



UNIVERSITATEA DE STAT DE MEDICINĂ ȘI FARMACIE
„NICOLAE TESTEMIȚANU” DIN REPUBLICA MOLDOVA

**Applying artificial complete
denture on a toothless jaw.
Adaptation of artificial complete
denture. Correction.**

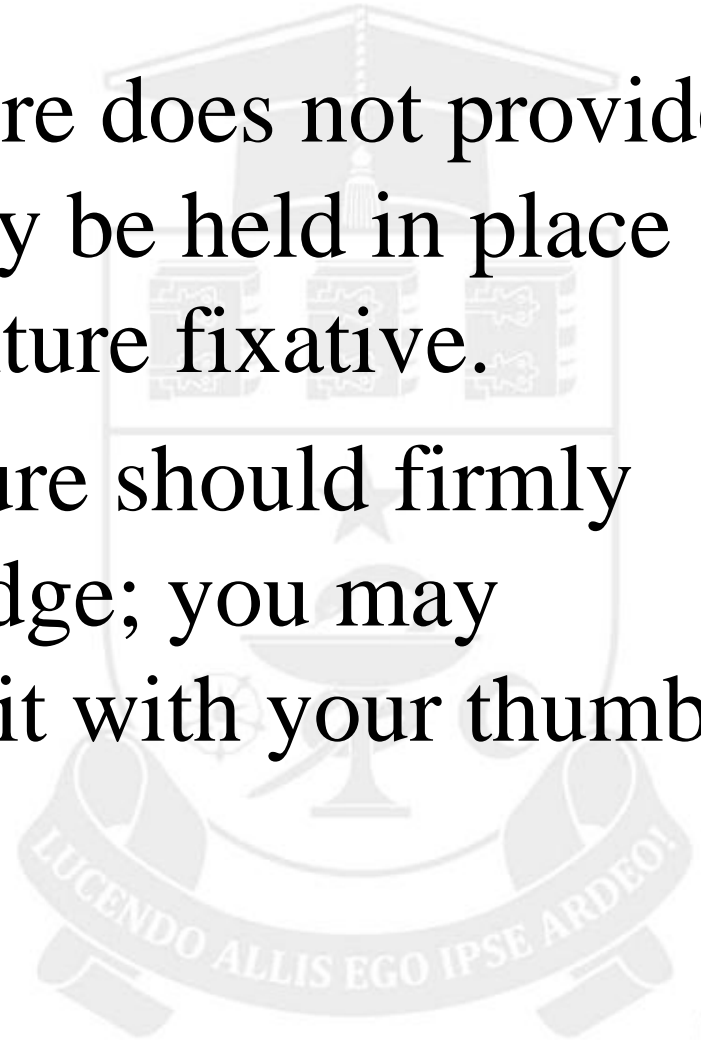
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Evaluation in the patient's mouth

- If the maxillary denture does not provide a suction effect, it may be held in place with the help of a denture fixative.
- The mandibular denture should firmly rest on the residual ridge; you may additionally stabilize it with your thumb and index finger.





1. Checking the vertical dimension at rest and the occlusal height

Verify the vertical height at rest and at occlusion either by assessing the patient's phonetics or by measuring the freeway space (2 – 3 mm).

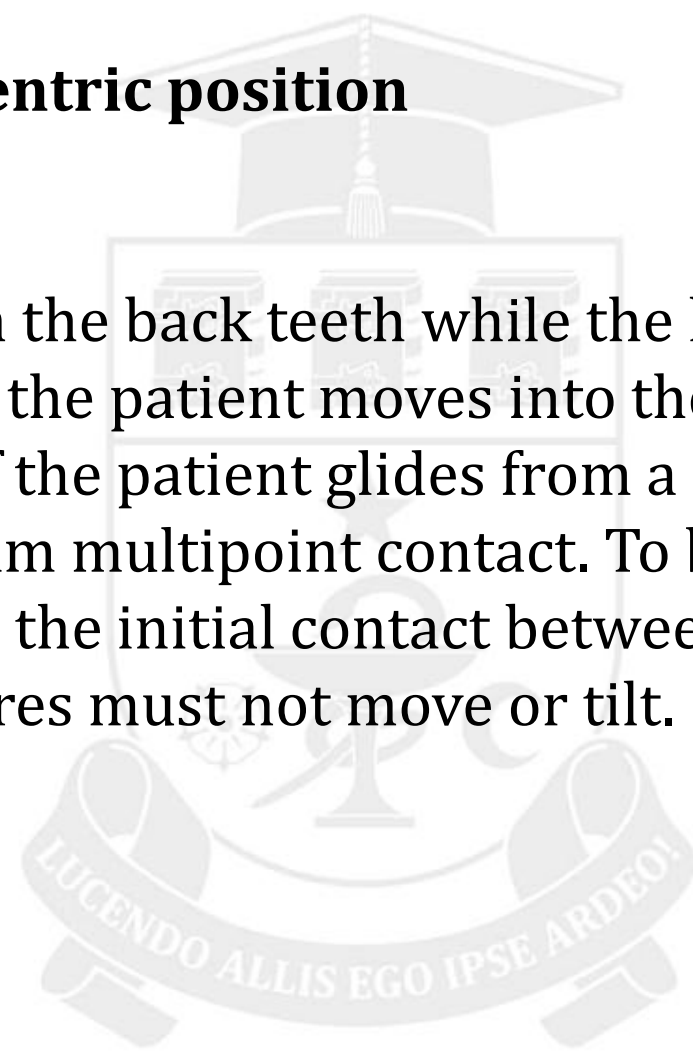
- **Vertical dimension at Rest (RVD)**
- **Vertical dimension at Occlusion (OVD)**
- **Free Way Space (FWS)**

$RVD - OVD = FWS$



2. Evaluation of centric position

Ask the patient to lightly close on the back teeth while the lips are being retracted. Observe if the patient moves into the centric occlusal position or if the patient glides from a premature contact into maximum multipoint contact. To be able to see this, closely observe the initial contact between the dental arches. The dentures must not move or tilt.





Instruct patients who tend to bite down in a protruding position to occlude down to one centimetre and then check under the chin if the jaw is in a relaxed, retral position capable of rotating with the help of your index finger and thumb. After that, ask the patient to close again while watching if the patient glides into maximum intercuspitation at the initial contact. Contacts during static occlusion can be visualized with articulating paper.





3.Evaluation of stability.

Using a large round condenser, apply pressure on the central fossae of the first molars to confirm that the denture is steady and firm





4. Evaluation of esthetics

- Tooth shade, shape and position
- Midline
- Length of upper anterior teeth
- Correct lip support
- Positive smile line
- Position of occlusal plane
- Buccal corridor
- Correct alignment of the upper incisors in relation to the inter-pupillary line and facial arch





5. Evaluation of phonetics

- Chat with the patient to see if the lower and upper teeth touch ("clatter") during speech. Have patients count from 60 to 70 or count backwards while they are overpronouncing. When pronouncing an "S" sound (as in "Mississippi"), the lower jaw should be closest to the upper jaw but the tooth rows should not touch and no hissing should be audible. When pronouncing an "F" sound, the incisal edges of correctly set up upper anterior teeth should rest on the transition between the moistened and dry part of the vermilion border.



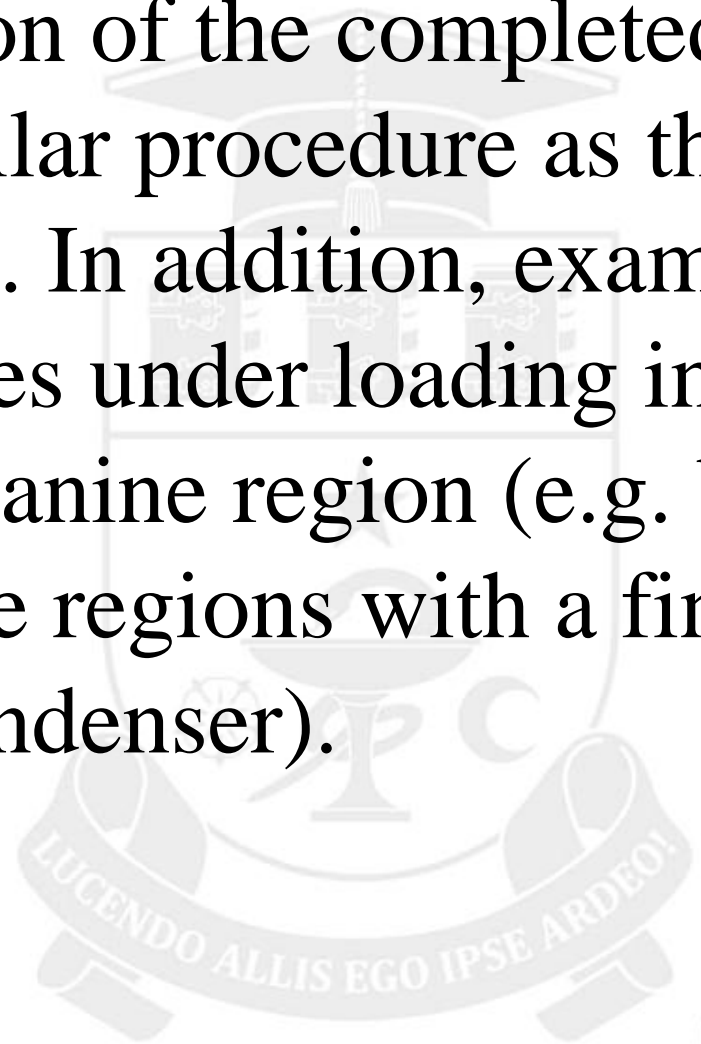
Final evaluation

Inspect the completed dentures before inserting them into the patient's mouth. Inspect the denture bases – they should be smooth and free of any spicules or sharp areas; the denture borders should be round and must not end in a sharp ledge.





The intraoral evaluation of the completed dentures follows a similar procedure as the evaluation of the wax-up. In addition, examine the stability of the dentures under loading in the posterior, anterior and canine region (e.g. by exerting pressure on these regions with a finger or round condenser).





Check the labial and buccal frenum notches. In static occlusion, the premolars and first molars should be in firm contact; in other words, a thin piece of articulating film should be held by all teeth.



During laterotrusion of the mandible, at least the premolars should be in contact on the working side and the last molars on the balancing side. Again use articulating film to check this.





During protrusion, the dentures are stabilized by the contact of the premolars and anteriors.
Finally, check the esthetic appearance and the patient's phonetics.





Possible mistakes at definition of intermaxilar relationships:

1. mistakes made **during vertical dimension of occlusion** determination
2. mistakes made **because of sagital or transversal mandible displacement**
3. mistakes made **because of displacement of occlusal rims**
4. mistakes made **because of displacement of wax bases from the prosthetic field**
5. mistakes made **because of deformation of wax borders**
6. mistakes made **because of compression of the mucosa of the prosthetic field.**



1 .Mistakes made during vertical dimension of occlusion determination

1. Increasing vertical dimention:

- a) if upper teeth are put in correct position decreasing vertical dimention will be made from lower dental arch (removing artificial teeth and making new occlusal rim);
- b) if upper and lower teeth are put incorect must be removed artificial teeth from both dental arches.

2. Decreasing vertical dimention:

- a) if upper teeth are put correct – on the lower will be put plate of soft wax and vertical dimention is determined again or complete removing lower teeth, making new occlusion rim and determination of Vertical Dimention;
- b) if upper teeth are put incorrect – removing upper and lower teeth, making new occlusion rims and determination of Vertical Dimention.



2. Mistakes at displacement of record base in sagittal or transversal plane

During testing the trial denture in position of centric occlusion **in case of displacement of the mandible forward** at previous stage in the frontal area **between incisors** will be **inocclusal space** characterised for prognaty. At the same time it will be observed **increasing the vertical height of occlusion** because of intercusps contacts in the area of lateral teeth.

In case of mandible displacement distally in the frontal area will be the contact typical for progeny, and **in lateral areas – increasing vertical height of occlusion.**



3. Mistakes made because of displacement of occlusal rims

Depending on direction of displacement (anterior, posterior) and situation of displacement (upper or lower jaw) will be discovered different changes of occlusion characteristic for sagittal displacement of lower jaw. In this case must be made new occlusion rims and new determination of intermaxillary centric relationships.



5. Mistakes because of deformation of occlusal wax border and their correction

May **appear** during fixation of the centric interjaws relationships if the wax bases were not reinforced or made correctly. At setting the wax composition on the model the space between the gypsum model and wax composition and possible balancing of wax composition appear. At setting wax composition of trial denture in the oral cavity appear interocclusal space in frontal area. At the same time increasing vertical height of occlusion is found out. **Correction of this mistake** is done by making new occlusal rims and **repeated determination of the centric interjaws relationships**.



Phases of adaptation to artificial complete denture

V. Kurleandski distinguishes 3 stages of adaptation to the complete denture:

I – irritating stage (from 5 days to 2 weeks)

II – partial inhibition (from the second day to the fifth day after complete denture setting)

III – total inhibition (within the first month after complete denture setting).



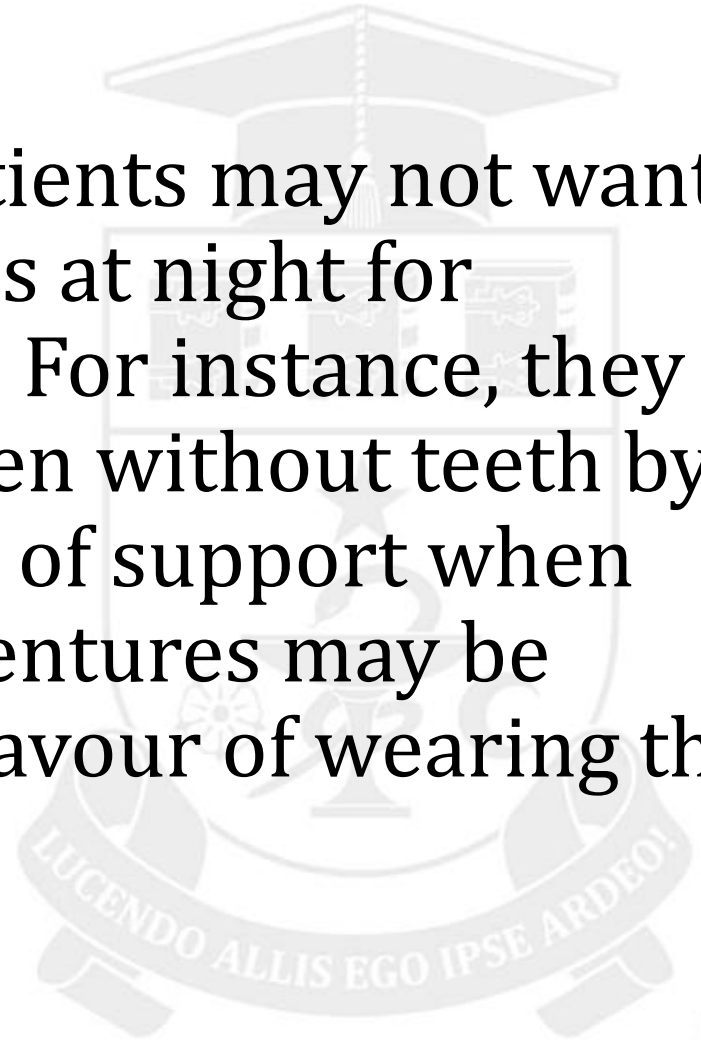


Wearing dentures at night???

- The question of whether or not to wear dentures at night frequently arises. There are arguments in favour and against it so that ultimately the decision lies with the patient. If the dentures are not worn at night, the mucous membrane can relax and recuperate from the pressure exerted by the dentures. Additionally, blood supply improves while the dentures are out of the mouth and the saliva has a chance to moisten the mucous membrane. Parafunctions are not possible in the absence of a bite.



- On the other hand, patients may not want to remove the dentures at night for psychological reasons. For instance, they may not want to be seen without teeth by their partner. The lack of support when swallowing without dentures may be another argument in favour of wearing the dentures at night.





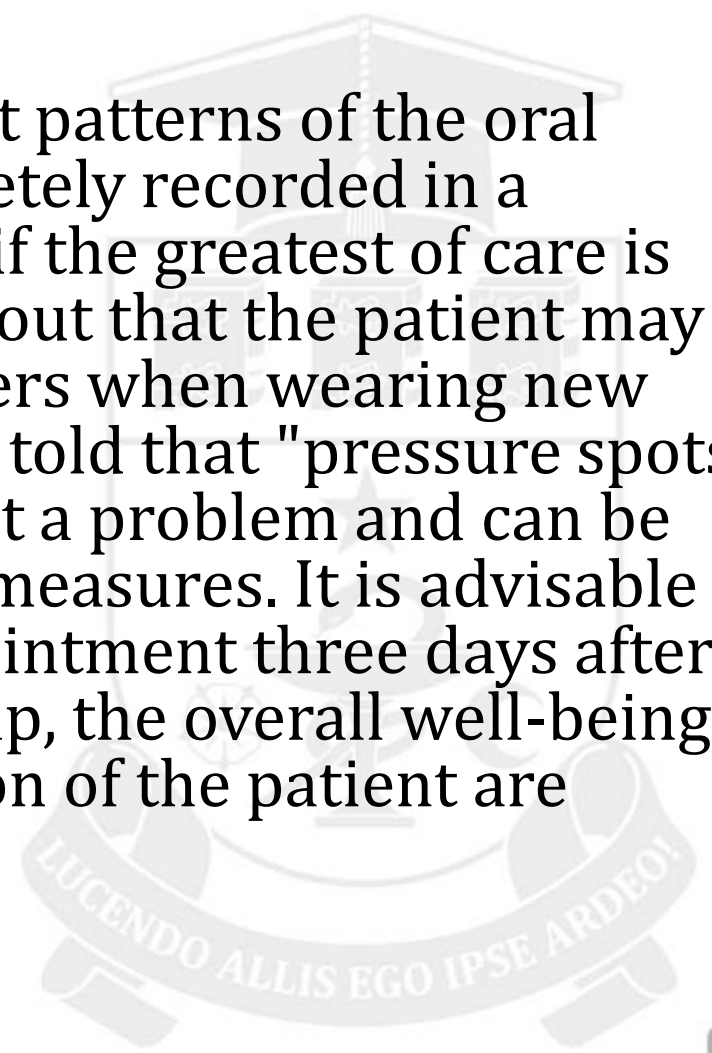
Cleaning

- Make sure that patients are aware of the importance of regular mechanical denture cleaning. Immersing the dentures in cleaning solution does not substitute for mechanical cleaning. Special denture brushes or tooth brushes and abrasive-free denture cleaning pastes, gels or foams are best suited for denture cleaning. Once a week the dentures should be soaked in a denture cleaning solution according to the manufacturer's instructions. Gentle and effective care can be ensured by cleaning the dentures in an ultrasound cleaning device. This method effectively and gently removes soft deposits, tartar and tea/nicotine build-ups. Additionally, the mucous membrane should also be cleaned with a toothbrush every day.



• Post-insertion care

- Since the complex movement patterns of the oral muscles can never be completely recorded in a functional impression, even if the greatest of care is taken, it may never be ruled out that the patient may not suffer from pressure ulcers when wearing new dentures. Patients should be told that "pressure spots" may occur but do not present a problem and can be alleviated with appropriate measures. It is advisable to arrange for a follow-up appointment three days after the insertion. At the follow-up, the overall well-being and the specific oral condition of the patient are assessed.





- Regular denture recall appointments should be scheduled on a yearly, or better still, half yearly basis. Patients tend to forget that even "artificial teeth" need to be checked on a regular basis. Regular check-ups are essential to discover changes in the stomatognathic system in good time and take appropriate measures as necessary.



With early recognition, possible pressure spots or denture stomatitis can be treated effectively and promptly by applying chlorhexidine-containing mouth gels, varnishes and rinses. At the same time, the dentures can be cleaned professionally in the dental practice at the check-up.





**THANK YOU
FOR
YOUR ATTENTION**

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