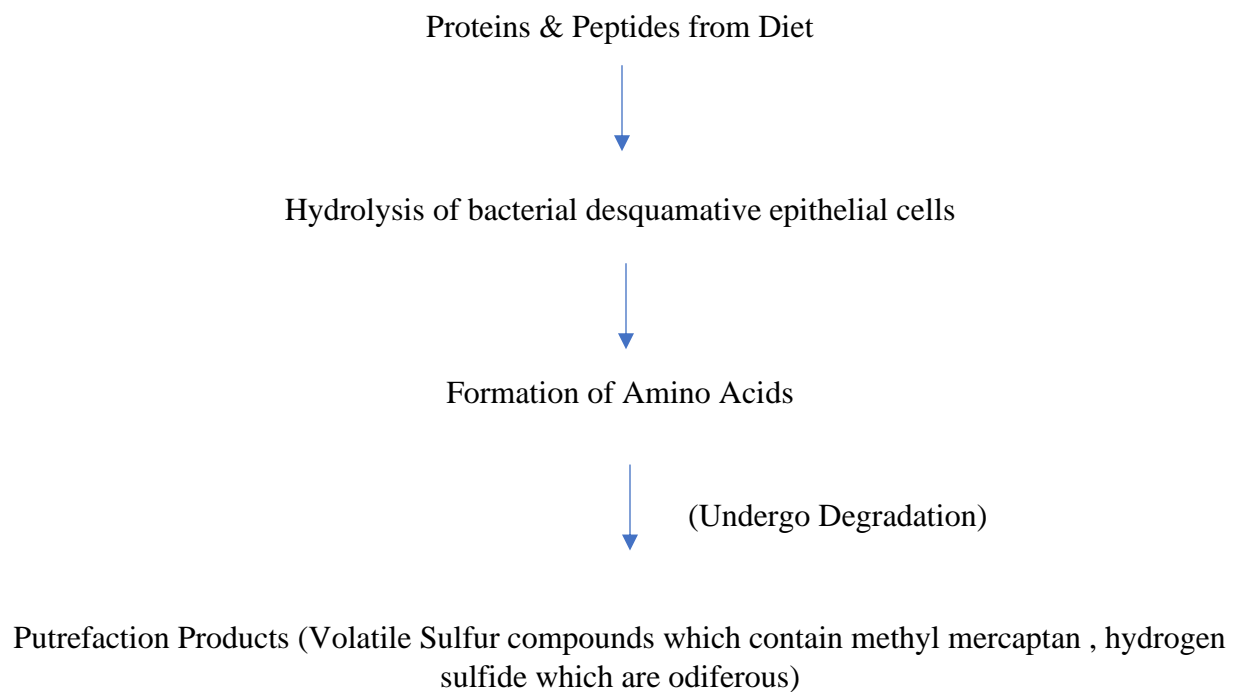
- According to the **classification of halitosis by Yaegaki et al., genuine halitosis** is defined as "obvious malodor with intensity beyond a socially acceptable level is perceived"
- Pseudo halitosis is defined as "obvious malodor is not perceived by others, although the patient stubbornly complains of its existence."





- **Halitophobia** : **Halitophobia** is a rare psychiatric condition characterized by an excessive preoccupation with the belief that one's exhaled breath has an unpleasant odour (Toyofuku 2016). It is sometimes called “delusional halitosis”, because, during halitophobia, the belief of having halitosis is mistaken.

Pathogenesis of Oral Malodor :



Etiology Of Oral Malodor / Halitosis

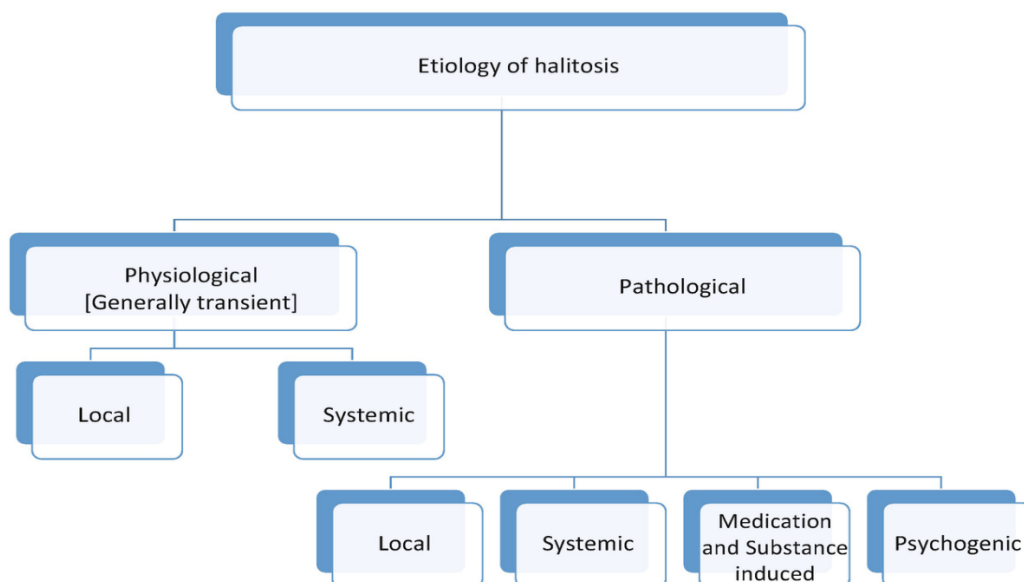
- **Causes for Physiologic Halitosis :**



1. Mouth Breathing
2. Medications such as **antihistamines**, sedatives, amphetamines, antidepressants, diuretics, decongestants, anticholinergics and some antipsychotics.
3. Aging & poor oral hygiene
4. Fasting / Starvation
5. Tobacco
6. Foods & Alcohol

- **Causes for Pathologic Halitosis :**

1. Periodontal infection : Odor from subgingival dental biofilm
2. Acute necrotizing ulcerative gingivitis & pericoronitis
3. Stomatitis
4. Xerostomia
5. Faulty restorations retaining food & bacteria
6. Unclean dentures
7. Oral Candidiasis
8. Oral Cancer
9. Parotitis
10. Cleft Palate
11. Aphthous Ulcers
12. Dental Abscesses





- **Systemic & Extra-oral Factors :**

1. Nasal Infections like rhinitis , sinusitis , tumors and foreign bodies
2. Diseases of gastrointestinal tract (GIT) : Hiatus hernia , carcinomas , GERD
3. Pulmonary Infections : Bronchitis , Pneumonia , Tuberculosis and Carcinomas
4. Hormonal changes that occur during ovulation , menstruation , pregnancy , and menopause.
5. Systemic diseases like Diabetes mellitus , hepatic failure , renal failure , uremia , blood dyscrasias , rheumatoid diseases , dehydration and fever & liver cirrhosis

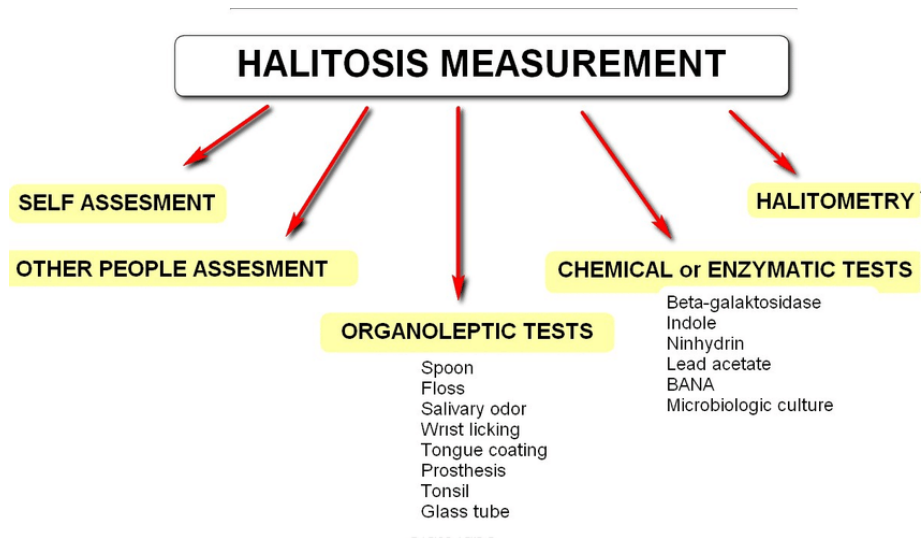
DIAGNOSIS OF HALITOSIS :

- Proper Recording of Case History – medical , dental & personal history
- Clinical Examination : **Intra-orally** , checking for tongue coating , evidence of mouth breathing , xerostomia (Dry mucosa)
- Complete Periodontal Examination : State of oral hygiene , probing of attachment level , probing depth

NOTE : 1. Patients should be instructed not to eat , chew , rinse or smoke for at least 2 hrs before the examination .

2. Patients who are on antibiotics should be seen 2 weeks after discontinuation of medicines .

- **Subjective Organoleptic Method :** In the organoleptic method, oral malodor is assessed by the investigator at a fixed distance by smell and severity grades which are assigned on the basis of that.
- **Gas Chromatography :** It is a monitor which digitally measures molecular level of three major volatile Sulphur compounds in the mouth sample.



- **BANA Test** : The BANA test (referring to the enzymatic breakdown of [N-benzoyl-dL-arginine-2-naphthylamide]) is used to determine the proteolytic activity of certain oral anaerobes that contribute to oral malodor.
- Some bacteria, e.g. *Prophyromona gingivalis*, *Treponema denticola*, and *Bacteroides forsythus* (Red complex) produce waste products that are quite odiferous, and as a result contribute to bad breath.
- When a sample of a patient's saliva that contains these bacteria is placed within the BANA testing compound, it causes the breakdown of the N-benzoyl enzyme. As a result of this biodegradation occurs, the test compound changes color, indicating a positive reaction.





- **Chemiluminescence** : It involves mixing of sample containing sulfur compound with mercury which leads to fluorescence
- **Halimetre** : It measures the sulphide gas found in a person's breath . **It is very sensitive to alcohol.**



Gas Chromatography



Halimetre

MANAGEMENT OF HALITOSIS

- Improving Oral hygiene through basic dental care
- Conventional tooth brushing should be advised
- Rinsing / Gargling with an effective mouthwash
- Using Metal ions like Zinc

NOTE :

Halita is a new solution containing 0.05% Chlorhexidine , 0.05% Cetylpyridinium chloride (CPC) and 0.14% Zinc lactate with no alcohol. It helps in reducing VSC levels and thus reduces halitosis . It also has anti-microbial properties.
