

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

PATIENT ADAPTATION TO COMPLETE DENTURES: PROBLEMS AND SOLUTIONS

Abdurakhimov Abubakr Abdurakhmonovich
Student of the Faculty of Dentistry

Mustafaeva Kamila Furkatovna
Assistant of the Department of Hospital Dentistry with a Course in
Otolaryngology EMU University, Tashkent, Uzbekistan

Abstract

Adaptation to complete removable dentures represents a complex physiological and psychological process that significantly influences treatment success in edentulous patients. Despite advances in prosthodontic techniques, many patients experience discomfort, functional limitations, and emotional stress during the adaptation period. The purpose of this study is to analyze common adaptation problems associated with complete dentures and to identify effective clinical and behavioral strategies to improve patient outcomes. A clinical observational study combined with literature analysis was conducted involving edentulous patients receiving new complete dentures. Adaptation difficulties were evaluated through clinical examinations and patient-reported outcomes during a six-month follow-up period. The results demonstrate that most adaptation problems occur within the first weeks of denture use and include impaired mastication, speech difficulties, mucosal irritation, and psychological resistance. Appropriate prosthetic adjustments, patient education, and gradual neuromuscular training significantly improve adaptation. The findings emphasize the importance of

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

interdisciplinary management and individualized treatment planning to enhance patient comfort and long-term prosthesis acceptance.

Keywords: Complete dentures, patient adaptation, edentulism, prosthodontic rehabilitation, denture discomfort, neuromuscular adaptation, removable prostheses

Introduction

Complete edentulism leads to profound anatomical and functional alterations of the stomatognathic system. The absence of teeth causes alveolar bone resorption, reduced muscular coordination, and changes in oral sensory perception. Complete dentures aim to restore oral function and facial esthetics; however, successful rehabilitation depends not only on prosthesis quality but also on the patient's ability to adapt.

Adaptation to complete dentures is a multidimensional process involving: neuromuscular reorganization, sensory adjustment, psychological acceptance, behavioral modification.

Unlike natural teeth, dentures lack periodontal proprioception, forcing patients to relearn chewing, speaking, and swallowing patterns. Many individuals initially perceive dentures as foreign objects, leading to frustration and reduced compliance.

Clinical experience shows that early adaptation difficulties are among the main causes of dissatisfaction and treatment failure. Understanding these challenges allows clinicians to implement preventive and corrective strategies.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

The aim of this study is to investigate common adaptation problems experienced by patients wearing complete dentures and to evaluate methods that facilitate successful adaptation.

Materials and Methods

Study Design

A prospective clinical observational study was conducted alongside a review of contemporary prosthodontic literature concerning denture adaptation.

Participants

The study included **55 completely edentulous patients** aged between 48 and 80 years who received new maxillary and mandibular complete dentures.

Inclusion criteria: complete edentulism, first-time denture wearers or replacement dentures, absence of severe cognitive impairment.

Exclusion criteria: neurological disorders affecting muscle coordination, severe xerostomia, untreated oral pathology.

Denture Fabrication Protocol

All prostheses were fabricated according to standardized clinical procedures:

1. Anatomical impressions.
2. Functional impressions.
3. Registration of vertical dimension and centric relation.
4. Trial insertion for esthetic and phonetic evaluation.
5. Final processing using acrylic resin bases.

Evaluation Parameters

Adaptation was assessed using clinical and subjective indicators:

Functional Indicators: chewing efficiency, speech clarity, swallowing comfort.

Biological Indicators: mucosal condition, pressure sores, salivation changes.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

Psychological Indicators: anxiety level, confidence during social interaction, overall acceptance of dentures.

Follow-Up Schedule

Patients were evaluated at: 1 week, 1 month, 3 months, 6 months post-insertion.

Patient questionnaires and clinical examinations were conducted at each visit.

Results

Early Adaptation Difficulties

During the first week after denture insertion, most patients experienced adaptation problems:

Problem	Percentage of Patients
Difficulty chewing	76%
Speech impairment	64%
Excess salivation	58%
Mucosal soreness	49%
Psychological discomfort	42%

These symptoms were most pronounced in mandibular dentures due to reduced stability.

Functional Adaptation

By the third month: chewing ability improved in 70% of patients, speech normalized in most participants, swallowing became more coordinated.

Patients gradually learned to control dentures using tongue and cheek muscles. Neuromuscular coordination improved significantly with practice.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

Biological Responses

Common biological reactions included: temporary mucosal irritation, localized pressure ulcers, increased salivary secretion.

Adjustments and relief procedures eliminated most lesions within two weeks. Bone resorption patterns influenced long-term stability, especially in patients with severely resorbed mandibular ridges.

Psychological Adaptation

Psychological acceptance followed a gradual pattern:

1. Initial rejection phase.
2. Adjustment phase.
3. Acceptance phase.

After six months, 85% of patients reported feeling comfortable wearing dentures in social environments.

Patient education significantly reduced anxiety and improved compliance.

Discussion

Adaptation to complete dentures is not instantaneous but represents a progressive learning process. The findings confirm that early discomfort is normal and does not indicate treatment failure.

Neuromuscular Adaptation

Natural teeth provide sensory feedback through periodontal ligaments, which dentures lack. Patients must develop new motor patterns to stabilize prostheses during function.

Repeated functional use enhances muscular coordination and improves prosthesis control.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaoa.com/index.php/1>

Common Adaptation Problems

1. Chewing Difficulties

Patients initially apply excessive biting force, causing instability. Gradual introduction of soft foods helps develop proper chewing patterns.

2. Speech Disturbances

Altered tongue position affects phonetics. Reading aloud and speech exercises accelerate adaptation.

3. Mucosal Pain

Pressure points often result from uneven load distribution. Timely adjustments prevent chronic trauma.

4. Psychological Resistance

Fear of embarrassment or discomfort may reduce denture use. Emotional support and realistic expectations improve outcomes.

Strategies to Improve Adaptation

Effective solutions include: detailed patient instructions, scheduled follow-up visits, gradual dietary progression, muscle training exercises, proper denture hygiene education.

Communication between clinician and patient is essential. Patients informed about expected adaptation stages demonstrate higher satisfaction.

Clinical Implications

Dentists should emphasize adaptation counseling as part of treatment rather than focusing solely on prosthesis fabrication. Individual anatomical and psychological factors must guide treatment planning.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaoa.com/index.php/1>

Conclusion

Adaptation to complete dentures is a complex interaction of biological, functional, and psychological processes. Most adaptation problems occur during the early post-insertion period and can be successfully managed through clinical adjustments and patient education.

Effective communication, regular follow-up, and individualized care significantly enhance patient acceptance and long-term prosthetic success. Understanding adaptation mechanisms allows clinicians to minimize complications and improve overall rehabilitation outcomes.

Complete dentures remain a reliable treatment option when adaptation challenges are properly addressed.

References

1. Abdullayev X., Ismatova K. Rhinosinusogenic orbital complications in young children //Science and innovation. – 2024. – Т. 3. – №. D7. – С. 103-106.
2. Badarch M., Iriskulova E., Tudevtagva U. Introduction to Proceedings of ISCSET 2022 //Embedded Selforganising Systems. – 2022. – Т. 9. – №. 3. – С. 2-3.
3. Ergashev J. D., Sigatullina M. I., Ibragimov U. K. Neuropsychic growth of children with hypoxi–ischemic encephalopathy //The 2th World Congress of Neonatology.–6th–9th January. – 2010. – С. 19.
4. Ergashev J. et al. The assessment of state of hearing and audiometric configuration of patients with vestibular schwannoma before and after gamma knife radiosurgery //Оториноларингология. Восточная Европа. – 2017. – Т. 7. – №. 1. – С. 31-38.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaoa.com/index.php/1>

5. Ergashev J. et al. Epidemiological and evolutionary study of vestibular schwannomas after different types of treatment : дис. – Universidade de Santiago de Compostela, 2014.
6. Ergashev J. et al. Clinical picture of vestibular schwannomas in a series of 106 patients managed with different treatment methods //Новый день в медицине. – 2019. – №. 4. – С. 369-373.
7. Ergashev J. D. et al. MANAGEMENT OF VESTIBULAR SCHWANNOMAS: AGE MATTERS //SCIENCE. – 2024. – Т. 3. – №. 10-4. – С. 221-225.
8. Ergashev J. D. et al. Gamma Knife Radiosurgery for Vestibular Schwannomas: Favorable and Unfavorable Effects in Series of 42 Patients. – 2019.
9. Ganiev A. A. et al. The practice of oropharynx cancer: A case report and literature review //Annals of Cancer Research and Therapy. – 2019. – Т. 27. – №. 2. – С. 37-41.
10. Iriskulova E. et al. Intraparotid facial nerve schwannoma: a cross-country report of two cases and literature review //Annals of Cancer Research and Therapy. – 2020. – Т. 28. – №. 2. – С. 93-96.
11. Iriskulova E., Kodirova Z., Juraboev S. Prognosis of Complications at Surgical Treatment of Benign Parotid Tumors //Embedded Selforganising Systems. – 2022. – Т. 9. – №. 3. – С. 70-72.
12. Iriskulova E. et al. Intraparotid facial nerve schwannoma: a cross-country report of two cases and literature review //Annals of Cancer Research and Therapy. – 2020. – Т. 28. – №. 2. – С. 93-96.
13. Iriskulova E., Nurxojaeva A. Express assessment of sonoelastographic parameters in patients with tumors of the parotid salivary gland //Embedded Selforganising Systems. – 2022. – Т. 9. – №. 3. – С. 18-19.

Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

14. Ismatova K. A. et al. The new coronavirus infection in otolaryngological practice: clinical features in different age groups //Science and innovation. – 2023. – T. 2. – №. Special Issue 8. – С. 813-816.
15. Khamraeva V. S., Karabaev H. E., Ergashev J. D. The choice of optimal medical method for exudative otitis media in children //CHOICE. – 2018. – T. 4. – С. 24-2018.
16. Shovkatovich S. O., Muratovna N. M. OPTIMIZATION OF COMPLEX THERAPY FOR CHRONIC RECURRENT APHTHOUS STOMATITIS //World Scientific Research Journal. – 2025. – T. 45. – №. 1. – С. 119-123.
17. Shovkatov O.Sh., Sharipov S.S., Akhundjanov R.A. / 2025. MODERN PROSTHODONTIC TECHNOLOGIES IN COMPLETE EDENTULISM: APPLICATION OF CAD/CAM AND 3D PRINTING. Журнал гуманитарных и естественных наук. 2, 28 [2] (дек. 2025), 6–13.
18. Shovkatov O.Sh., Sharipov S.S., Akhundjanov R.A. 2025. BIOMATERIALS AND THEIR BIOLOGICAL COMPATIBILITY: A CLINICAL ANALYSIS OF PMMA, THERMOPLASTICS, BIOACTIVE POLYMERS, NANOMATERIALS, AND NEXT-GENERATION ZIRCONIA. Журнал гуманитарных и естественных наук. 2, 28 [2] (дек. 2025), 19–25.
19. Shovkatov O.Sh., Mirsaidov M.M. (2026). KATTA CHAYNOV TISHLARI EKSTRAKSIYASIDAN KEYINGI YALLIG‘LANISHLARNING OLDINI OLIHDA ANTIBIOTIKLAR SAMARADORLIGINI VAHOLASH. ОСНОВЫ МЕДИЦИНЫ, 1(8), 147–150. ИЗВЛЕЧЕНО ОТ <https://journals.tnmu.uz/tas/article/view/3760>



Eureka Journal of Physical and Chemical Research (EJPCR)

ISSN 2760-490X (Online)

Volume 2, Issue 3, March 2026



This article/work is licensed under CC by 4.0 Attribution

<https://eurekaooa.com/index.php/1>

20. Yun J. M. et al. Optimizing Cochlear Implant Position for Magnetic Resonance Imaging of Vestibular Schwannoma //Laryngoscope Investigative Otolaryngology. – 2025. – T. 10. – №. 6. – C. e70319.