

University of Basrah

College of Dentistry

Department of prosthetic dentistry

5th stage / lec 3

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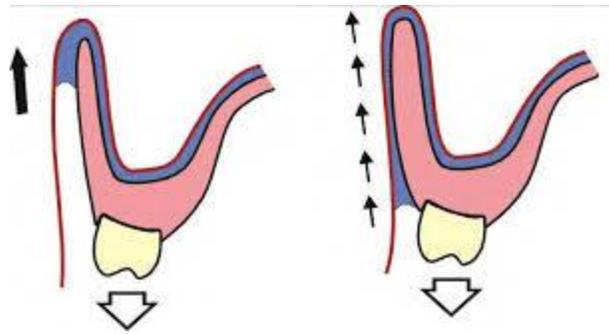
1. Complete denture impression:

Complete denture impressions Dental Impression: a negative imprint of an oral structure used to produce a positive replica of the structure to be used as a permanent record or in the production of a dental restoration or prosthesis.

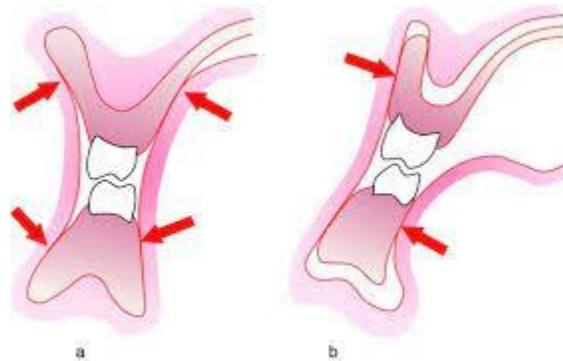


2. Objectives of impression making: Complete denture impression procedures must provide five objectives:

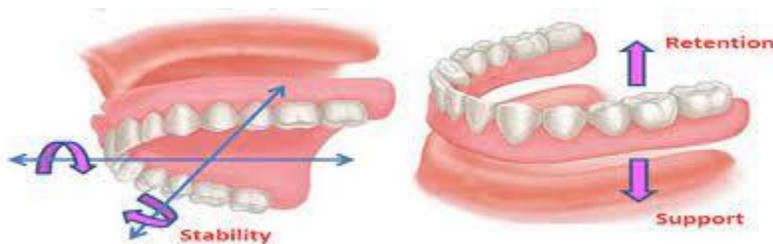
- a. Retention: This is the resistance of the denture to removal from the mouth by resisting displacement forces at a right angle to the occlusal plane. Retention is the constant relation of the denture base to underlying soft tissues. *Retention must hold the denture in its position when it is set at rest



b. Stability: Is the quality of the prosthesis to be firm, steady, or constant to resist displacement by functional horizontal or rotational movement. stability is the relation of the denture base to the underlying bone. Stability must resist displacement by rocking when a force is applied to teeth over a limited area



c. Support: Is the quality of the prosthesis to resist displacement from the denture supporting foundation; therefore, the greater the amount of area covered the greater the support. The best support for dentures is the compact bone covered with fibrous connective tissue.



Retention = Denture base + Soft tissue.

Stability = Denture base + Bone.

Support = Denture base + Bone + Soft tissue

- d. Aesthetic: Border thickness should be varied with the need of each patient in accordance with the extent of residual ridge loss. The vestibular fornix should be filled, but not overfilled, to restore facial contour.



- e. Preservation of the residual alveolar ridge and soft tissue: of the remaining residual ridge is physiologically accepted that with the loss of the stimulation of the natural teeth, the alveolar ridge will atrophy or resorb.

3. Prosthodontists should keep in mind the primary impression:

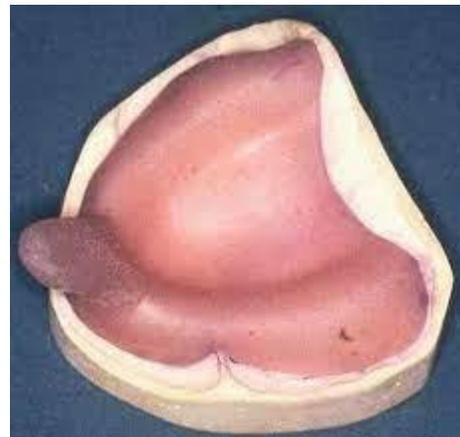
it is a negative likeness made for the purpose of diagnosis, treatment planning, or the fabrication of a tray. It is the first impression made for the patient and from which the study cast was produced. This impression is obtained by a stock tray. For the upper stock tray, the posterior border of the tray should cover the maxillary tuberosity and hamular notch, and anteriorly should include the anterior-alveolar ridge. For the lower stock tray posteriorly should cover the whole area of the retromolar pad area and anteriorly include the alveolar ridge.

Materials used for making primary impression:

1. Impression compound.

2. Alginate impression material.
3. Rubber base impression material (heavy body).

Primary cast (study model or diagnostic cast): a cast formed from a preliminary impression for use in diagnosis or the fabrication of an impression tray.



4. The special tray:

will be constructed on the primary or study cast which is used to make the final impression. The impression represents the completion of the registration of the surface or object, The final or secondary impression for edentulous patients that use it for complete denture construction is a negative likeness or registration of the entire denture bearing, stabilizing area, and border seal area of the mandible and

maxilla for the purpose of fabricating a prosthesis. The final impression is made with a special tray and it is used for making master cast which must be poured with stone material.



The impression material used must be Mucho static and highly accurate such as

- a. Zinc oxide eugenol impression material (ZOE).
- b. Alginate impression material.
- c. Impression plaster.
- d. Elastomers impression material: 1- Polysulphide (rubber base). 2- Poly ether.
3- Silicon (light body).
- e. Waxes.

The techniques used for making the final impression:

1. Monostatic impression technique (non-pressure technique).
2. Muco-compression or Functional impression technique (pressure or closed mouth technique).
3. Selective pressure impression technique.

5. Master cast (definitive or final cast):

A replica of the tooth surfaces, residual ridge areas, and or other parts of the dental arch and or facial structures used to fabricate a dental restoration or prosthesis.

6. *Common faults in impression making:*

- a.** Poor selection of the tray.
- b.** Insufficient material loaded in the tray.
- c.** Excessive material loaded in the tray.
- d.** Failure to press the tray completely to position (insufficient seating pressure)
- e.** Excessive seating pressure.
- f.** Incorrect position of the tray before final seating it (Un centralization).
- g.** Obstruction of the proper flow of the material by lips, cheek or tongue.