

Immediate denture

Immediate denture is "any removable dental prosthesis fabricated for placement immediately following the removal of natural tooth.

PATIENT SELECTION:INDICATION

١. Hopeless remaining teeth(caries, periodontal disease or malocclusion).
٢. Educated patient with daily social .
٣. patient with stable health condition(the patient for immediate denture is the philosophical type, their motivation for denture is the maintenance of health &appearance).
٤. patient don't mind some additional visits or cost.

CONTRAINDICATIONS

١. patients who are in poor general health or who are poor surgical risks (e.g., post irradiation of the head and neck regions & cardiac or endocrine gland disturbances).
٢. patients who are identified as uncooperative because they cannot understand and appreciate the scope, demands, and limitations to the course of immediate denture treatment.
٣. patients is not willing to accept the treatment mentally &psychologically.
٤. patient at risk from bacteremia.
٥. patient with recurrent history of post extraction hemorrhage.
٦. the presence of oral sepsis, acute periapical or periodontal diseases, extensive bone loss.
٧. patient don't mind being edentulous for a period of time till complete healing.

Types of immediate dentures: According to treatment plan:

١. **Conventional (or classic) immediate denture (CID):** After this ID is placed and after healing is completed, the denture is refitted or relined to serve as the long-term prosthesis.

٢. **Interim (or transitional or nontraditional) immediate denture (IID):** After this ID is made and after healing is completed, a second new CD is fabricated as the long-term

prosthesis. The interim prosthesis designed to enhance esthetics, stabilization and/or function for a limited period of time, after which it is replace.

Advantages for all types of IDs :

A. Related to the patient:

١. The primary advantage of an immediate denture is the maintenance of a patient's appearance because there is no edentulous period.
٢. Circumoral support, muscle tone, OVD, jaw relationship, and face height can be maintained. The tongue will not spread out as a result of tooth loss.
٣. Less postoperative pain & bleeding is likely to be encountered because the extraction sites are protected.
٤. The patient is likely to adapt more easily to dentures.
٥. Speech and mastication are rarely compromised, and nutrition can be maintained.
٦. Overall, the patient's psychological and social well-being is preserved.



B. Related to the dentist:

١. It is easier to duplicate (if desired) the natural tooth shape and position, plus arch form and width. If desired, the horizontal and vertical positions of the anterior teeth can be more accurately replicated.
٢. Achieving good appearance.
٣. Hemostasis, when ID are inserted, they act as a bandage & help to reduce bleeding.

DIAGNOSTIC STEPS MUST INCLUDE:

- **Good oral hygiene** is essential before starting any prosthodontics treatment.
- **Patient's systemic condition** is very important to check the general health of the patient because multiple extraction may not be tolerated by all patients. Patient under medical control & do not interfere with the steps of denture construction including several teeth extraction can be included, medical consultation is advisable.
- **Full dental history** must be recorded in the case sheet.
- **Periodontal condition** of the remaining teeth must be assess, this must include teeth mobility, measurement of the pockets; because this might affect surgical step of treatment course. Severe cases of periodontal disease may suggest some surgical correction after extraction to have well contoured residual ridge covered with firmly attached mucosal tissue.
- **Radiographic examination** is essential for immediate denture patients. Periapical radiograph may be useful for localized area; OPG view give general view for both jaws in single image.
- **Teeth mold & shade** must be recorded, proper communication with the patient about his teeth shade & form is essential furthermore teeth alignment & any individual variations as diastema, spacing, rotation of the teeth if the patient like to preserve same appearance or improvement could be suggested by you for better appearance.
- **Occlusal plane adjustment** is necessary because the factors that necessitate tooth extraction are often associated with occlusal discrepancies. These also interfere with the centric relation record as well as with the proper determination of occlusal vertical relation. Proper location of the low & high lip lines must be determined to determine the required changes in teeth position or angulations.
- **Presence of any infection or inflammation** in the soft & hard tissues. Periapical abscess, granuloma & cysts may make the estimated tissue changes at the time of extraction & healing & remodeling process unpredictable, this may increase of the risk of unfitted.
- **Previous prosthesis:** if present must be checked as an additive reference for the jaw relations or teeth selection. It also may help the dentist to explain some of treatment or correct some errors.

- **Diagnostic cast** is essential, that could serve a lot in the treatment plan & communication with the patient, also can be used as pre-extraction record.

- All ID patients must have good oral prophylaxis, proper scaling & good oral hygiene, this will reduce post-operative edema & infection. Other treatment as restoration crown & bridges or even RPD all must be one coincidence with ID planning.

- In the diagnosis step; with all the collected information you have to decide type of surgical procedure, ID can be constructed with one of the surgical procedure:-

١. Extraction of teeth only.

٢. Extraction of teeth with alveoloplasty. In some cases simple correction may be needed at the sight of extracted teeth to improve the shape of the alveolar process in order to facilitate & improve denture objectives, in this cases surgical splint construction important.

Impression:

Primary impressions:

Type one: single full arch custom tray

This technique can be used for conventional ID & the only tray used for interim ID, also: it is the used when the patient have anterior teeth only or ant. & post. remaining teeth.

▪ The ١stry cast outline the tray extension to be shorter than the vestibular depth by ٢ mm.

▪ The remaining teeth must be covered with single layer of sheet wax; then second layer is used to cover all the area needed to be recorded by the impression & covered with the denture; this technique usually used in conventional ID while in interim ID all teeth & denture foundation area are blocked using ٢ layers of wax.

▪ A stops effect is provided by making ٤-٥ regular holes through the wax, symmetrically distributed anteriorly & posteriorly.

▪ Special tray is fabricated and covering the denture bearing area and remaining teeth, by using the cold cure acrylic resin, & the handle is attached in the anterior region.

▪ Make three tissue stoppers one in the incisal edge and two in posterior.

- Check special tray in the patient mouth.
- Border molding of the edentulous area.
- Take impression by alginate for the edentulous area and remaining teeth.
- Pour impression and construct the master cast.

Two trays or sectional impression tray (Split impression technique

This method used only when the posterior teeth are not present .It involve fabricating two trays on the same cast ,one in the posterior which is made like in complete denture (close fitted).Fabricate special tray for edentulous area only, &the handle can be placed on the palatal surface. Border molding, make impression for edentulous area by ZOE, silicon or rubber base, remove impression after setting and remove excess material, replace the impression in the patient mouth, select proper stock tray and make an overall impression. Remove the impression as one unit& pour the impression and fabricate master cast. The most important thing in sectional tray technique is the accuracy &proper seating of the trays &reassembling both, care must be taken not to be distorted this assembly during tray removal from the mouth or during pouring therefore it's advisable to beed &box the impression before pouring.

Try-in stage

- A try-in procedure is not always possible (when all teeth or number of posterior teeth are present). But the mounting casts should still be confirmed at patient visit.

١. Set the posterior teeth .

٢. the denture base and posterior teeth are try-in the mouth :

-verifying vertical dimension of occlusion

-centric relation as with complete denture

٣. record land marks on the cast to confirm the patient's esthetic

A : midline or newly selected midline is recorded on the base area of the master cast.

B :the anterior plane of occlusion

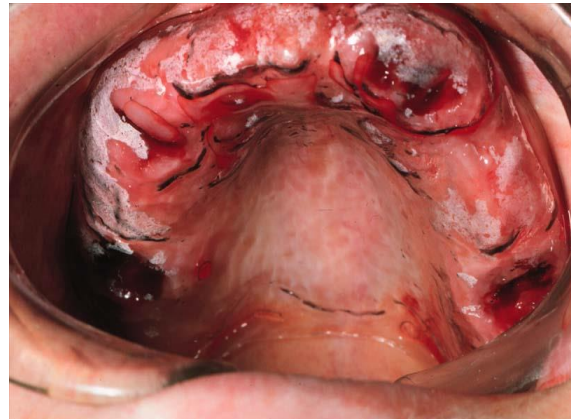
C :ala-tragus plane should be located and noted .

D :high lip line should be determined on the cast.

ξ.anterior teeth selection is confirmed with patient.

Surgical Template:

- A thin, transparent form duplicating the tissue surface of an immediate denture and used as a guide for surgically shaping the alveolar process . it is essential when there is a need to do some alveolar corrections after teeth extraction or ridge recontouring or correction of the interseptal bone or in multiple teeth extraction. Make alginate impression to the cast after trimming, pour the impression, make the clear template processes either by heat or light, vacuum from & sprinkle-on method can be used also.
- **Advantages:** help to remove any expected pressure area at the sight of extraction thus minimize insertion time & adjustment at the insertion time.



Setting the anterior teeth

If the arrangement of the natural anterior teeth is to be reproduced in denture a recording of their position must be obtained in one of the following ways:

- ✓ **First way:** produce a labial index of the natural teeth before they are cut off the cast.



Position of the anterior teeth recorded by a silicone putty index.