

Clinical Practice Guideline For
***The Prosthetic
Department***



INTRODUCTION

Removable prosthodontics is the branch of dental art and science pertaining to the restoration and maintenance of oral function by replacement of missing teeth and structures with artificial devices.

Prosthodontics is often divided into fixed prosthodontics (crown and bridges) and removable prosthodontics (partial and complete dentures).

- Removable partial denture is an appliance which restores a partial loss of natural teeth and associated tissues and which receives its retention and support from the natural teeth and mucous membrane
- A complete denture is an appliance that replaces the missing hard and soft tissues

INDICATIONS:

- Restoration of appearance
- To assist in maintaining masticatory efficiency
- Restoration of speech to normal
- Maintenance of the health and integrity of the soft tissues of the oral cavity
- To prevent/lessen alveolar resorption
- To maintain the integrity of the dentition by preventing drifting/tilting or over-eruption of remaining teeth
- To prevent excessive attrition
- To maintain the “neutral zone”

PROSTHETIC ASSESSMENT

A) Personal details

Name; Sex; Age; Occupation;

B) Social Hx

Habits (clenching, bruxism); Smoker/ Non- smoker; Alcohol

C) Dental Hx

Denture wearer; Frequency of brushing, Type of tooth paste/ tooth brush, Last visit to dental clinic

E) Medical Hx

History of any medical condition(s), Patients' physicians contact; Drug protocol

E) Clinical Examination (*refer to assessment form*)

Extra oral (Head, neck, lymph nodes, facial symmetry, TMJ, muscles, lips)

Intra ora :

Soft tissues: buccal mucosa, floor of the mouth, tongue, cheeks, palate, alveolar ridge smooth & of even thickness, no sharp ridges), saliva quantity, maxillar and mandibular relationship, any areas of inflammation of other pathology should be noted

Hard tissues: caries, over-erupted, tilted, rotated, presence of torus palatines, presence of mandibular torus, occlusion

Periodontal status: Gingival- bleeding, colour, calculus, plaque accumulation, degree of mobility

Examination of existing dentures: extension of dentures, retention, stability, neutral zone, occlusion' how many years the patient has been a denture wearer?, number of dentures done, why dentures were replaced?, number of years each denture lasted?, denture hygiene, expectations of the patient

F) Special investigations

Radiographs: retained roots, buried teeth, impacted teeth, bony support, interproximal caries, pulpal or periapical pathology-cysts, etc.

Biopsy: to confirm the Dx for any lesions present in the mouth

Vitality test: abutment teeth (cariious or heavily restored)

G) Treatment Plan

Preventive : OHI, TBI, motivation of effective OH

Surgical: alveolectomy, Frenectomy, treatment of any oral lesion, extraction of tilted, rotated or over-erupted teeth, extraction of cariious & mobile teeth that is of poor prognosis, extraction of remaining teeth where full denture construction is needed

Conservative treatment

Endodontic treatment

Periodontal treatment

Treatment of any oral lesion

H) Re- evaluation

“our objective in treating incomplete dentition is to preserve the remaining teeth in a stable and healthy environment to prevent further disease.”

PROSTHETIC ASSESSMENT FORM

Denture Classification- Four Classes:

- KENNEDY CLASS I
- KENNEDY CLASS II
- KENNEDY CLASS III
- KENNEDY CLASS IV

1. Assessment for Prosthetic Patients

1.1 Complete Dentures, Dental Officers only

1.1.a Thorough oral examination is mandatory

1.1.b The condition of the alveolar ridges must favor denture construction

1.1.c Unfavorable undercuts must be corrected surgically in consultation with the Dental Officer (Oral Surgery)

1.1.d All patients for F/F dentures must have formal consultation with the prosthetic officer prior to giving appointments

1.1.e Consultation topics include:

- Limitation in dentures
- Number of visits
- Fees
- Meeting patient's expectations

1.1.f History of past denture wearers must be noted

1.1.g Any relevant medical conditions must be noted.

2. Partial Dentures

2.1 Thorough oral examination is mandatory

2.2 Patients must be dentally fit before appointments are given

2.3 Priority for partial dentures will be given to patients who seek dentures for functional reasons

2.4 Appointments should only be given when the dentally fit criteria is met

3. Dentally Fit Criteria

- 3.1 Complete extraction of severely carious and mobile teeth
- 3.2 Conservative treatment done on carious teeth (reversible pulpitis)
- 3.3 Periodontal Therapy complete
- 3.4 Surgical intervention sorted
- 3.5 A supplementary card must be made for prosthetic records

4. Payments

- 4.1 A minimum deposit of \$10.00 must be collected during primary impression stage
- 4.2 For F/F dentures, complete payments must be made by the try-in stage
- 4.3 For P/P dentures, complete payments must be made before the insertion if no Try-in
- 4.4 All DPT letters must be received and updated on the register with the PDO's stamp
- 4.5 Authorization of fees that are waived or charged shall bear the stamp of the PDO
- 4.5 All prosthetic assessments must pay a charge of \$1.00 unless exempted

5. Appointments

- 5.1 All prosthetic appointments are given according to the number of Dental Technicians available
- 5.2 The supervising dental technician in consultation with the prosthetic officer manages all prosthetic appointments
- 5.3 Daily appointments for the prosthetic department are 2 F/F and 2 P/P
- 5.4 Any extra cases will be accommodated with the approval of the Prosthetic Officer and the Supervising Dental Technician.
- 5.5 District referrals for appointments must meet the assessment criteria
- 5.6 F/F appointments are given a minimum of 2 procedural appointments for 3 days:
 - Day1 Primary and Secondary Impression
 - Day 2 MMR and Try-in
 - Day 3 Insertion
- 5.7 Replacement of default appointments should be given to the next available case presented
- 5.8 Cancellation and reappointment of patients may be done by contacting them on the phone

6. Consent

Patients must provide consent after the try-in stage

7. Prosthetic Equipment

7.1 All prosthetic equipment must be used according to manufacturer's specification and operational manual

7.2 Maintenance of all prosthetic equipment shall be the responsibility of the Equipment Officer and the Biomedical Department

7.3 Attention to defective equipment shall be referred to the immediate supervisor. Respective forms should be filled-out

8. Prosthetic Materials

8.1 The Supervising Dental Technician is fully responsible for the ordering, and storage of prosthetic material in the department

8.2 The Supervising Dental Technician must closely monitor usage of prosthetic material and consult the prosthetic Officer accordingly of any incidents

PROCEDURE

Primary Impression

- A tray is selected which adequately covers all the anatomical landmarks.
- Alginate is mixed and the tray is selected in place, taking care to seat the upper tray at the back first to prevent the material flowing down the throat.
- When seating the lower tray, after careful manipulation of the tray, the patient is requested to protrude the tongue and encourage to swallow.

NB. Remember to explain what you are going to do **before** doing it.



Secondary Impression

- Check for stability and correct extension of the trays.
- Add greenstick compound to the posterior part of the upper tray after heating it in a flame. Temper the material by placing in warm water.



Bite Registration

The purpose for this procedure is to firstly assess the secondary impressions by making sure that the bases are of good fit and retentive.

- Check extension, retention and stability of the upper bases.
- Carve the wax to allow for correct buccal and lingual contour to provide adequate lip support and tongue space.
- Adjust the upper rim plane of occlusion parallel to the alar-traigol line but making allowances for individual variation.
- Adjust the level of the plane, firstly so that it is parallel to the inter- papillary line and then with about 1mm, visible when the jaws are at rest.
- Mark the midline on the upper rim so that its harmonizes with the face, high lip line or smile line and the canine lines.

Now trim the lower rims to obtain adequate inter occlusal clearance having determined the rest vertical dimension.

This may be done with the aid of a Willi's bite gauge. The occlusal surface of the rim should contact the upper over its entire length. Make sure that there is adequate clearance of wax from the "heels" of the rims.

- Cut the grooves about 203mm, deep on the occlusal surface of the upper wax rim in the premolar region and remove 1mm of wax from the posterior part of the lower rim on each side.
- Add softened wax or registration paste to the lower rim and get the patient to close in the most retruded position.
- Remove, chill and separate the rims, trim away surplus wax or paste.
- Check again in the mouth for reproducibility of position and then seal the rims with a small quality of wax.
- Replace the occlusal rims onto the casts making sure there is no contact of the casts on the "heels".



Try in Stage

- Check for extension, retention and stability of upper and lower bases.
 - Review tongue space and neutral zone.
 - Assess the appearance of the lips and teeth and discuss with the patient. Make adjustments if necessary.
 - Inter occlusal distance to be checked.
 - Recheck the centric relations.
- **If an error is detected, retain the vertical dimension, remove the posterior teeth from the lower rim, recontour the wax and re-take the occlusim record.**



Insertion Stage

At this stage minor interferences may be corrected.

Instructions to Denture Patients

You have just been fitted with your new dentures. If you have worn dentures before you will appreciate some of the difficulties in adapting to new teeth. If not, here are some hints to help you to adapt and enjoy wearing your new teeth.

- Remember that dentures are not like natural teeth. They are not securely attached to your gums and will move if you try to use them like natural teeth.
- You may have some soreness at the beginning. This may be related to the edges of the denture or underneath it. If the discomfort is mild, try to bear it but if it is too severe to bear, remove the denture, place it in water, and replace it, if possible 24 hours before returning for adjustment.

- To begin with, a soft diet is advisable gradually replacing it with normal food.
- Cut the food up small rather than using the front teeth to bite. Biting on your front teeth may cause the denture to come down at the back.
- To begin with try to chew on both sides of the dentures at the same time, rather than on one side and then the other.
- Any difficulties with speech will be overcome within a few days.
- After eating, always try to remove the denture and wash thoroughly, over a basin of water to prevent breakage if it should accidentally drop during cleaning.
- Washing with a soft brush and soap or toothbrush is recommended and an occasional soak [no more than two or three minutes in diluted household bleach] will help to maintain your dentures freshness.
- Remove your dentures at night, clean and place in water.
- Do not try to adjust the teeth yourself. The dentist will see you soon after the dentures are fitted to check that they are all right and will see you for further adjustments if necessary.



Recall and Review

- Recall visits should not be later than one week after the insertion of the dentures.
- Careful note must be made of the patient's problems and the mouth and dentures should be examined carefully.
- Remember that the occlusal, fitting and polished surface should all be checked.
- Patients should be informed that if he has any other problems can later for adjustments.

Acknowledgement: This guideline is compiled by Dr Praveena Singh and Dr Raashna Devi, Lautoka Hospital.

References:

- 1) DENTAL TECHNOLOGY, Wilson HJ, Mansfield MA, Heath JR, Spence D, 1987, Dental technology and Materials for Students, 8th dn. Blackwell , Oxford.
- 2) REMOVABLE DENTURE PROSTHODONTICS, Alan AG, The late Wesley J, 1992, 2nd edition.
- 3) www.isidental.hu/Fillings

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