

*Tag
Reflex*



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DEFINITION



An involuntary contraction of the muscles of the soft palate or pharynx that results in retching, It is a protective reflex, designed to protect the airway and remove irritants from the posterior oropharynx and the upper gastro-intestinal tract, manifesting itself through an unpleasant feeling that precedes the sensation of vomiting.

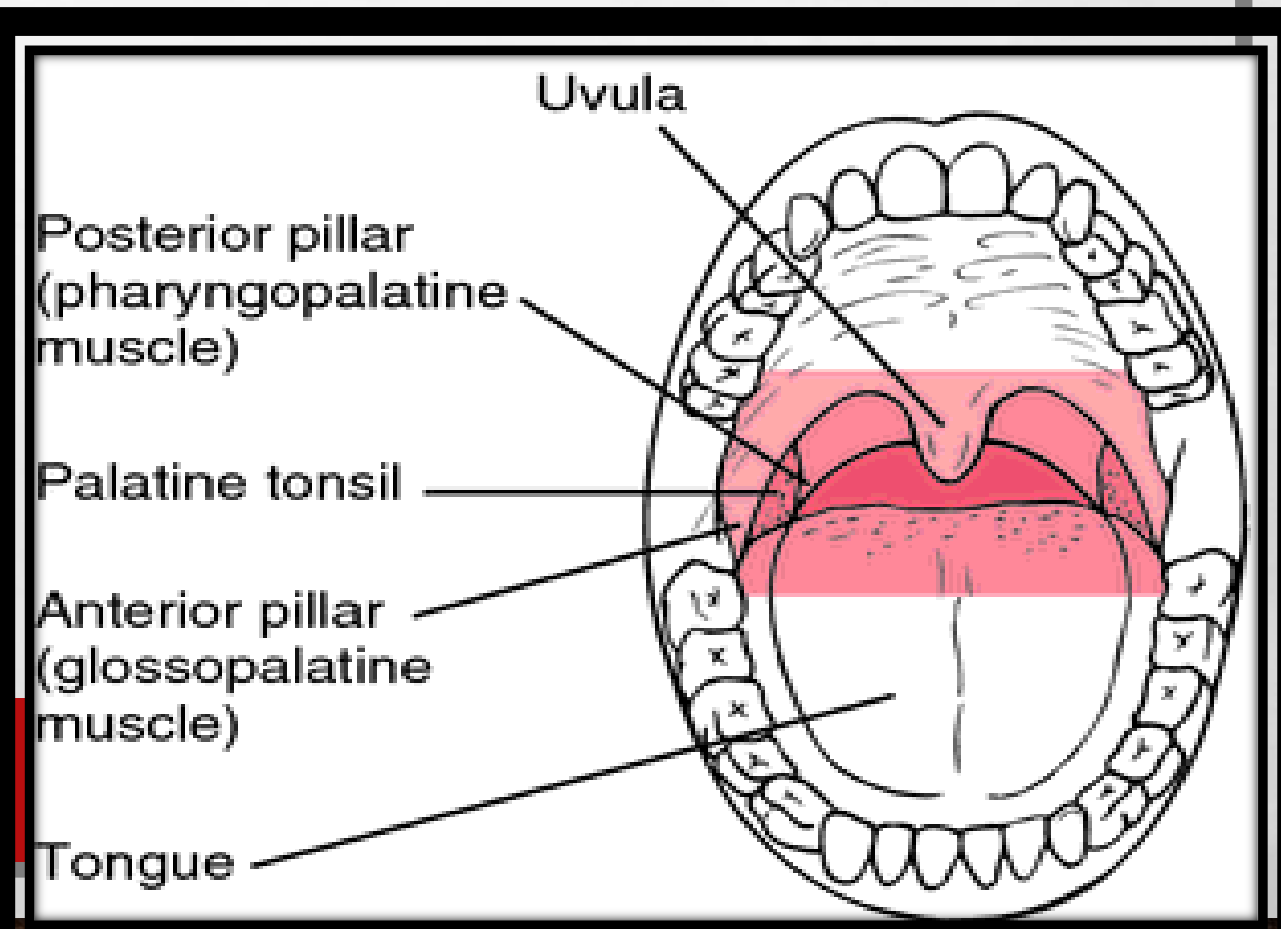
GAG REFLEX CATEGORIES

- *Psychogenic gagging*
 - can be induced without direct physical contact
 - induced by the sight, smell or sound.



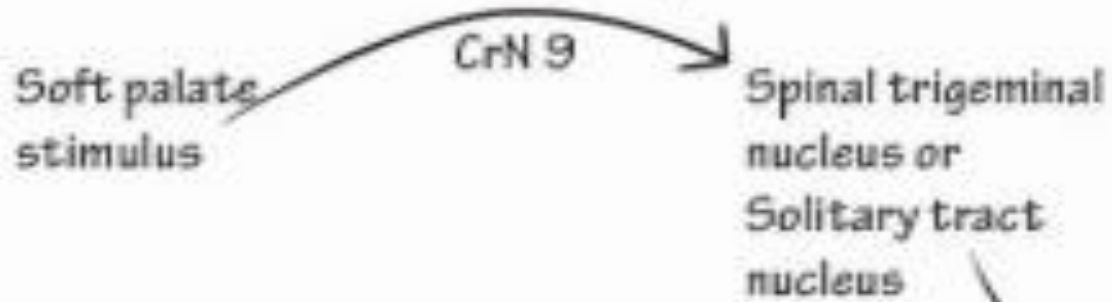
- *Somatic gagging:*

can be triggered by touching areas of the oral cavity specific to the individual. Five intraoral areas are known to be “trigger zones”: palatoglossal and palatopharyngeal folds, base of tongue, palate, uvula, and posterior pharyngeal wall.

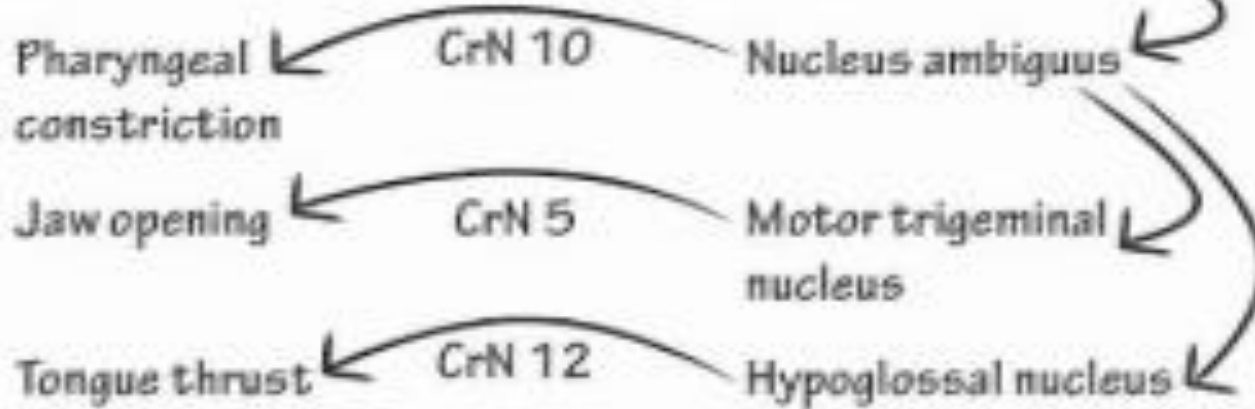


THE GAG REFLEX

Sensory Loop



Motor Loop



GAG REFLEX SCALE

The gagging reflex is:

- I. Very mild, occasional and controlled by the patient
- II. Mild, and control is required by the patient with reassurance from the dental team
- III. Moderate, consistent and limits treatment options
- IV. Severe and treatment is impossible
- V. Very severe; affecting patient behaviour and dental attendance and making treatment impossible.

Source: Dickinson, 2000

ETIOLOGY OF GAGGING

1. SYSTEMIC DISORDERS

Deviated septum, nasal polyps or sinusitis block nasal passages .

-Alcoholism, smoking, chronic gastritis, carcinoma of the stomach, peptic ulcer, and cholecystics are related to chronic gastrointestinal irritability and gagging.

-Medication that a person may be taking are another consideration if this produce nausea as a side effect.

-Diaphragmatic hernia has also been implicated as a systemic cause for gagging.

ETIOLOGY OF GAGGING

2. PSYCHOLOGICAL FACTORS:

Patients may gag to gain attention from the dentist, to avoid treatment, and/or to avoid the outcome of treatment. Further, **fear is the underlying factor** influencing the psychological gagger.

Some patients gag because of an abnormal fear of swallowing a foreign object.

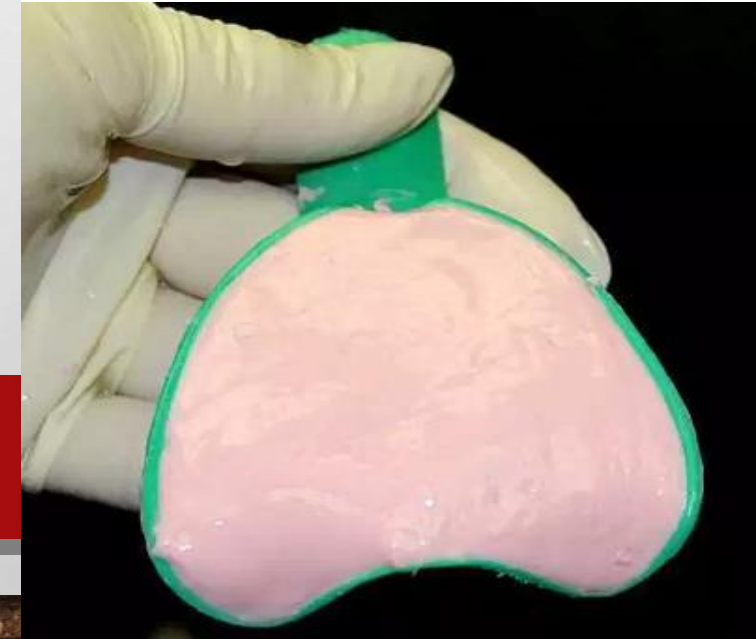
ETIOLOGY OF GAGGING

3. PHYSIOLOGIC FACTORS:

EXTRAORAL STIMULI:

Visual { The sight of a mouth mirror or impression tray}
auditory {sound of the dental devices }
and olfactory stimuli {The smell of various dental substances, cigarette smoke etc}.

INTRAORAL STIMULI: The effect of tactile stimuli gag reflex is well known (trigger zones).



ETIOLOGY OF GAGGING

4. IATROGENIC STIMULI:

Inadequate Post Dam

Over extended Borders

Occlusion

Under extended prosthesis

A smooth shining surface



MANAGEMENT OF GAGGING PATIENTS:

COMMON TECHNIQUES:

- Sympathetic approach towards the patient.
- Build his confidence by telling him that the problem could be overcome, but would take time.
- Explain and demonstrate stop signal, ex. Raising the hand, to feel that he has some control over the procedure.
- Simple measures like no over loading the impression tray, fast setting materials, ensuring sufficient aspiration, treatment in upright position, frequent cessation of treatment ... etc ,can be used.

DENTAL MANAGEMENT STRATEGIES:

a) Relaxation techniques

such as listening to music, use of dimmed lighting and avoiding the sight of dental instruments (passive relaxation) can be used in conjunction with controlled rhythmic breathing or relaxed abdominal breathing (active relaxation).



DENTAL MANAGEMENT STRATEGIES:

b) Distraction techniques

include talking to the patient, asking the patient to concentrate on keeping their leg raised from the chair, placing salt on their tongue, closing their eyes and rinsing their mouth with ice-cold water.



Distraction

Attention is focused away

DENTAL MANAGEMENT STRATEGIES:

c) Desensitisation techniques

may lead to a more permanent improvement in patient tolerance of dental treatment. Suggestions include repeated stroking or brushing of the tongue or anterior soft palate with a finger, swallowing with the mouth open, and carrying out 'dental homework' with borrowed dental instruments.



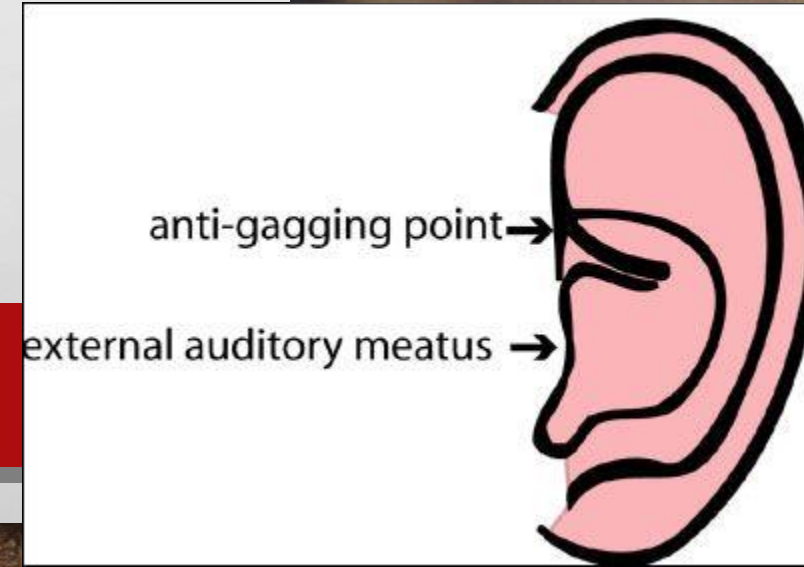
ADDITIONAL COMPLEMENTARY THERAPIES

ACUPUNCTURE

Ear acupuncture was selected for the following reasons:

- There is a specific, recognised anti-gagging point on the ear
- The needles are not disturbed during access to the mouth for dental treatment
- The needles are out of the patient's line of vision – a bonus for anyone with a dislike of needles.
- safe, quick, inexpensive and relatively non-invasive technique

The technique involves the insertion of one, fine, single-use disposable needle of 7 mm length into the anti-gagging point of each ear to a depth of 3 mm. The needles are manipulated for 30 seconds prior to carrying out dental treatment. The needles remain *in situ* throughout treatment and are removed before the patient is discharged. The patient does not require an escort and is not inconvenienced in any way following treatment.



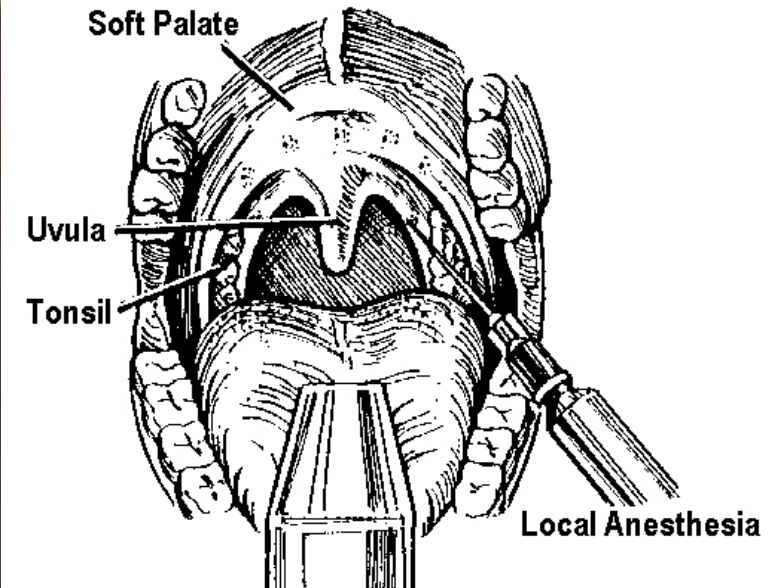
ACUPRESSURE

This utilizes pressure points without piercing the skin. Application to the pressure point during dental procedures has been shown to decrease the likelihood of triggering a gag reflex.



PHARMACOLOGICAL AGENTS

- The use of local anaesthesia (injection or topical), relative analgesia (inhalation sedation), IV sedation and even general anaesthesia may be warranted for the treatment of some patients.
- The greater the severity of the gag reflex, the more often intravenous sedation or general anaesthesia is required due to difficulty in desensitisation of the patient



MISCELLANEOUS TECHNIQUES

- using rubber dam to overcome a patient's worry about swallowing or inhaling debris,
- using sectional rather than full impression trays,
- using lower impression trays in the upper arch and using special trays for impressions, intraoral scanner ...etc.





