



Research Article

POSTINSERTION INSTRUCTIONS FOR A COMPLETE DENTURE WEARER

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ABSTRACT

From the first appointment, itself patient should be given an idea of the outcome of the final treatment. Postinsertion care of the prosthesis is as important as the care taken during the fabrication of the prosthesis for the success of prostheses. This article deals with the postinsertion instructions for a complete denture wearer and the reason for the instructions.

Key words:

Postinsertion, Instructions, Complete Denture, Follow up

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INTRODUCTION

Denture insertion represents the pinnacle of a series of carefully considered and exacting procedures. Well –made dentures enable the patient to have comfort, adequate function and an appearance that will further societal relationships and participation.¹ Patient education regarding prosthesis is very essential as some patients have a thought that the denture will function exactly like natural teeth and they complain after a week of denture insertion regarding problems like difficulty in speech, swallowing, mastication etc....For some patients with dentures that fit perfectly and they won't have to worry about their teeth again. However, some have lifelong problems with their dentures.^{2,3}

Patient education is the prosthodontic service that refers to giving complete information and instructions to a complete denture patient in the use, care, and maintenance of the prosthesis.⁴

A willingness to instruct the patient in the care and use of his dentures and an understanding of his desires are essential to assuring a successful prognosis. An informed patient will realize when his dentures require attention and will seek treatment before ill-fitting denture damages the oral tissues.

Therefore, a patient should be educated to understand his responsibility in denture service.^{4,5,6}

Postinsertion Instructions to the patients

Adjustment period: Following the insertion of new dentures, there is a variable period (generally 2-6 weeks) during which patients must adjust and accommodate. At first, the new dentures often feel volatile and awkward. Soft mouth tissues, which are now covered, may have been uncovered or left open by a previous denture. This weirdness, while humiliating, is a temporary issue that is typically resolved during the adjustment period.^{7,8}

Appearance: At the time of insertion, the nervous patient has a strained facial expression as he was not psychologically prepared for the denture. The facial expression may seem slightly altered, and the muscles and lips need time to relax and assume their natural position around the dentures.⁹

Speech: At first, there is a feeling of full mouth, and crowding of the tongue as the dentures have changed the shape of the mouth. A patient will be cautious of something that wasn't in the mouth before, and he/she will need to learn to speak. Because the new artificial teeth can be placed in a slightly different relationship, and the base of plastic denture can feel bulky, speech patterns are often interrupted temporarily.^{6,10} Nevertheless, as soon as the lips, tongue, and cheeks have become accustomed to dentures (as the tongue, lips, and cheek muscles must learn to regulate movement to allow normal

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speech) and new muscle patterns are established, this problem is easily overcome. One good way to learn how to talk is to read aloud in front of a mirror as it is a way to minimize the time needed to recover normal speech patterns and enunciate each syllable carefully. Patients should repeat pronouncing words that are troublesome for them. Practice can help enhance the learning process. Practice and patience resolve all difficulties. Continued difficulty should be brought to the clinician's attention.^{6,10}

Denture wearing at night: There is no question that the healthiest policy is to remove the dentures for at least 6-8 hours daily to allow the soft tissues to breathe and recover. To most people, removing the dentures during sleep is the most effective way to accomplish this. The dentures should be soaked in water while out of the mouth, or in a denture cleaning solution. Such a procedure will make oral tissues much safer, protect the ridges and the underlying bone, and allow the dentures to fit properly for a longer period. Patients suffering from discomfort and sleep loss after removal of the dentures may provide short rest periods in oral tissue during the day.¹¹

There are many scientific reasons for providing rest to the tissues. It was illustrated by Chinese women by binding their feet that constant pressure makes the bone 'shrink'. The similar atrophy was produced by dentures on the oral tissues. A denture exerts both steady and intermittent heavy pressure that interrupts the blood supply to the supporting tissues. This is especially true at the arch of the mandibular. When the mandible is in a rest position, gravity exerts a pull on the mandibular denture. The pull of gravity on the maxillary denture could aid in releasing some of the pressure of the maxillary denture, and this may be a factor in the varying rates of resorption when comparing the two arches.⁶

Dentures become loose when soft tissues are damaged by constant pressure. A patient does not experience any pain until the damage is extensive. The supporting tissues, therefore, require rest from the force of the denture. The blood should be allowed to circulate freely through the vascular tissue because the bone receives part of its supply from this tissue.⁶

8 hours of a rest period is best managed during sleeping hours. In the waking hours, the somatic nervous system acts as a protective mechanism. When a hard surface is encountered in mastication or the contacts with the functioning tooth cause pain, the jaw opens reflexively. This nociceptive or withdrawal reflex that protects the oral tissues from excessive pressure during working hours does not function during sleep. The denture can become unseated, or the wearer may swallow and make tooth contact. The resulting force can be damaging to the tissues. Absence of the reflex phenomenon during sleep is one reason for leaving the denture out of the mouth during sleeping hours.⁶

Hypersalivation: Soon after the insertion of the dentures, the salivary flow is stimulated, which declines after 2-3 days unless something with the dentures is physically wrong, which can cause irritation. The glands try to wash out the strange "foreign body." Simply swallowing the saliva more often is the best remedy and in a few days, the salivary glands will adjust themselves to the presence of dentures and resume normal function.¹²

Cough, Sneezing, and Gagging: The acts of coughing and sneezing dislodge the dentures and result in an embarrassing situation. This situation can be avoided by covering the mouth with a handkerchief. When vomiting seems imminent, the denture should be removed and kept in water until the patient recovers. If it persists, then it is recommended for a denture wearer to meet his dentist.⁶

Chewing with dentures: Again, it will take practice to learn to eat a fairly normal diet with the introduction of new dentures. During the first several days, a soft diet is recommended. Avoid having tough, hard, and sticky food initially.

Some points to remember regarding chewing habits:^{7,8,13-15}

- Eat slowly, always cut in little pieces of food.
- Although the usual tendency is to chew on one side or the other, wearers of dentures perform better at the same time by chewing foods on both sides over the back teeth. This helps the denture balance its forces.
- Avoid bringing the lower front teeth forward and to cut or incise food against the upper front teeth. This preserves the delicate upper front ridge and prevents the denture from tipping.
- If a bite with the front teeth is necessary, try to spread the tongue against the back of the maxillary denture to keep it in place.
- Try to chew (up and down) vertically, rather than horizontally (side to side).
- It takes time to learn to eat with the dentures and needs positive patient-side attention.

Drinking with dentures: It is advised for the denture wearers to drink water by sipping and not by lifting the glass, as it will dislodge the denture because of the slipping of water beneath the denture.⁴

Maxillary versus mandibular dentures: Patient's should be advised that his/her maxillary denture will rest comfortably in place with moderate-to-strong suction. Although mandibular denture will have good stability, it is infrequent that suction can be expected on a mandibular denture.⁴

Tenderness: During the first few weeks, the patient feels some tenderness and pain from the dentures. The explanation for this is that the mouth's mucous membrane is fragile and does not adapt to withstand the pressures the dentures impose on them. New dentures will require some adjustments. One should tell the patient to wear the denture regularly for the first 24 hours, then return directly to the dentist. Many irritations or impingements can be easily detected and rectified. He should later be advised to wear only the dentures during the day without using them for food. After 1-2 weeks, he can start with soft, chewy foods, and then he can resume his daily diet as the ridges get accustomed to pressures. They should avoid parafunctional habits such as clenching and grinding.⁷

Denture soreness: Almost always, new dentures cause some sore spots. It will be compensated during the first few appointments post-insertion. Over the first few days, clinicians recommend soft foods. Rinsing with warm salt water is the best home treatment between appointments for sore spots.^{4,6}

Denture lifespan: Ideally, 5-7 years is the average lifespan of a well-made denture. As time passes, the tissues and bone that support the denture will resorb. Generally, the dentures will require to relin every couple of years to maintain an ideal fit.

Each patient is special, and therefore each denture case is unique to that patient. It's important to keep in mind that not everybody can comfortably wear a denture. Variable factors include the anatomical shape of the mouth, strength of muscles and presence/absence of saliva, quality of mucosa, psychological tolerance.^{4,5}

Instructions to the patients regarding denture care

How to insert denture – denture insertion is a topic requiring patient instruction at insertion appointment. However, there are three possible exceptions to this rule.¹⁶

First-time wearers of dentures might want to know if it matters in which prosthesis is first implanted. A patient who asks about this should be told that the order of insertion does not matter unless the maxillary denture is practically unretained. In this case, you should insert the mandibular denture first.

If the patient has significant undercuts in the retro-mylohyoid space, instruction should clarify the positioning of the mandibular denture after the ultimate position of the patient to seat the posterior segment, and then the prosthesis should be brought forward and then fully seated.

If the patient suffers from cognitive dysfunction due to stroke or Alzheimer's disease, it may be impossible for him/her to initially distinguish maxillary and mandibular denture and/or to position prosthesis over the ridge. In such a case, the dentist needs to work with the patient as well as the caregiver who can clarify the knowledge away from the office. It should be stressed that the use of a mirror will, in effect, make the process more complicated for some patients, whereas it may make matters simpler for others.

How to remove denture or break the peripheral seal

Patients with no previous experience with removing a denture should be advised to break the seal by running one or both of the digits along the entire length of the flanges or by puffing the cheeks out.¹⁶

Guidelines for the care and maintenance of complete dentures.¹⁷

In 2009 the American College of Prosthodontics (ACP) formed a task force to establish evidence-based guidelines for the care and maintenance of complete dentures.

- ✓ Careful routine treatment of the bacterial biofilm present in the oral cavity and on complete dentures is of paramount importance in reducing stomatitis of the dentures and leading to good oral and general health.
- ✓ Patients who wear dentures should do the following to minimize biofilm levels and potentially harmful bacteria and fungi:
 - Dentures should be cleaned daily by soaking and brushing with an inexpensive, non-abrasive denture cleanser.
 - Denture cleansers should only be used outside of the mouth
 - to disinfect the dentures. Upon washing and cleaning with denture cleansing agents, dentures should always be thoroughly rinsed before reinsertion into the oral cavity. Also, follow the instructions on using the product.

- Hold the dentures over a container of water while cleaning as it will act as a cushion.
- A dental professional should clean the dentures annually using ultrasonic cleansers to minimize the accumulation of biofilms across time.
- Dentures should never be placed in boiling water, as this will distort them.
- Dentures should not be immersed in sodium hypochlorite bleach for more than 10 minutes, or in products that contain sodium hypochlorite.
- Dentures should be stored in water after cleaning to avoid warping.
- Denture adhesives can increase denture retention and stability, and help seal the buildup of food particles under the dentures, even in well-fitting dentures.
- Improper use of zinc-containing denture adhesives could have systemic adverse effects. So zinc-containing denture adhesives should be avoided as a precautionary measure.
- Regular cleaning of denture adhesives from the prosthesis and oral cavity should be done solely.
- When increasing amounts of adhesives are needed to achieve the same level of denture retention, a dentist or dental specialist should see the patient determine the quality and stability of the dentures.
- It is recommended that dentures should not be worn continuously (24 hours per day) in an effort to reduce or minimize denture stomatitis.
- Patients wearing dentures should be reviewed regularly by the dentist to ensure optimal denture fit and function for oral lesion assessment and bone loss assessment and oral health condition assessment.

Recall Appointments

Patients with complete dentures have lower awareness of preventive dental behaviors. A deliberate and proactive effort must be made to bring them back to the practice annually for a recall. This is important to re-evaluate and revise the prostheses and to assess the health of the oral cavity. Patients must be educated that annual recall appointments are important to ensure the sustained optimal fit and function of their new prosthesis as well as for the maintenance of mucosal health. These considerations are particularly important for patients employing denture adhesive because the use of such product can modify or eliminate customary cues for returning to the dental office.¹⁸

References

1. Wu B, Plassman BL, Liang J, Wei L. Cognitive Function, and Dental Care Utilization among community-dwelling older adults. *Am J Public Health* 2007; 97:2216-21.
2. MacEntee MI. Caring for elderly long-term care patients: Oral health-related concerns and issues. *Dent Clin N Am* 2005; 49:429-43.
3. Shah N, Prakash H, Sunderam KR. Edentulousness, denture wear and denture needs of an Indian elderly-a community-based study. *J Oral Rehabil* 2004; 31:467-76.
4. Winkler S. *Essential of Complete Denture Prosthodontics*, 3rd ed, AITBS Publishers, 2014.

5. Zarb GA, Bolender CL, Carlsson GE. Boucher's Prosthodontic treatment for edentulous patients, 11th ed, St. Louis: Mosby, 1997.
6. Heartwell CM, Rahn AO. Syllabus of complete dentures, 5th ed, New Delhi: Harcourt Private Limited, 2003.
7. Vinton P, Manly RS. Masticatory efficiency during the period of adjustment to dentures. *J Prosthet Dent* 1995; 5:477-80.
8. Manly RS, Braley LC. Masticatory Performance and Efficiency. *J Dent Res* 1950; 29:448.
9. Hickey JC, Boucher CO, Woelfel JB. Responsibility of the dentist in complete dentures. *J Prosthet Dent* 1962; 12:637-53.
10. Palmer JM. Structural changes for speech improvement in complete upper denture fabrication. *J Prosthet Dent* 1979; 41:507-10.
11. Tautin FS. Should dentures be worn continuously? *J Prosthet Dent* 1978; 39:372-4.
12. Landa JS. Troubleshooting in complete denture prosthesis: Part IX-Salivation, Stomatopyrosis and glossopyrosis. *J Prosthet Dent* 1961; 11:244-6.
13. Goiato MC, Garcia AR, Dos Santos DM, Zuim PR. Analysis of masticatory cycle efficiency in complete denture wearers. *J Prosthodont* 2010; 19:10-3.
14. Koshino H, Hirai T, Ishijima T, Ohtomo K. Influence of mandibular residual ridge shape on masticatory efficiency in complete denture wearers. *Int J Prosthodont* 2002; 15(3):295-8.
15. Kapur KK, Soman SD. Masticatory performance and efficiency in denture wearers. *J Prosthet Dent* 2004; 92:107-11.
16. Sherman H. Denture Insertion: Winkler S. Essentials of complete denture prosthodontics, 2nd ed, New Delhi, AITBS Publishers, 2009.
17. Felton D. Evidence-based guidelines for the care and maintenance of complete dentures: A publication of the American College of prosthodontics. *J Prosthodontics* 201;20:S1-S2.
18. Sadr K, Mahboub F, Rikhtegar E. Frequency of traumatic ulcerations and postinsertion adjustment recall visits in complete denture patients in an Iranian Faculty of Dentistry. *J Dent Res Dent Clin Dent Prospectus* 2011; 5(2):46-50.

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