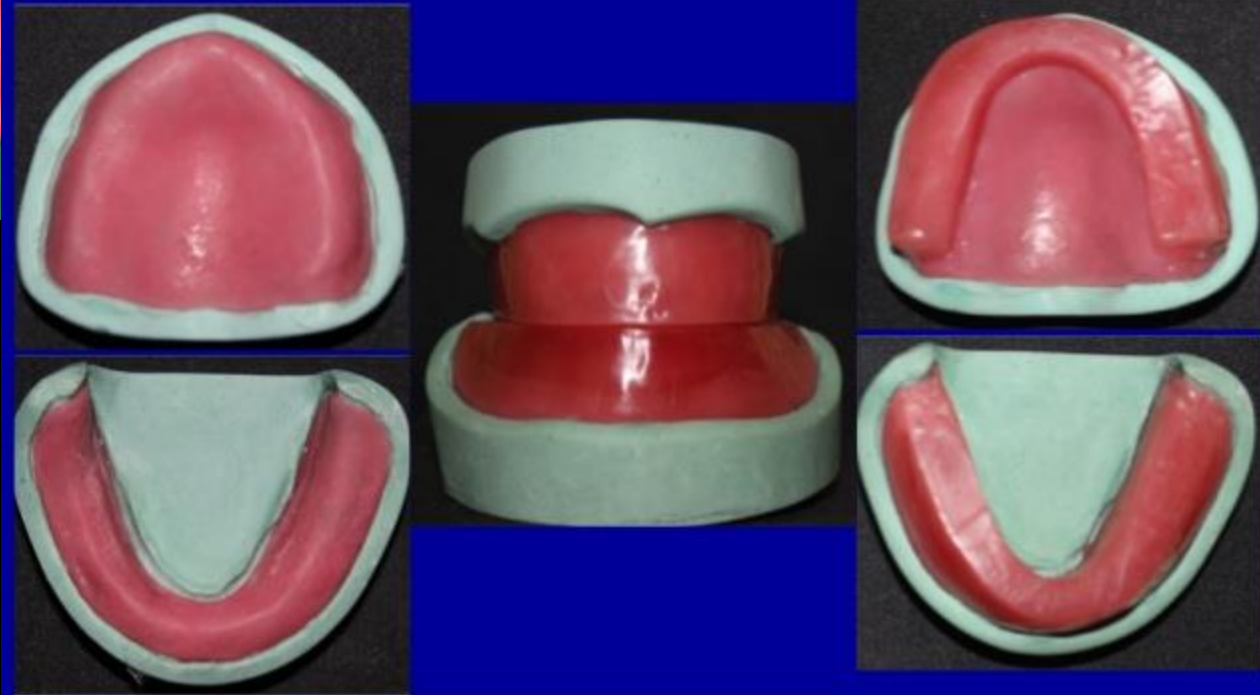


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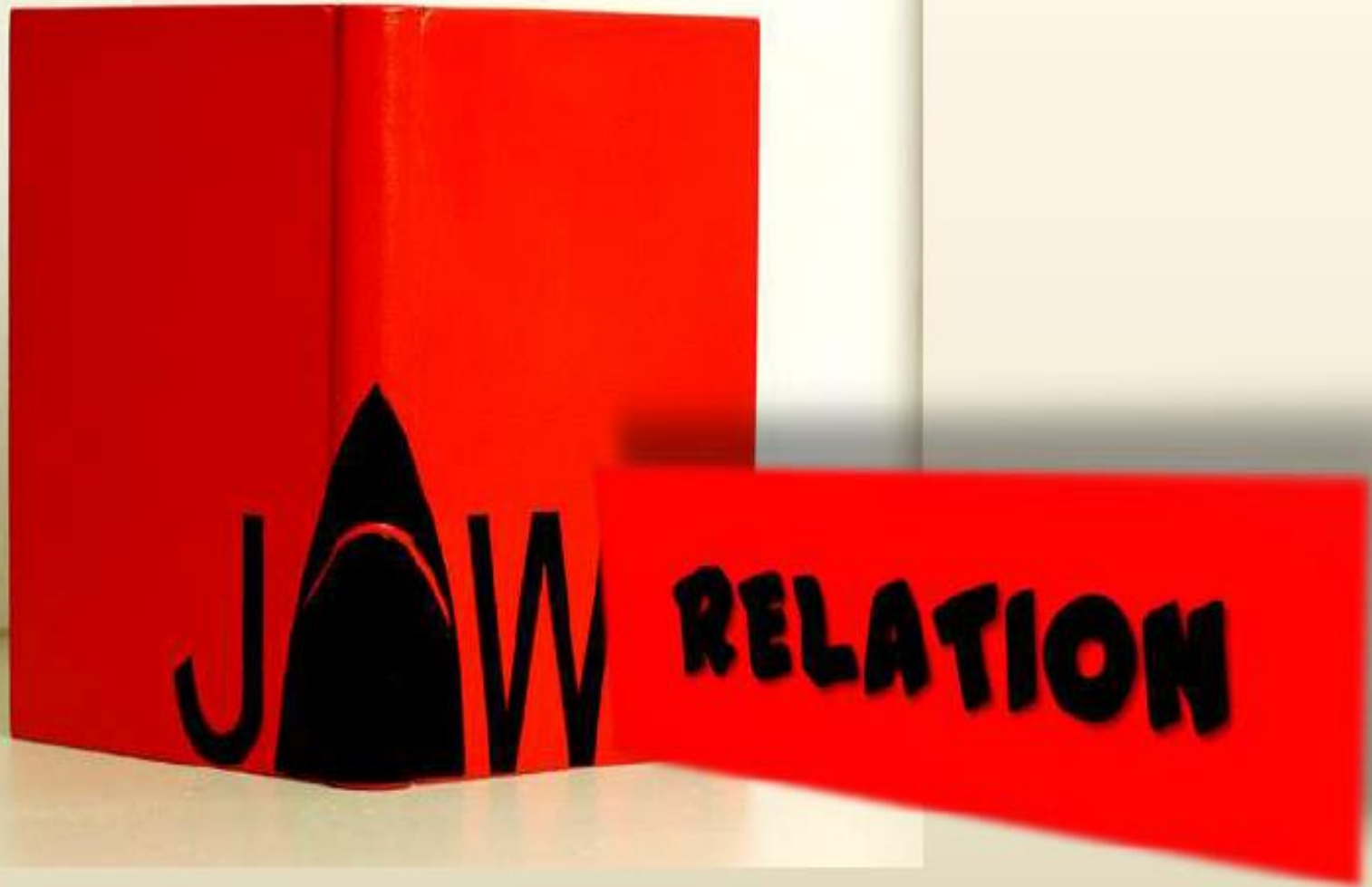
Last lectures

RECORD BASES AND OCCLUSION RIMS



Contains

- **Definition of Jaw relation .**
- **Types of jaw relations**
- ***Vertical jaw relation***
- **Types:**
 - **Rest vertical dimension**
 - **Occlusal vertical dimension**
- **Interocclusal distance**
- **Importance of vertical dimension**
- **Recording methods of vertical dimension**
- **Consequences of incorrect vertical dimension:-**

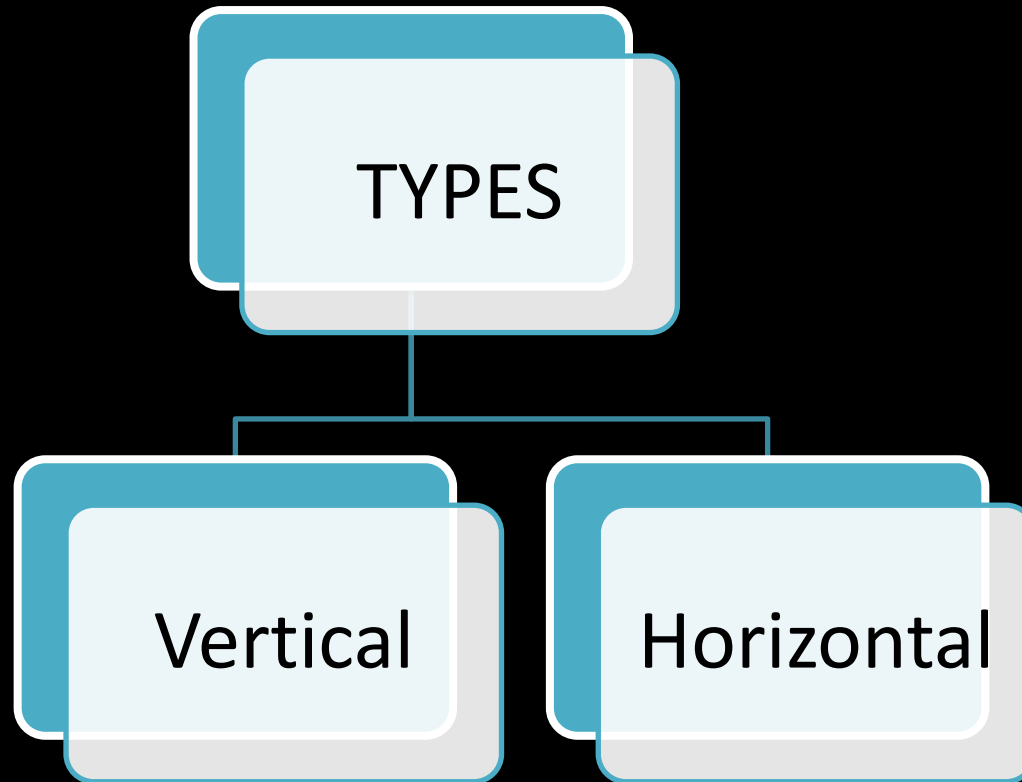


IN COMPLETE DENTURE

Prof. Dr. Mohammed Alkhafagy

❖ INTRODUCTION

- **Jaw relation** is defined as any relation of the mandible to maxilla



• The Vertical Jaw Relations

Are expressed as the amount of separation of the maxilla & mandible in frontal plane.

Vertical dimension: It is the distance measured between two selected points, one on a fixed and one on a movable member.

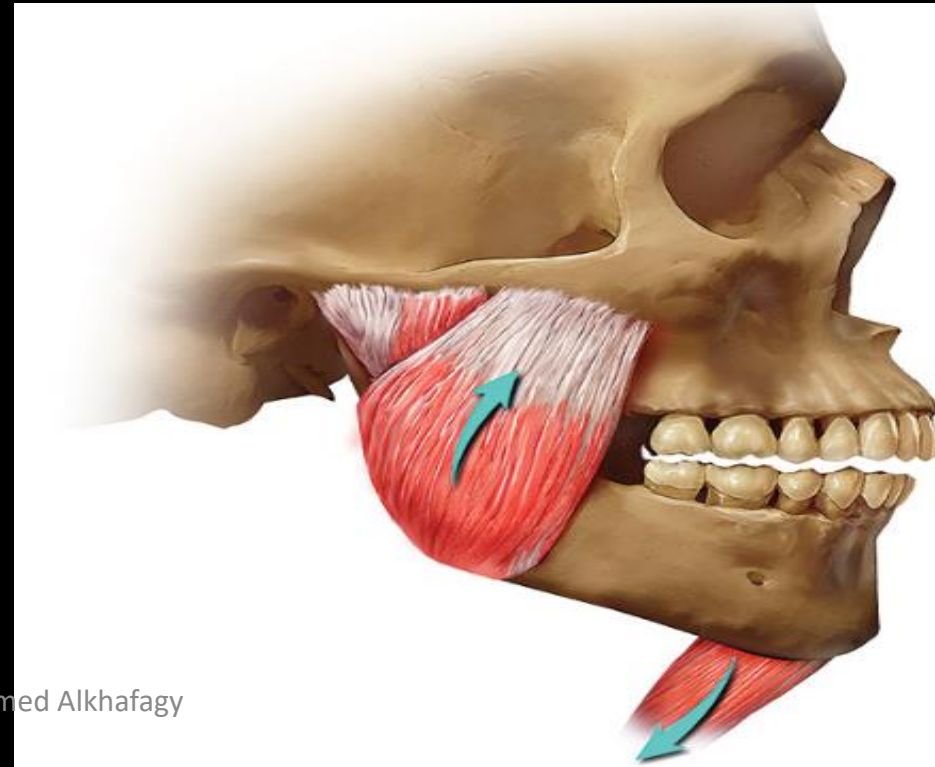


Two measurable lengths of the face are important guides in making maxillo-mandibular relation records and are referred to as :

- **Vertical dimension of rest or physiologic rest position. (RVD).**
- **Vertical dimension of occlusion (OVD).**

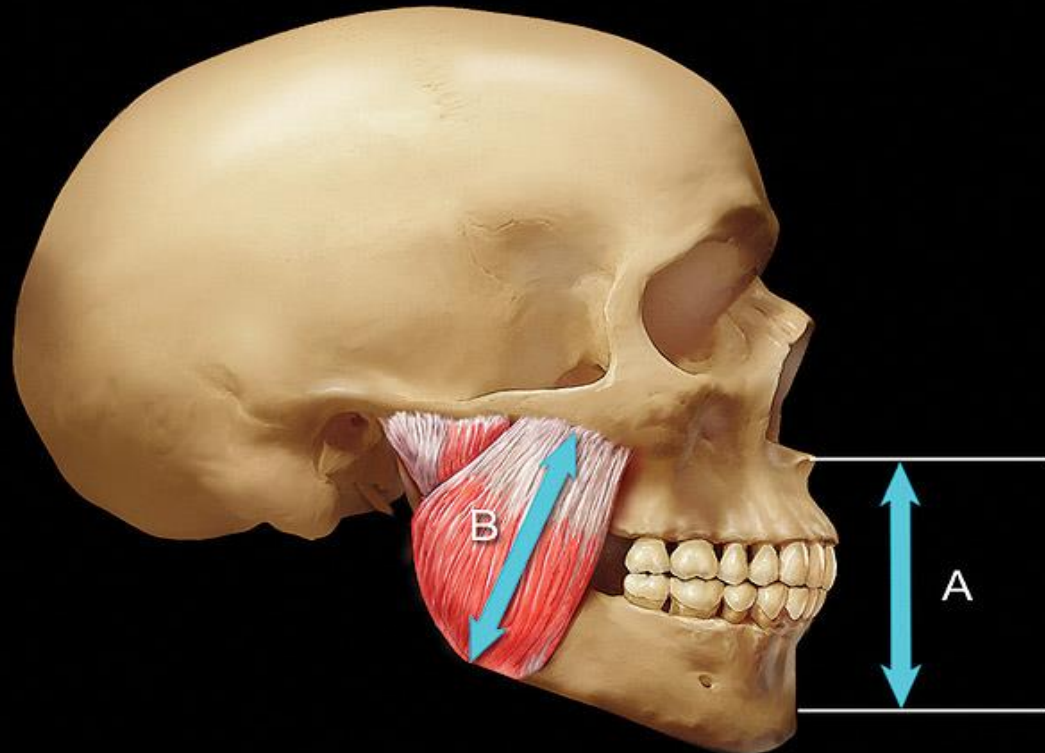
Physiologic rest position

- It is the postural position of the mandible when an individual is resting comfortably in an upright position and the associated muscles are in a state of minimal contraction activity.



Vertical dimension of occlusion (OVD)

- Vertical separation of the jaws when the teeth or occlusion rims are in contact.



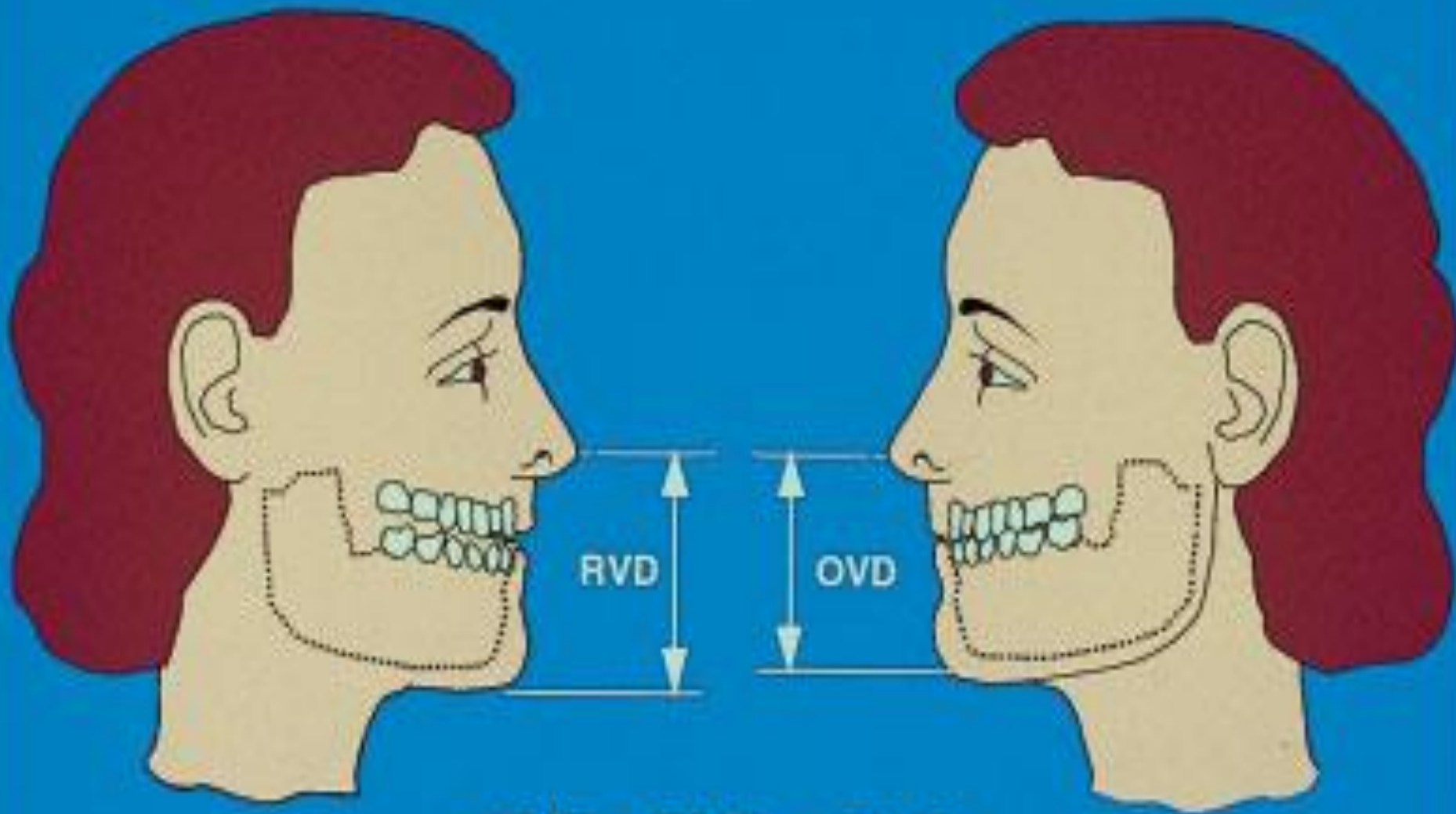
Interocclusal Distance (IOD)

FREE WAY SPACE

The 2 to 4mm distance between the upper and lower teeth when the mandible is at physiologic rest position is called interocclusal distance (IOD) frequently referred to as the “free way space”.

$$\text{RVD} = \text{OVD} + \text{IOD}$$

$$\text{RVD} - \text{IOD} = \text{OVD}$$



$$RVD - OVD = FWS$$

IMPORTANCE OF VERTICAL DIMENSION:

1- Functional roles :

- Mastication .
- Respiration.
- Deglutition.
- Phonetics.

2- Psychological role.

3- Esthetic role.

4- Comfortable role by maintenance health of tissue, mucosa, bone, muscles and T.M.J.

Methods of recording rest vertical dimension

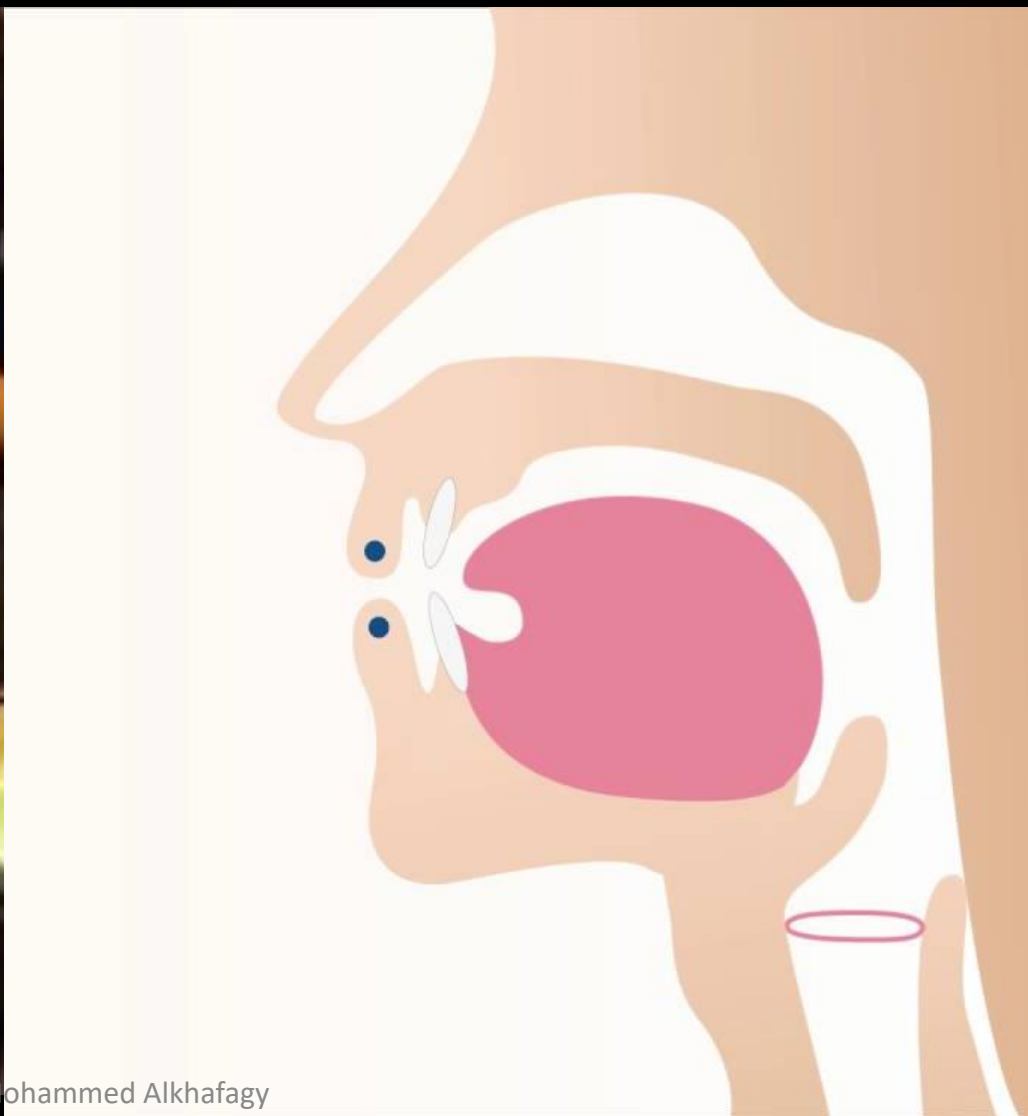
1- Facial measurements



2- Tactile sense



3- Phonetics



4- Facial expression



5- Anatomical landmarks (Willis method)



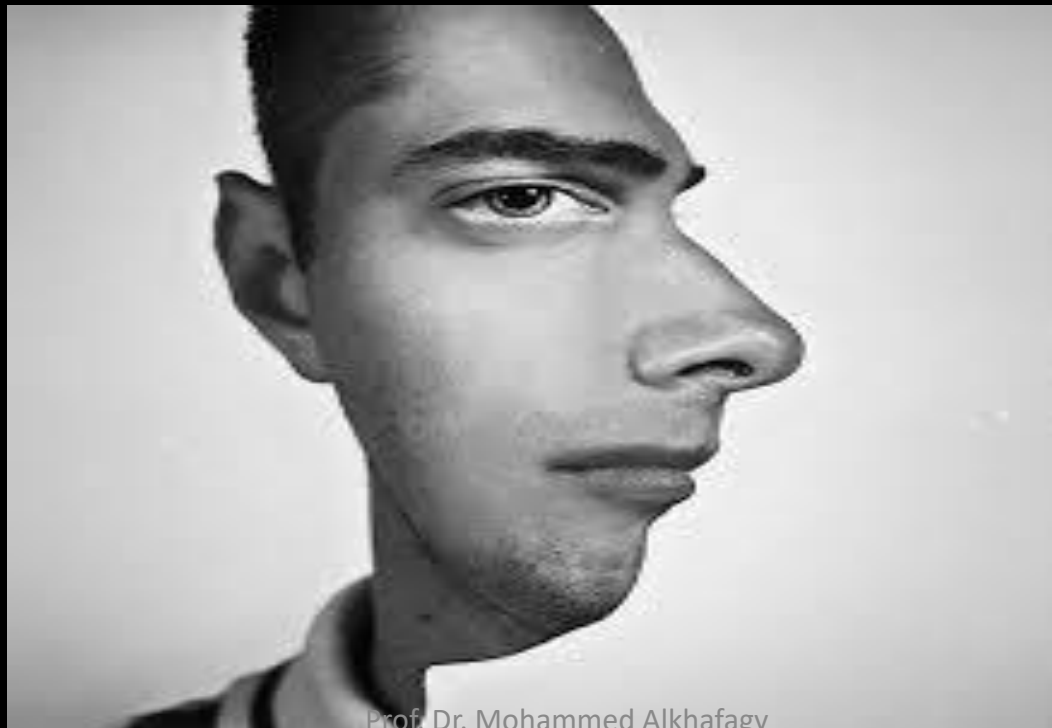
6- Electromyographic method (EMG)



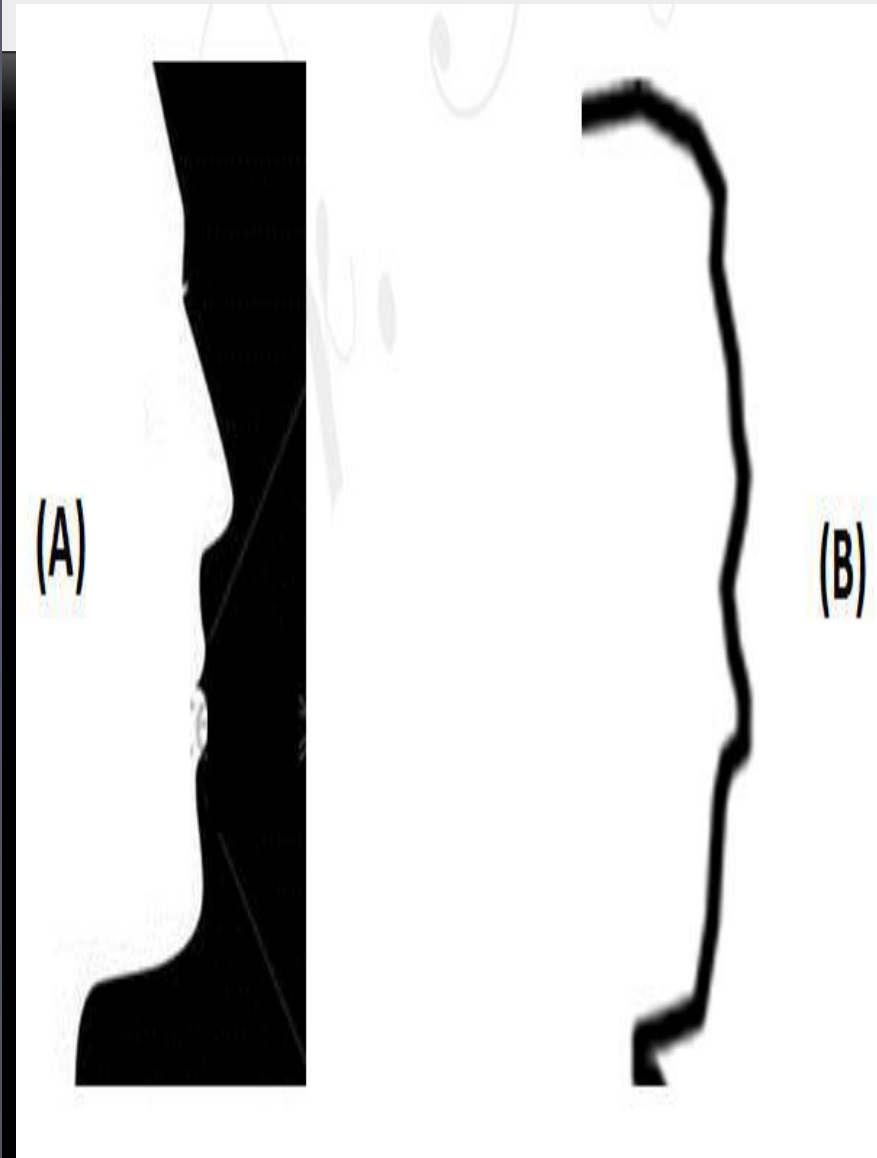
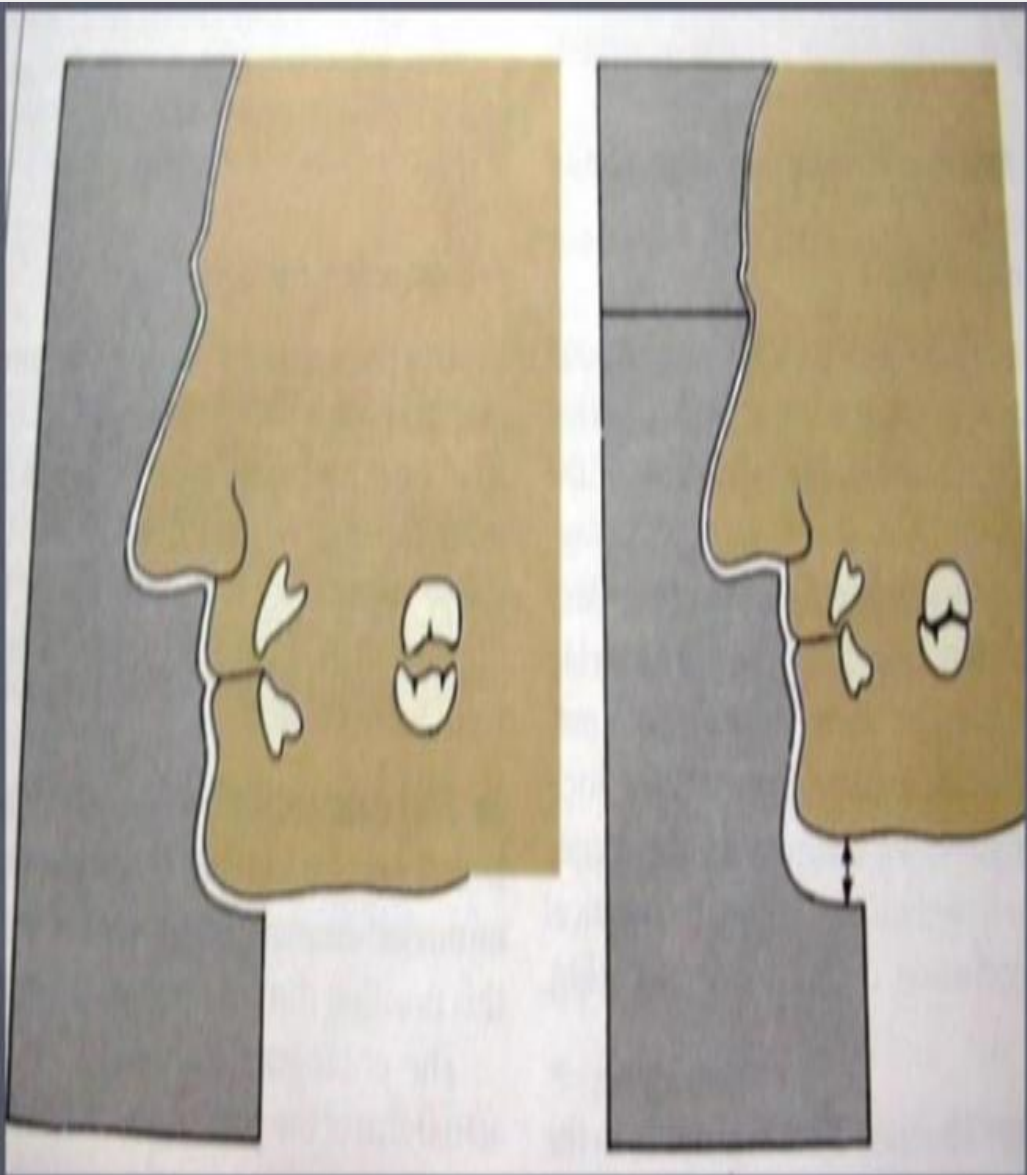
Methods of recording occlusal vertical dimension

1. Pre-extraction methods:-

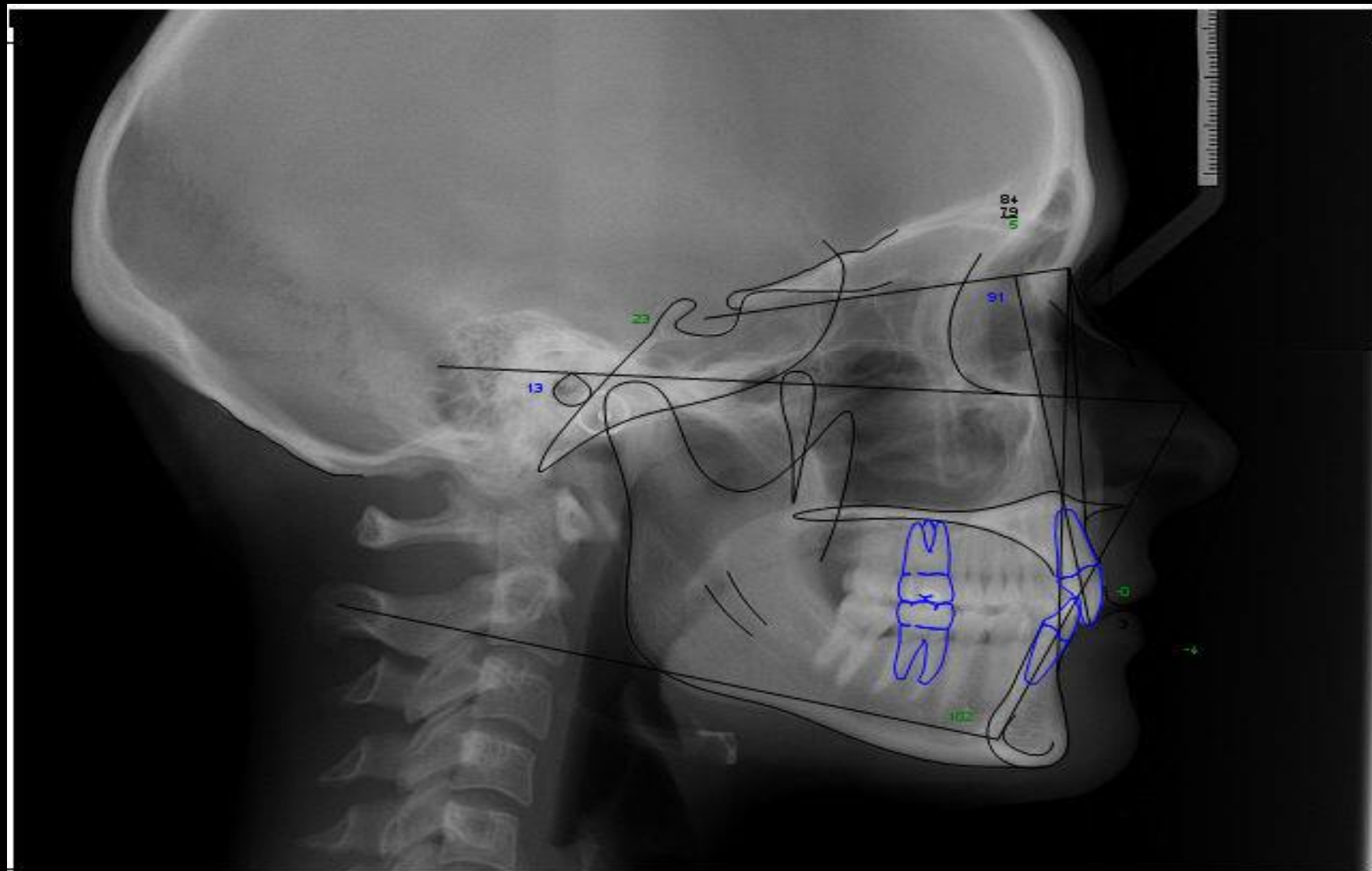
1- PROFILE PHOTOGRAPHS



2- PROFILE SILHOUETTES



3-Profile radiographs:



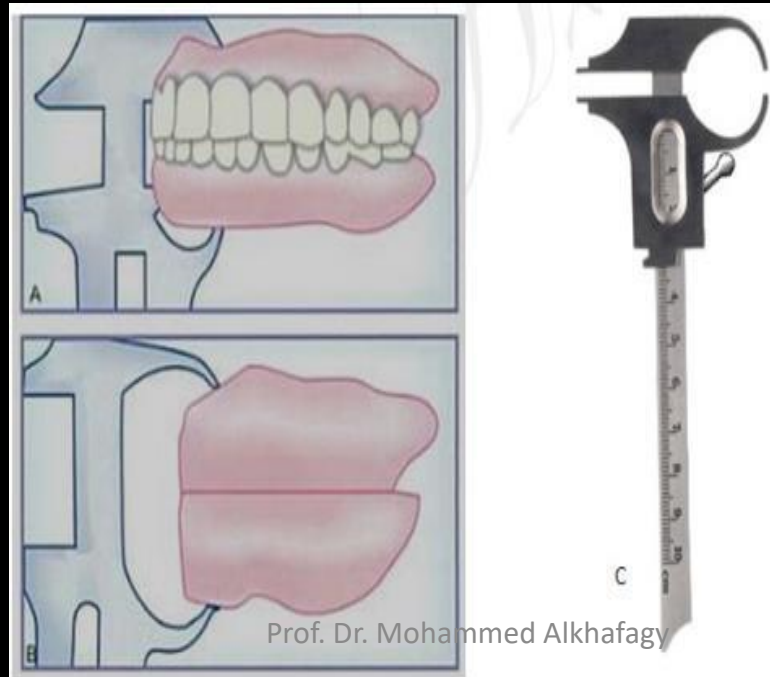
4- Articulated casts



5-Facial measurements



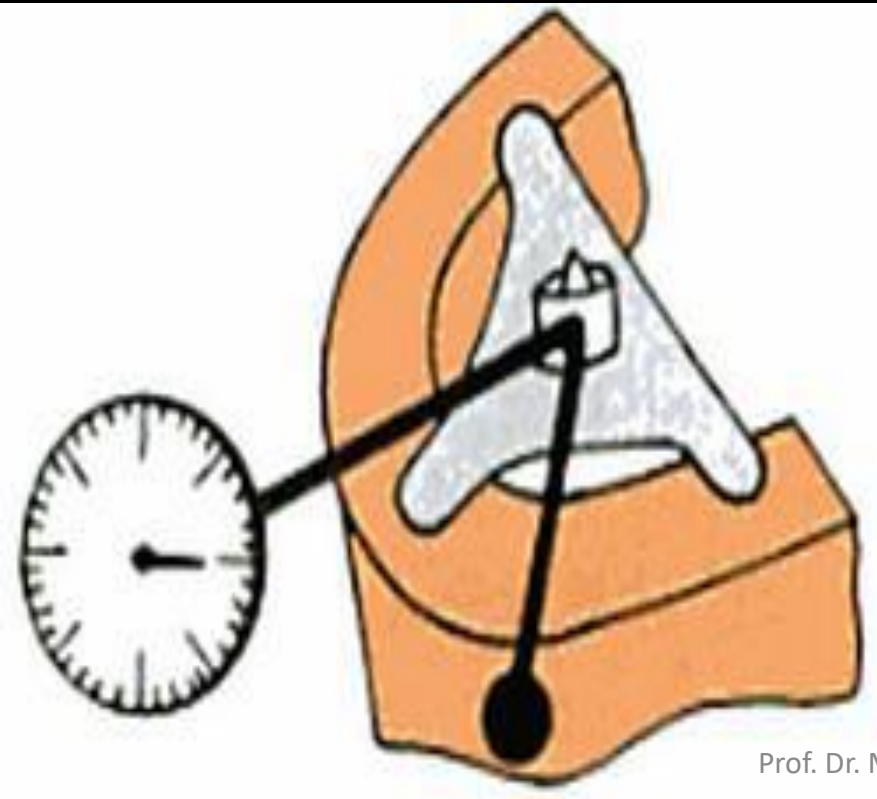
6. Measurements from former dentures



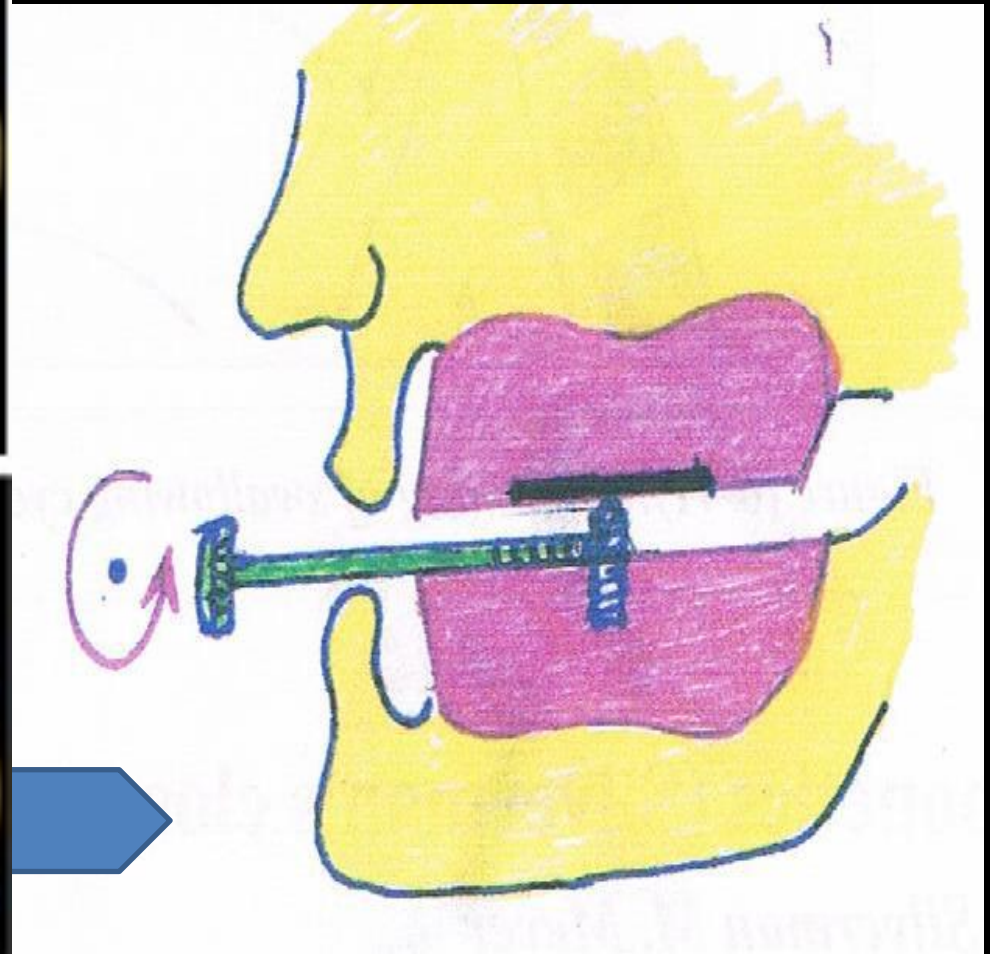
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- **2-Without pre-extraction records:**

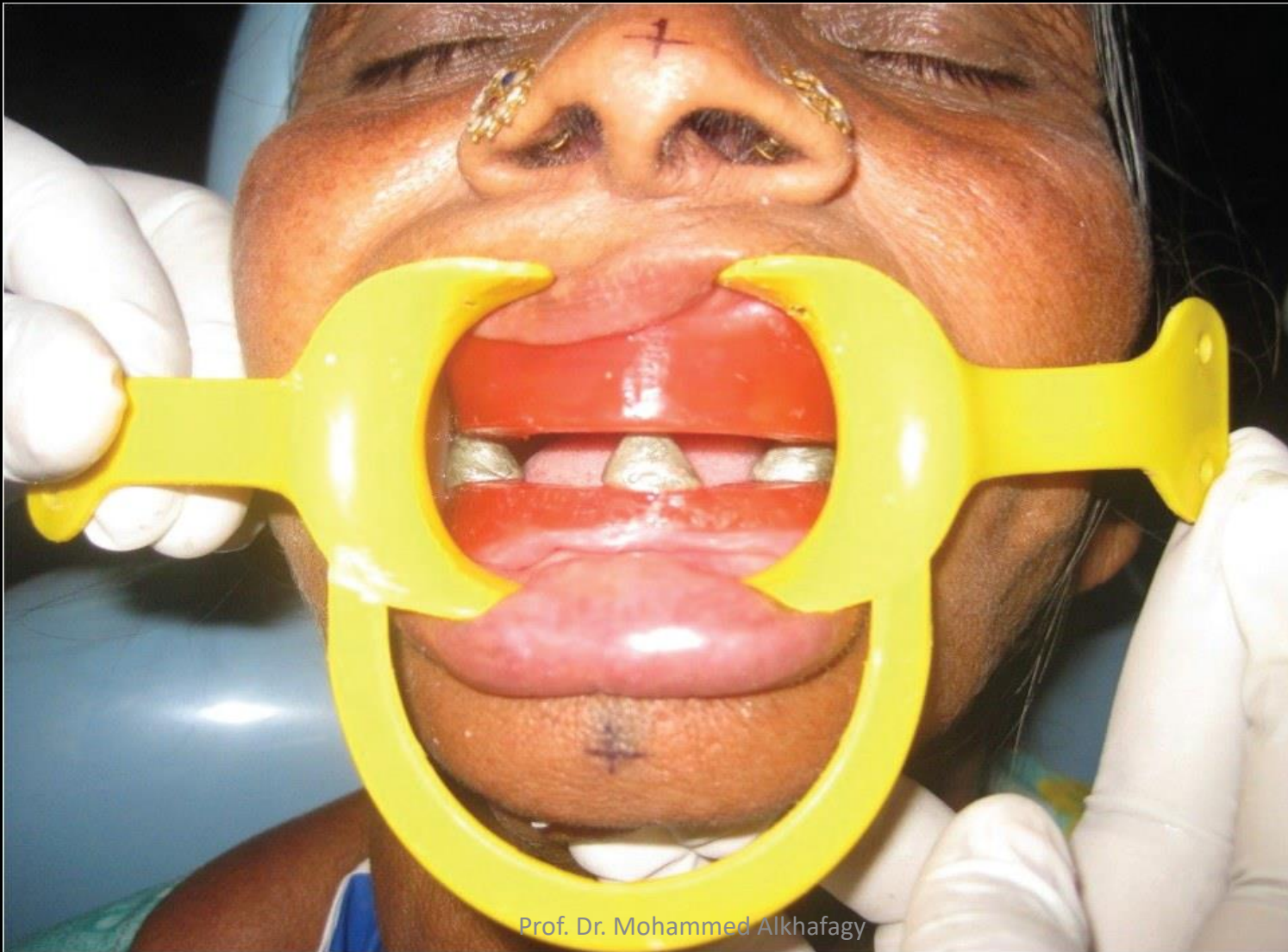
- 1- Power point by Boos:**



2-Neuromuscular perception:



3-Swallowing threshold:



EFFECTS OF ALTERED VD

INCREASE IN OVD / DECREASE IN IOD

- Increased trauma to the denture bearing area (acceleration of residual ridge resorption).
- Inharmonious facial proportion (increased lower facial height).
- Difficulty in swallowing and speech.

- Pain and clicking in the temporomandibular joint and muscular**
- Stretching of the facial muscles and skin.**
- Increase space of the oral cavity.**
- Loss of biting power.**

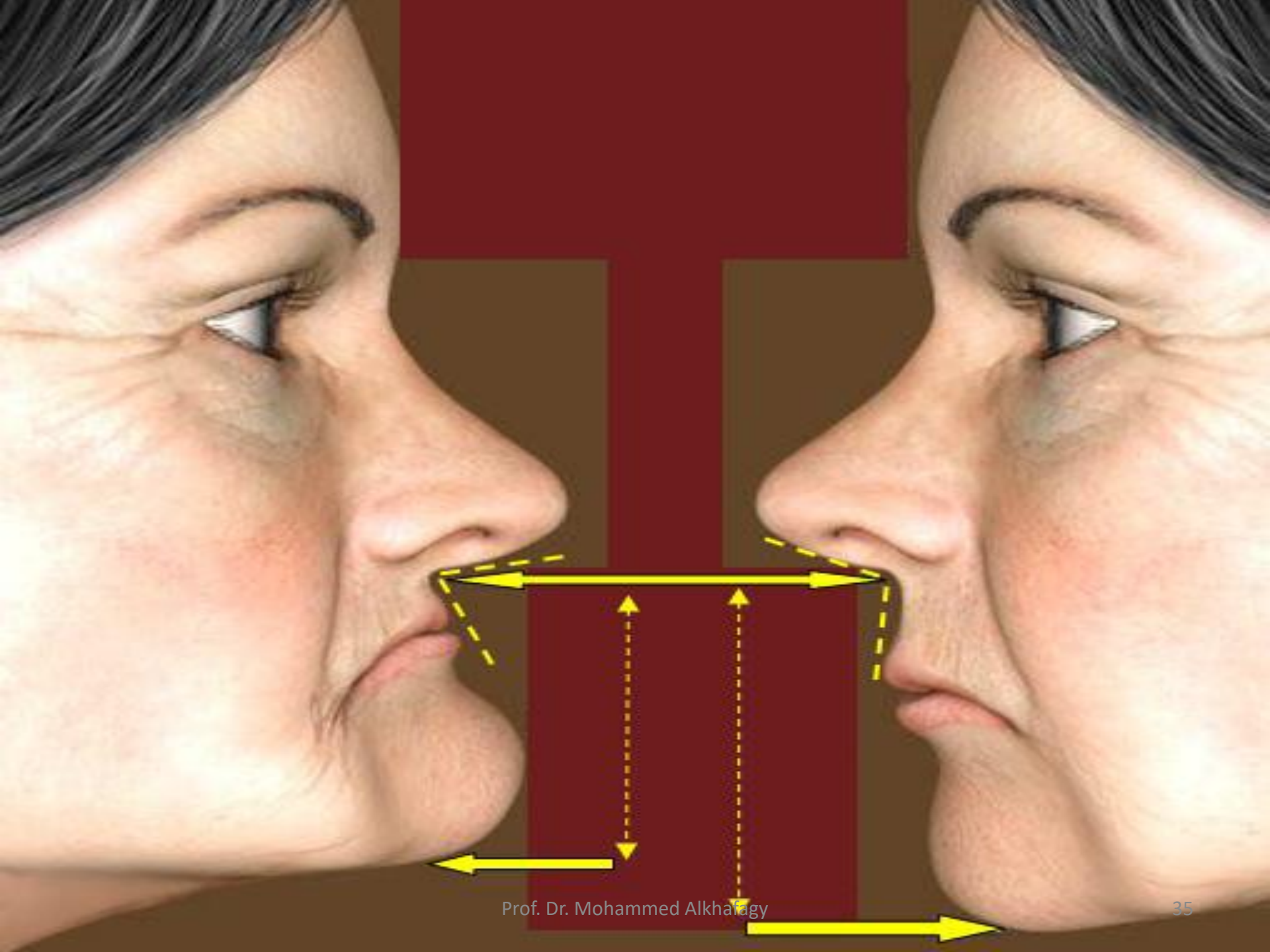
- Increase nasolabial angle.
- Sensation of bulky denture.
- Premature contact of upper and lower teeth.



- Instability of dentures due to their excessive height.**
- Clicking of teeth in speech and mastication.**
- Separated upper and lower lip with poor esthetic.**
- Excessive display of artificial teeth and gum.**

DECREASE IN OVD / INCREASE IN IOD

- Inharmonious facial proportion (decreased lower facial height).
- **Difficulty in swallowing and speech.**
- **Pain and clicking in the temporomandibular joint and muscular fatigue.**



- **Loss of muscle tone and presence of wrinkles and folds that is not due to age.**
- **Decreased space of the oral cavity, and pushing the tongue backward.**
- **Loss of biting power.**
- **Nasolabial angle is less than 90° .**



- **Angular cheilitis due to folding of the corner of the mouth.**
- **Cheek biting.**
- **Thinning of the vermilion borders of the lip.**
- **Prominence of lower jaw and chin.**



THANK YOU