

Try in step in complete denture

Definition

Preliminary insertion of complete denture wax up (trial denture) to determine the fit, esthetics, maxilla mandibular relation.

Importance:

1-It is the last opportunity to evaluate many of the previous steps already accomplished.

2-It offers an excellent opportunity for patient education and facilitates the patient's acceptance of the finished prosthesis.

Objectives:

1-To check and verify the established maxilla mandibular relationship.

.A) Verify that centric occlusion and centric relation coincide

B) Test for the acceptance of the established vertical dimension of

2-To determine if the positions of the teeth and the contours of the denture bases are compatible with the surrounding oral environment.

3-To verify the occlusal plane level relative to the ala-tragus and interpupillary plane horizontally.

4-To verify tooth selection and arrangement for proper esthetics and phonetics.

5-To make additional interocclusal maxilla mandibular records if needed for further adjustment of the articulator e.g: protrusive interocclusal record.

The steps of the try-in procedure:

.-Extra oral examination of the trial dentures

-Intraoral examination of the trial dentures.

Extra oral examination of the trial dentures

:1-**On the articulators** :the mounted cast is checked for:

a) Maintaining of the vertical dimension of occlusion

- Top of the incisal pin is flush with the upper member of the articulator.

.-The incisal pin is in contact with the incisal table

b) The mounting rings are firmly screwed in their position

c) Moving of the articulator smoothly from centric to eccentric positions
.without cuspal interlocking

d) When the articulator is locked in centric, no other movements are
.permitted other than simple hinge movement

2-The master cast

As the finished denture is processed on the master cast. So the master cast should be:

.A) Has good shape

.B) Free from air bubbles or scratches

C) Free from wax debris which lead to improper adaptation of the trial denture bases leading to false relationships.

D) If there are any undercuts present in the cast, these undercuts should be relieved to avoid scratching the cast by the trial denture bases

3-The trial denture bases: checking the following:

.a-The trial denture bases must be stable

b-The borders of the trial denture base should be smooth, round, and have .no sharp edges

c-Also the border should be shaped to conform to the depth and width of the .sulci

4-The teeth:

1-The dentist responsibility to select the proper shade, and mold of the teeth to determine that the teeth is setted correctly.

2-Elimination of the excess wax to avoid the camouflages of the teeth .relationships to overlook the occlusion

3-The relation of both upper and lower teeth to the opposing ridges must be checked: if there is excessive anterior tooth contact on the articulator, should be corrected to avoid the excessive forces on the maxillary anterior ridge.

4-denture occlusion .

The occlusion of the teeth on the articulator should meet the following in the class I jaw relationship

a-The upper anterior teeth overlap the lower anterior teeth by about 1 – 2 mm, in both horizontal and vertical planes

b-The mandibular incisors do not protrude beyond the labial vestibule, and should present a curve when viewed from the occlusal surface this curve depends on the shape of the underlying alveolus.

c-The lower posterior teeth should be set vertically on the ridge (not lingual to not interfere with the tongue), also the central grooves of mandibular .(posterior teeth should be on the crest of the ridge (better stability)

d-The posterior end of the occlusal plane should be located at the junction between the middle and the distal thirds of the retro molar pad; also the

height of the occlusal plane coincides with the line joining the incisal tip of the mandibular canine to the retro molar pad.

e-Uniformly balanced occlusal contacts between the maxillary and mandibular posterior teeth, and maximum intercuspation between upper and lower posterior teeth when checked from both buccal and lingual aspects.

After being satisfied with the case on the articulator

Intraoral examination of the trial dentures

To reduce the risk of cross- contamination, the trial denture should in a suitable antiseptic solution, washing in running water , before inserted in patient mouth.

1:Checking the trial dentures separately

.a) Trying- in the upper denture

.b) Trying- in the lower denture

2--Checking the upper and lower dentures together

Denture base extension

:a) The labial and buccal extension

-If marked overextension of the flanges, will stretch the sulcus tissues when denture inserted, leading to elastic recoil result in dislodgment of the denture, immediate denture displacement after its seating.

-Also under extension of the upper trial denture, leading to poor physical retention. Correction will usually entail

..making a new final impression

:b) Posterior extension

The posterior border of the upper trial denture base should extended from the hamular notch to the other along the vibrating line of the soft palate, and correctly placed on the master cast. If the posterior palatal seal area is not done before. It should be done at this stage.

Retention

It is noted that the retention of the trial denture is less than that of completed denture, due to

1-.Absence of a posterior palatal seal

2-Poor adaptation of the trial denture base to the tissues

The trial denture should be stay in position when the mouth is opened. Looseness of the upper trial denture make it impossible to carry out an accurate assessment of the occlusion {may use denture fixative} especially, in patients with unfavorable anatomical factors.

?How to test the retention of the upper denture

.Seat the upper trial denture with a firm upward and backward pressure

Allow the tissues to settle around the denture ☺

Grip the labial and lingual surfaces of the upper denture teeth between ☺ the thumb and forefinger

Apply a firm downward vertical pull to dislodge the denture away from ☺ the tissues, {if the retention is good}.

Stability

It is tested by applying pressure in a tissue ward direction with the ball of the index finger in the premolar and molar regions on each side alternately. This pressure must be directed at right angles to the occlusal surface .where displacement does occur.

Height of the occlusal plane

A) occlusal plane is high in relation to the plane of the tongue)

B) Corrects height of the occlusal plane in relation to the tongue)

❑ If the plane of occlusion is well above the tongue, the patient may have significant problems shifting food onto the occlusal surfaces of the teeth while eating. This impairs the patient's masticatory efficiency and comfort .while eating

The greater the height of the lower denture, the longer will be the lower anterior teeth, so greater the surface exposed to the pressure of the lower lip.

❑ If the occlusal plane is too low, then the tongue will completely overlap the .lower teeth and cause tongue biting

And then checked the lower denture for extension .retention and stability.

Checking both upper and lower dentures together

It is usually advisable to insert the lower trial denture first and then the upper because there is less chance of having the upper denture drop down

A – Evaluation of the vertical dimension of occlusion

,To evaluate the vertical dimension

❑ The patient should be seated in an upright position

❑ The patient head is not supported by the headrest (the headrest may effect the physiologic rest position of the mandible so, it effect the amount of interocclusal distance.

A combination of methods to evaluate the vertical dimension of occlusion would likely give a more accurate evaluation after the artificial teeth have been arranged. Some of these measures include:

1-Facial measurements

2-Phonetics

3-Esthetics

4-patient's proprioception

1- - Facial measurement

Instruct the patient to wet his lips, swallow, and then allow his mandible to part his lips to see whether his ,rest. While the patient is in resting position .teeth are touching, or there is adequate space between his teeth.

If the teeth are in contact while the mandible is at rest, the vertical dimension of occlusion is high and need a new record of vertical dimension of occlusion.

2 – Phonetics

It is difficult to locate speech problems at the try-in stage because the tongue wax as they do with the finished and lips do not react the same with the and polished denture base. But to accept the correct vertical dimension, the patient

.should put through a series of phonetic test

1-:"Evaluation of the "closest speaking space"—

Ask the patient to say s,s,s or count from 50 to 60

a-If the teeth make contact during speech, indicate that there is not enough .interocclusal distance between the teeth(increase vertical dimension)

b-If there is whistling during saying sss, so the vertical dimension of occlusion may need to be increased or the position of the anterior teeth changed.

..c-thickness of palatal area of upper denture may affect .

2-"Instruct the patient to say "th –

{The tongue should protrude to occupy the interocclusal space}

-If the interocclusal space is less than 2 – 4 mm the anterior teeth may be placed too far anteriorly or the vertical overlap may be so great that there is insufficient space for the tongue to protrude between the teeth.

3- Instruct the patient to pronounce "m" rapidly

The mandible should remain stationary while the lips contact each other to .make sound

4-"Instruct the patient to say "f" or "v

To evaluate both the anterior – posterior and superior – inferior position of .the maxillary teeth

a-If the incisal edges of the upper anterior teeth contact the lingual side of the lower lip, so the upper anterior teeth are set too far lingually or the lower anterior teeth are set too far labially.

b-Difficulty in making contact between the lower lip and upper teeth usually indicates that the maxillary anterior teeth must be moved downward.

c-The upper teeth are placed too far inferiorly if the incisal edges depress the lower lip when the "f" and "v" sounds are formed.

:3– Esthetics

Facial form is an important guided to whether the patient is at the correct vertical dimension of occlusion

☐ If the appearance of the patient from the front face and the lateral view approximation of the nose and when the mouth is closed is like an old man .the chin) this indicated low vertical dimension

☐ If the patient appear with his facial muscles are stretched, this indicated .that there is high vertical dimension

:4 – Patient's proprioception

:Ask the patient

☐ If he has the feeling that the teeth touch before his jaws are closed far .enough, this indicate high vertical dimension

☐ If he feels that he closed too far before the teeth touch, this indicate low .vertical dimension

☐ If he feels that the teeth touch at about the right moment this means that .it has correct vertical dimension

:Correction of the vertical dimension of occlusion

☐ If the interocclusal distance is too large it may be corrected by adding appropriate thickness of wax to the occlusal surfaces of the posterior teeth of the lower denture, (adjusting the wax to produce an even occlusion at the desired occlusal face height and then recording the jaw relationship in .(centric relation)

☐ If the interocclusal distance is too small or absent, posterior teeth will be and replaced with a new wax ,removed from one of the trial dentures occlusion rim before a new record is made. However note should be taken of the relation between the upper and the lower anterior teeth, if it reached a point which prevent more closure, so the anterior teeth should be removed from the lower trial denture and replaced with wax occlusion rim {occlusal plane should be examined, if it is correct all alterations should

be done on the lower occlusal plane, if it is not correct so a new one is made}. The wax occlusion rim is trimmed to occlude with the opposing .teeth at the new vertical dimension.

:Procedures

☐ The trial dentures are inserted in the patient mouth; adjust the occlusion rim until the patient closes the mouth to

bring the upper posterior teeth into contact with the occlusion rim on the .lower trial denture in the centric jaw relation When the new position of occlusion is achieved, adding softens wax to the occlusion rim and the .patient is asked to close back in the correct centric position

☐ After making the new registration, the lower cast is detached from the articulator and is remounted on the articulator by means of the new centric record.

B – Evaluation of the centric occlusion position

☐ If the maxillo mandibular relation wax correctly recorded, the teeth should inter digitate in the mouth in exactly the same manner as they do on the articulator, when both condyles occupy their most posterior functionally .unstrained position in the glenoid cavity.

☐ If the opposing cusps fail to inter digitate, when the denture is inserted in the mouth, this will indicate that the previous centric jaw relationship record was incorrect. In such a circumstance a new centric jaw relationship .record will have to be recorded.

:To check the centric occluding relation

Ask the relaxed patient to touch the posterior edge of the upper denture .base with the tip of his tongue and slowly close the teeth together.

The lower trial denture can be stabilized in its place by placing the index fingers of both hands on the trial denture Flanges in the premolars region, while the thumbs are held gently under the lower border of the mandible

When the jaws are in centric relation, the teeth should inter-digitate accurately and each cusp should be situated in its corresponding fossa. The tip of the cusp should meet the deepest part of its corresponding fossa. But the initial contact between teeth is cusp incline to cusp incline, an antero posterior shift of the mandible or denture is affected. This means that the centric relation of the jaws is not in harmony with centric occlusion of the teeth. If there will be an antero-posterior shift of the mandible or denture and the teeth seem to occlude properly. This is misleading and may get one of these possibilities

- ❑ The mandible will be shifted forwards or laterally out of centric relation position and the teeth occlude in centric occlusion. Here centric occlusion does not coincide with centric relation
- ❑ The lower denture will be shifted out of its place, while the mandible remains in centric relation. This is a wrong centric occlusion.
- ❑ Anterior displacement of dentures is more likely to occur with the lower denture, as its retention is poor compared with that of the upper denture.
- ❑ Both upper and lower dentures are shifted out of their places, while the jaws remain in centric relation. In this case the teeth are in centric occlusion, but the dentures are not properly seated on their supporting area. This is a wrong recording of centric occluding relation.

Correction of centric occlusion / relation disharmony

- ❑ When errors of occlusion are noted at the try-in stage. A new recording of centric relation position should be

obtained after the teeth from one of the dentures have been removed and replaced with a wax occlusion rim

❑ If the teeth are not removed there is a danger that the cusps will guide the mandible back into an incorrect tooth position.

❑ Before carrying out any modifications in the trial dentures the dentist should determine first whether or not the occlusal plane of the upper trial denture is correct.

❑ If it is, the alterations will be carried out on the lower trial denture. If the will have to be modified by plane is not correct, the upper trial denture. resetting the anterior teeth or replacing the teeth with a wax occlusion rim

:Procedures

❑ The trial dentures are returned to the articulator and all the posterior teeth from one of the dentures are removed and replaced by a new wax occlusion rim which should be trimmed to occlude with opposing posterior teeth without altering the original vertical dimension as set on the articulator.

❑ The trial dentures are then placed in the mouth and the patient is asked to close them together, thus, impressing the cusps of the opposing teeth into the soft wax.

❑ If any contact of the anterior teeth occurs the offending lower anterior teeth should be removed and the position is retaken.

❑ After making the new centric registration, the lower cast is detached from the articulator and is remounted with the new centric relation record.

❑ Dentures should then be checked at a subsequent visit of the patient for trying-in the dentures before processing them.

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