In some cases before complete dentures are constructed ; certain preparations to the denture bearing areas must be done … examples of such cases is bony exostosis (as it creates undesirable undercuts).

The stages of complete denture construction involve dealing with trigger zones in the oral cavity such as the hard and soft palate which can be touched accidently by the clinician while examining the patient. Another trigger zone is the posterior 1/3 of the tongue.

**\* Gag reflex** is a protective reflex found in all individuals ranging from slight to moderate or may be severe to any foreign body that enters the oral cavity and it differs from one person to the other.
\* Most of the time this reflex occurs in the following two steps and clinicians must be able to cope with it ;
1-impression making 2-denture delivery stage
 **\*Mechanism of gagging (retching)**:
we are not going to talk about this in a detailed manner as we are mostly interested in how to manage such cases .
The reflex is triggered by a stimulus or a foreign object that comes in contact with the area of hard and soft palate junction mostly or the dorsum of the tongue .

Afferent impulses are transmitted afterwards from the trigeminal and glossopharyngeal nerves to the medulla of the brain.
then gagging takes place and may be followed by real vomiting where clinicians must be taking precautions by preparing a bowel and immediately place the patient in an upright position…

Note that patients may have the fear of swallowing or choking the materials introduced into their mouths or there may be excess material flowing back to the soft palate.

Now by that time the glottis starts to close and the patient stops breathing, then salivary flow increases (as a foreign body is introduced) and finally the pharyngeal muscles contract then retching starts .

**\*Causes of retching in general:**

A.Psychological factor ;the patient may be afraid of swallowing or getting choked with the impression material.

B.Overextension of the upper denture too far to the soft palate that’s why we must exactly locate the post dam area .

C.Overextension of the lower denture in the lingual flanges , if the patient tells you that he is experiencing some sort of tonsillitis then expect that the lower denture is overextended in the lingual pouches area.

D.Narrow tongue space (cramped tongue) , restricted tongue space may be due to the excessive tilting of the lower posterior teeth lingually.

E.Thick , rough posterior border of the maxillary denture, which may cause mechanical irritation to the dorsum of the tongue.
if the upper denture is underextended in the post dam area or any roughness exists in it , the seal will be broken and the denture will drop down to the tongue which causes gagging.

F.Lack of retention for ex. There’s no complete post dam seal.

G.Imbalance occlusion ; which may cause looseness of the denture due to incorrect RCP and increase the vertical dimension , the dragging effect of the denture may cause the saliva to flow from the minor salivary glands back to the soft palate and the throat causing gagging.

H.Retching after long time of using the complete denture may happen due to bone resorption or occlusal wearing of the teeth or fracture in the teeth which may cause a change in OVD.

**\*Types of retching patients** :

A.Very severe…the patient seldom seeks dental treatment.

B.Severe…patients tend to retch at the beginning of examination .

C.Difficult patients (apprehensive)…retching may take place even in the most careful clinical examination e.g.simple extraction with very mobile teeth ,once you insert a mirror in their mouths they experience a gag reflex.

D.Problem patients…unable to wear the denture for minutes or even hours and this may be due to the psychological factor or faults in the denture itself ; these patients are referred to the psychiatric department to get their gag reflex managed.

**\*Management :**

At first,The dentist should have the confidence to overcome the gag reflex problem by means of reassuring the patient that this is a natural response varying from one individual to another.

Then, try to seat the patient in an upright position with his/her head slightly forwards and instruct them to breathe through their nose not by mouth.

🡪Some clinicians tend to swab or spray local anesthesia or ethylchloride at the sensitive trigger zone areas except for the tongue. Others mix impression materials with local anesthetic agents.

**\*\*During impression making ; what to do?**

 1-Try to take the lower impression before the upper one.

 2-Try to use slowly flowing impression material as impression compound or heavy body silicone , don’t use a material that flows easily to the throat.

 3-Behavioral therapy (hypnosis).

 4-Try to occupy the patient’s mind throughout impression making procedure i.e.ask the patient to count to ten or to raise his /her hand or to hold sth like the light …by this we drag the patient’s attention to other things.

 5-Drugs therapy which is not preferred… examples of this include :

Barbiturates that depress the central nervous system.

Anti-histamine that reduces the feeling of sickness.

Atropine causing reduction in the salivary flow.

**\*\*After or before denture delivery :**1-Brushing technique :
patients should be encouraged to touch the palate with the toothbrush and get it as back as possible without causing gagging .

2-Base-plate acrylic technique:
By constructing a retentive base without teeth and to be used for at least two weeks.
🡪take an impression by compound just to get a general outline in a primary cast over which a denture base is constructed and ask the patient to place it as many times as possible before the real dentures are inserted.

3-Palatless denture :
in order not to cover the crucial area .

4-For new denture wearers with the tendency of retching ;the patient should be given the first appointment in the next morning and the last appointment in the evening between the two intervals ;so ,the patient should be asked not to take it out .
🡪most preferably ,the clinician should see the patient within 24 hours after denture insertion.

5-Advise should be given to the patient to listen to music whenever he feels the gagging attacks or possibly read a newspaper or a book of interest.

 Good Luck …