IMMEDIATE DENTURE

Is a denture constructed before the extraction of the teeth which it replaces and fitted immediately after the teeth are extracted. 
An immediate denture either conventional or interim immediate denture.
Conventional immediate denture: intended to be relined to serve long-term.
Interim immediate denture (transitional): after healing a second new complete denture is fabricated as a long-term prosthesis.

Advantages of immediate dentures:
1-the edentulous period is eliminated and this has a great social and psychological significance.
2-A very natural and functional result can be obtained as the lip position, occlusal plane, vertical height and occlusion can be exactly reproduced. Some times alteration of the setting immediate denture is needed.
3-function of mastication is maintained.
4-there is little interference with speech.
5-there is little interference with T.M.J and its function.
6-facial contour and tone of facial muscles is maintained.
7-change in tongue shape is prevented.
8-no unnatural mandibular movement will develop.
9-little interfere with diet.
10-size, shape, shade and position of teeth can be accurately reproduced.
11-Resorption of alveolar bone is lessened due to maintenance of function.
12-sockets are protected and healing is quickened.
13-patients fear the edentulous state and immediate dentures will encourage them to lose (diseased) teeth they might otherwise wish to retain.

Disadvantages of immediate dentures:
1-Alveolar bone resorption immediately after extraction of teeth that the denture will be poor retention and relining needed. It is not unusual to do two relining in the first six mouths.
2-if the natural teeth are mall-occluded then accurate reproduction is not possible.
3-Additional cost and time.
4-general health my not permit multiple extraction.

Indications for immediate dentures:

a. Patient is socially active
b. Wishes to retain their natural appearance - Minimal bone loss.
c. Good health
d. Available time and can afford multiple visits
Contraindications for immediate dentures:

a. Patient is unavailable for appointment or financially underprivileged.
b. Patient is debilitated.
c. Systemic conditions preclude multiple extractions.
d. Emotionally disturbed or diminished mental capacity.
e. Indifferent patients.
f. Patients with extensive bone loss.

Main types of immediate denture according to construction:

1- Anterior teeth socketed immediate denture (open face design.)
   Advantages:
   a. Very natural appearance.
   b. Easy to insert.
   c. Exact reproduction of tooth position.
   d. Easier to set teeth in laboratory.
   e. Not interference with lip musculature.
   Disadvantages:
   a. Poor retention and inadequate support.
   b. Natural appearance is not long maintained.
   c. Denture has short life.

2- Labial flange without alveolectomy immediate denture.
   Advantages:
   a. Good retention and support.
   b. Rapid healing with smooth ridge.
   c. Easy in rebasing.
   d. Stronger denture.
   Disadvantages:
   a. Poor appearance due to labial fullness.
   b. Difficult in case of undercuts.
   c. Lack of space around necks of teeth and so denture teeth are often shortened after final waxing.

3- Labial flange with alveolectomy immediate denture.
   Indications:
   a. Prominent premaxilla which prevent insertion of a flanged denture.
   b. Limited anterior inter-alveolar space and deep vertical overlap.
   Contraindications:
   a. Fairly severe surgical task.
   b. Increase in resorption following labial cortical bone removal.

4- Labial flange with alveolotomy immediate denture.
   Advantages:
   a. No cortical bone is removed and post-surgical resorption is reduced.
   b. Surgery is less traumatic than alveolectomy.
   c. Less interference with facial form.
   Disadvantages:
   a. The undercut cannot always be completely eliminated.
5-Post-immediate or delayed immediate denture.

*Used to replaced posterior and anterior teeth at the same time, and where excessive bridges or implants have to be removed.*

**Clinical and laboratory procedures:**
1- selection of patient, the patient should know the advantages and disadvantages of immediate denture
2- teeth are cleaned and primary impression is taken with stock try using elastic impression material (mainly alginate).
3- study cast is poured with plaster.
4- Special tray is fabricated either sectional tray or single special try.
5- final impression is taken for the edentulous and the dentures area either one step or two steps to get accurate final imp. And master cast is done.
6- record base is fabricated vertical and horizontal jaw relations are taken of the patient and casts are mounted on articulator.
7- setting of teeth done of the edentulous span and try in done in the patient mouth.
8- cast preparation for setting the artificial teeth in the dentulous region according to the type of the immediate denture:

**A-ing the socketed design**

1- remove the tooth to the level of the gingival margin.
2- deepen the socket 1- 1.5 mm leaving the margins.
3- depen the labial part of the socket a further 1- 1.5 mm and lightly scrape the labial margin
4- set the artificial teeth alternatively in the position of the natural teeth.

Place the teeth directly on the wax. Alternative placement to retain orientation. It is often necessary to grind the teeth substantially to get them to fit into the a valuable space.
B-in the flanged design without alveolectomy  the labial part of the gingival margin is scarped and sockets reduced 1-1.5 mm and setting done. If the arrangement of the natural anterior teeth is to be reproduced in the denture, a record of their position must be obtained in one of the following ways:

(1) Produce a labial index of the natural teeth before they are cut off the cast. The index can be produced quite simply by moulding silicone putty against the labial surface of the teeth and ridge on the cast. The artificial teeth are then set into the index while it is held against the cast.

(2) Remove teeth singly from the cast and immediately wax an artificial tooth into position so that the adjacent teeth serve as a guide to the position of the artificial replacement.

(3) Scribe guidelines on the cast recording the position, angulation and incisal level of the natural teeth.

Once the artificial teeth have been positioned, the flange is added in wax before the denture is processed.

C-in labial flange with alveolectomy design

The most common indication for an alveolectomy in association with the fitting of immediate dentures is the reduction of a prominent premaxilla to allow a more favourable placing of anterior teeth on the dentures. A clear acrylic template is processed on a duplicate of the working cast trimmed to produce the desired ridge form. The template is used as a guide to bone removal during surgery in the same way as described for an alveolotomy following interseptal alveolectomy.

socket are carved deeper and labial plate is reduced and form smooth rounded labial contour ((do not scrap palataly and lingually)) then an impression is taken to the master cast and a surgical template in a clear acrylic base plate processed on the second cast after trimming and used to check the pressure areas prior insertions of immediate denture.

Setting of teeth done after identification the position of the natural teeth by a pen on the cast for the long axis of each tooth and the vertical overlapping.

D-labial flange with alveolotomy. Alveolotomy following interseptal alveolectomy

This procedure is intended to eliminate moderate labial alveolar undercuts so that a flanged denture can be used without that flange distorting the upper lip unduly. The denture is constructed on a working cast which is trimmed to the anticipated contour of the ridge after surgery as follows:
The gingival margins are marked and the teeth removed.

Guidelines are drawn on the cast.

(a) A line is drawn on the crest of the ridge, passing across the center of the sockets of the incisors and through the junction of the labial third and palatal two-thirds of the canine sockets.

(b) A second line is drawn horizontally along the labial aspect of the ridge; it is placed approximately two-thirds down the length of the shortest tooth root, usually the lateral incisor, and is continuous around all the teeth at that level.

All that part of the cast contained within these two lines is trimmed away and the edges are rounded over.

A clear acrylic template is processed on a duplicate of this cast and is used as a guide to control the amount of bone removal at operation.

The surgical procedure involves:

(1) Extraction of the teeth.

(2) Removal of the associated interseptal bone.

(3) Collapse of the labial cortical plate of bone and mucoperiostium, back into the resulting ‘gutter’.

(4) Insertion of the clear acrylic template to check if bone removal has been sufficient.

Blanching of the mucosa is clearly seen beneath the template in any area where there is excessive pressure.

(5) Further bone removal, if necessary, until re-insertion of the template ceases to cause blanching.

(6) Suturing of the sockets and insertion of the immediate denture.

E-delayed immediate denture

1- Set the artificial teeth alternatively on the cast without carving the sockets of teeth.

2- A few days after extraction of all the natural teeth apply zinc oxide eugenol impression material in the inner surface of the trial denture and insert it in the patient mouth in the accurate centric occlusion.

3- Cast the impression and processing of the denture is done.

Patient’s instructions:

The First 24 Hours

- Do not remove denture until next appointment (usually 24 hours).

- If a denture comes out replace it immediately, or swelling may make it difficult to replace it in your mouth.

- A certain amount of bleeding after surgery is normal. Slight oozing may occur for 24 hours after surgery. If there is excessive bleeding, call your dentist.

- Some discomfort usually occurs during the first 48 hours. Take the pain medication that has been recommended, as needed.

- For swelling, apply ice wrapped in a towel over the swelling. Keep the cold on for 10-15 minutes, then off for 10-15 minutes. Contact your dentist if swelling persists longer than 48 hours.

- Some facial discoloration is normal after surgery. This will disappear shortly.

- Small, sharp bone fragments work their way through the gum during healing. These usually fall out without intervention, but if they become annoying, they can be removed.

- Eat soft foods & liquids for the first 24 hrs. Gradually begin eating firmer foods.
- Refrain from smoking, drinking alcohol, using a straw, vigorous rinsing or doing vigorous activity during the first 24 hours. These activities could interfere with clot formation and slow healing.

After 24 Hours
It takes time to adjust to new dentures. Some things to remember:

**Fullness**
A sense of fullness may be noted. Your tongue and muscles will adapt and this feeling will subside, usually within one to two weeks.

**Eating**
It takes time to adapt to chewing with new dentures. Your bite will be different, and your muscles may want to chew like you did with your old teeth. Eat softer foods at the start. Cut food up into smaller pieces, and chew more slowly until you develop new chewing habits.

Place a small portion in your mouth and chew mostly with the back teeth. Keep away from bulky, hard and sticky foods until you get used to chewing with your new dentures.

**Speech**
Occasionally there can be a temporary difficulty with speech. Practice by reading aloud. Your speech will soon return to normal. If the position of your teeth have been changed dramatically, you may take longer to get used to speaking with the new dentures.