

Lec.

Class: 2

OCCLUSAL CORRECTION

Artificial teeth move about to a minor degree during waxing and flasking procedures.

This tooth movement is due:

1. Dimensional changes in the wax denture base.
2. The investing materials (during flasking).
3. Resin denture base changes during curing.

Causes of errors in occlusions:

1. Inaccurate maxillo-mandibular relation record by the dentist.
2. Errors made in the transfer of maxillo-mandibular relation from the patient to the articulator.
3. Failure to use the face-bow.
4. Changing in the vertical relation on the articulator.
5. Failure to seat the occlusion rims correctly on the cast (ill-fitting record base).
6. Incorrect arrangement of the posterior teeth.
7. Failure to close the flask completely during processing.
8. Dimensional changes of the acrylic resin (denture base material).
9. Warpage of the dentures by overheating them in polishing stage.

These errors result from processing changes can be eliminated after flasking and before insertion of the dentures in the patient's mouth, correcting the occlusal surface of the teeth by selective grinding.



Selective grinding:

It is a modification of the occlusal forms of the teeth by grinding according to a plan.

✚ How to mark Occlusal errors that need grinding??

Selected places on the occlusal surface marked by spots made by articulating paper (colored paper), or marked by parts of the teeth cutting through a thin layer of wax placed over the teeth.



It is preferable to use wax sheet because premature contact will cause the cusps to penetrate through the wax indicating heavy contact is present.

Correction (grinding) of occlusal errors:

Two methods are generally used:

- Intra-oral (inside the patient mouth).
- Extra-oral (on the articulator in the laboratory).

Disadvantages of intra-oral method correction:

1. The denture bases will be shifted due to the resiliency of the soft tissues.
2. It is difficult to see the errors because they are obscured and distorted by soft tissues.
3. The articulating paper marks may be incorrect due to the presence of the saliva.

4. The CR depends entirely on the ability of the patient to move the jaw correctly.

Advantages of extra-oral (on the articulator) correction:

1. More visible.
2. Easily located by articulating paper marks which can be easily made on dry teeth.
3. Easily corrected by selective grinding.
4. Make the correction away from the patient thus there is a psychological advantage.

Procedure to correct the occlusion:

Before removal the dentures from the cast (after flasking), as follows:

- Replace the upper and lower casts and dentures on the articulator.



- Re-established the Occlusal vertical dimension on the articulator an opening (increase VD) in the vertical dimension can be noted by corresponding opening in the relationship of the incisal pin to the incisal table (the pin should contact the table).



- Refine and equalize the centric occlusion.
- Perfect the working and balancing occlusions.
- Correct the protrusive occlusion.

Rules for selective grinding:

1. When perfecting centric occlusion, Never grind a centric cusp tip, always grind the opposing fossa unless this cusp contacts prematurely in all excursions movement.



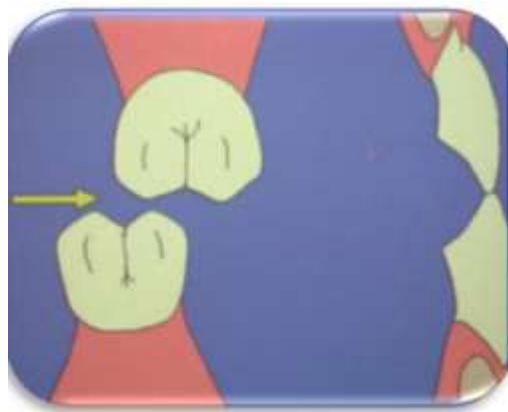
2. When perfecting working occlusion utilize the **BULL** rule: grind the **b**uccal cusp ridges of the **u**pper tooth and the **L**ingual cusp ridges of the **L**ower tooth.
3. When to perfect balancing occlusion never grind the interfering cusp tips but grind the cusp inclines.



4. When perfecting protrusive interference

If the anterior teeth have heavy contact with no posterior contact:

Reduce the labio-incisal surfaces of the lower teeth and palatal surfaces of the upper teeth.



If the posterior teeth have heavy contact with no anterior teeth contact:

Reduce distal inclines of upper cusps and mesial inclines of lower cusps



