

Digital mapping of post-insertion adjustments in complete dentures

Mapeamento digital de ajustes pós-instalação em próteses totais

João Afonso Kenhyti SATO¹ , Carolina Mayumi IEGAMI¹ , Yolanda de Toledo Salvado da RESSURREIÇÃO¹ ,
Newton SESMA¹ , Marcio Katsuyoshi MUKAI¹ , Regina TAMAKI¹ 

1 - Universidade de São Paulo, Faculdade de Odontologia. São Paulo, SP, Brazil.

How to cite: Sato JAK, Iegami CM, Ressurreição YTS, Sesma N, Mukai MK, Tamaki R. Digital mapping of post-insertion adjustments in complete dentures. Braz. Dent. Sci. 2026;29:e5210. <https://doi.org/10.4322/bds.2026.e5210>

ABSTRACT

Objective: Quantitative data regarding complete dentures (CDs) adjustments may support more predictable treatment outcomes and reduce the need for follow-up visits. The purpose of this observational study was to digitally evaluate the magnitude and distribution of postinsertion adjustments in complete dentures. **Material and Methods:** Eighteen edentulous patients received maxillary and mandibular CDs (N = 36). Dentures were scanned before and after postinsertion adjustments, and meshes were superimposed with best-fit alignment. Deviations were measured in the anatomical regions of interest. Statistical comparisons were conducted with 1-way ANOVA and Tukey tests ($\alpha=0.05$). **Results:** In mandibular CDs, the right (0.906 ± 0.837 mm) and left (0.772 ± 0.925 mm) lingual sulcus showed the greatest level of correction, differing significantly from vestibular regions ($p<0.05$). Maxillary regions required smaller adjustments ($0.100\text{--}0.261$ mm), with no significant differences ($p>0.05$). **Conclusion:** Digital superimposition enabled quantitative mapping of postinsertion CD adjustments, with the lingual sulcus showing the largest magnitude of correction in mandibular CDs. This analysis may provide reference parameters to guide more predictable and evidence-based adjustments in CD treatment.

KEYWORDS

Complete denture; Computer-aided design; Dimensional measurement accuracy; Edentulous jaw; Three-dimensional imaging.

RESUMO

Objetivo: Dados quantitativos referentes aos ajustes de próteses totais (PTs) podem contribuir para resultados de tratamento mais previsíveis e reduzir a necessidade de consultas de controle. O objetivo deste estudo observacional foi avaliar digitalmente a magnitude e a distribuição dos ajustes pós-instalação em próteses totais. **Material e Métodos:** Dezoito pacientes edêntulos receberam PTs maxilares e mandibulares (N = 36). As próteses foram escaneadas antes e após os ajustes pós-instalação, e as malhas foram sobrepostas por meio de alinhamento por melhor adaptação (best-fit). As discrepâncias foram medidas nas regiões anatômicas de interesse. As comparações estatísticas foram realizadas por meio de ANOVA a um fator e teste de Tukey ($\alpha = 0,05$). **Resultados:** Nas PTs mandibulares, os sulcos linguais direito ($0,906 \pm 0,837$ mm) e esquerdo ($0,772 \pm 0,925$ mm) apresentaram o maior nível de correção, diferindo significativamente das regiões vestibulares ($p < 0,05$). As regiões maxilares exigiram ajustes menores ($0.100\text{--}0.261$ mm), sem diferenças estatisticamente significativas ($p > 0,05$). **Conclusão:** A sobreposição digital permitiu o mapeamento quantitativo dos ajustes pós-instalação em PT, sendo o sulco lingual a região com maior magnitude de correção nas próteses mandibulares. Esta análise pode fornecer parâmetros de referência para orientar ajustes mais previsíveis e baseados em evidências no tratamento com próteses totais.

PALAVRAS-CHAVE

Prótese total; Desenho assistido por computador; Precisão da medição dimensional; Mandíbula edêntula, Imageamento tridimensional.

INTRODUCTION

Edentulism affects nearly one-quarter of individuals over 60 years of age worldwide [1], and its prevalence is expected to increase with the population aging [2,3]. Conventional complete dentures (CDs) and overdentures remain widely prescribed because of their cost-effectiveness and suitability for patients unable to receive implant-supported fixed prostheses [4,5]. However, mucosa-supported dentures may cause traumatic ulcers, particularly during the adaptation period [6-8], leading to patient dissatisfaction and even treatment discontinuation [8,9], compromised stability that accelerates residual ridge resorption [10,11], and an increased risk of oral cancer [12].

Despite advances in computer-aided design and computer-aided manufacturing (CAD/CAM) that have accelerated the fabrication of CDs [13], their long-term success still relies on accurate conventional impressions that reliably record mobile tissues [14], such as the mucostatic technique [15], and appropriate teeth arrangement to maximize prosthesis retention and stability [16-19]. Inadequate stability during lateral or protrusive movements can result in denture displacement [19] and, over time, lead to mucosal injury and patient discomfort. Additional contributing factors include occlusal interferences, inadequate maxillomandibular relationships [19], incorrect border molding, overextended borders, improper adaptation of the intaglio surface, irregularities or porosities in the denture base [8], and patient-related factors [20-24]. These challenges highlight the importance of regular follow-up visits and timely adjustments to ensure patient satisfaction with CDs [5,8].

CDs adjustments are multifactorial, influenced by the degree of residual ridge resorption, the health of the supporting soft tissues, patient adaptability, the clinical and technical skills of practitioners and dental technicians, jaw relationships, occlusal scheme, and other patient and treatment-related variables [25]. Most studies addressing postinsertion adjustments have focused on the frequency of interventions [8,25-28]. Digital tools offer promising methods to enhance the accuracy and predictability of these adjustments. Therefore, the aim of this study was to evaluate by digital superimposition the magnitude and distribution of adjustments performed on CDs during postinsertion appointments. The null

hypothesis was that different regions of the maxillary and mandibular CDs would show no quantitative differences following adjustments.

MATERIAL AND METHODS

Eighteen completely edentulous patients referred to the university were enrolled for bimaxillary CDs rehabilitation. Inclusion criteria comprised patients edentulous in both arches without recent extractions (<6 months). Exclusion criteria included uncontrolled systemic conditions (diabetes, HbA1c > 7%; hypertension > 140/90 mmHg; severe cardiac disease; hematologic disorders) and neurodegenerative diseases with relevant psychomotor impairment (paralysis or motor dysfunction). Ethical approval was obtained by the local ethics committee (CAAE: 82295424.0.0000.0075). Sample size calculation was performed a priori using a software program (G*Power v3.1.9.4; Heinrich-Heine-Universität, Düsseldorf, Germany), based on the mean and standard deviation values obtained from a pilot study (maxilla: 0.20 ± 0.08 mm; mandible: 0.48 ± 0.31 mm), based on the primary outcome of the study (magnitude of post-insertion adjustments), resulting in a total sample size of 36 dentures (power = 0.8; $\alpha = 0.05$).

Clinical procedures were performed by two experienced operators. Preliminary impressions were made with stock trays (TT model aluminum edentulous tray; Jon Industria e Comercio de Produtos Odontológicos, São Paulo, São Paulo, Brasil) and high-fusing compound (Godibar; Lysanda Produtos Odontológicos, São Paulo, São Paulo, Brasil) to displace soft tissues and record anatomic references. Initial casts were poured in type II dental stone and used to outline the basal area for the fabrication of custom trays with autopolymerizing acrylic resin (JET; Artigos Odontológicos Clássico Ltda, Campo Limpo Paulista, São Paulo, Brasil). Final impressions were made with zinc oxide eugenol paste (Lysanda Produtos Odontológicos, São Paulo, São Paulo, Brasil) using a mucostatic, noncompressive technique [15], and definitive casts were poured in type IV dental stone. Casts were mounted on a semiadjustable articulator (A7 Plus; Bio-Art Equipamentos Odontológicos, São Carlos, São Paulo, Brasil) with a facebow transfer. Occlusion rims were adjusted according to esthetic and functional criteria, and artificial teeth (Biotone; Dentsply Sirona) were arranged

in bilateral balanced occlusion. Dentures were processed in heat-polymerized acrylic resin, finished, and polished.

Denture bases were scanned by a single operator with a laboratory scanner (inEos X5, Denstply Sirona, São Paulo, São Paulo, Brasil) after applying an opacifying spray (CEREC Optispray, Denstply Sirona, São Paulo, São Paulo, Brasil). Standard tessellation language (STL) files were generated in CAD software (inLab SW 22.0.0, Denstply Sirona, São Paulo, São Paulo, Brasil). After scanning, dentures were cleaned with neutral detergent, immersed in 0.12% chlorhexidine for 20 minutes, and inserted. Patients received oral hygiene and dietary instructions.

One to three follow-up visits (3 to 5 days intervals) were scheduled until resolution of discomfort. Traumatic ulcers were identified by inspection and marked using a standardized protocol: marking of injuries using a copying pencil, denture insertion in maximum intercuspation, denture removal and mucosa examination under focal light. Adjustments were performed incrementally with a tungsten carbide bur (Maxicut PM, American Burrs, Palhoça, Santa Catarina, Brasil), followed by finishing and polishing with acrylic polishing rubbers (PM Ultra-Technique Kit, American Burrs, Palhoça, Santa Catarina, Brasil). Once patients reported comfort, final scans were performed following the same protocol.

Initial and final scans were superimposed using CloudCompare software (version 2.13.2; CloudCompare Project). To ensure consistency and eliminate inter-examiner variability, all digital procedures and analyses were performed by a single calibrated operator. An initial alignment was executed by selecting three stable anatomical landmarks, followed by best-fit registration. Subsequently, fine registration was achieved using the Iterative Closest Point (ICP) algorithm, configured with a random sampling limit of 50,000 points and a convergence criterion based on a Root Mean Square (RMS) difference of 1.0×10^{-5} . The digital deviations were then quantified using the Cloud-to-Mesh distance tool, and color-coded distance maps were generated to visualize dimensional changes. To identify the points of maximum deviation within each specific region, the Point Picking tool was utilized. The maximum discrepancy was recorded for the following anatomical reference areas: the labial frenulum, right and left buccal sulcus, and posterior palatal

border in the maxilla; and the labial and lingual frenulum, right and left vestibular sulcus, and right and left lingual sulcus in the mandible.

Quantitative analyses were conducted in a statistical software program (JAMOV version 2.3.13; The Jamovi project). For the deviation found for each anatomical site, means and standard deviations were calculated. One-way ANOVA was used for comparisons, with Tukey post hoc tests for pairwise analyses ($\alpha=0.05$).

RESULTS

The results demonstrated distinct patterns of material removal between maxillary and mandibular prostheses (Figures 1 and 2).

For maxillary CDs, no statistically significant differences were observed among the evaluated regions ($p = 0.777$; $F = 0.367$) (Table I). The greatest adjustment was observed at the posterior palatal limit (0.256 ± 0.782 mm).

In contrast, mandibular complete dentures exhibited significant regional variation ($p < 0.001$; $F = 6.387$) (Table II). The greatest material removal occurred in the right lingual sulcus (0.906 ± 0.837 mm) and the left lingual sulcus (0.772 ± 0.925 mm). These regions showed significantly greater adjustment compared with the inferior labial frenum (0.250 ± 0.532 mm), the lingual frenum (0.189 ± 0.334 mm), the right buccal sulcus (0.228 ± 0.394 mm), and the left buccal sulcus (0.317 ± 0.473 mm) ($p < 0.05$). No statistically significant differences were observed among these latter regions ($p > 0.05$).

DISCUSSION

Digital analysis of CD adjustments allowed the visualization and quantification of material removal during postinsertion visits. In clinical practice, adjustments are usually based on visual inspection [6], pressure-indicating paste [6,8,26,27], copying pencil [6], and pressure indicating ink [27], which identify overextensions and traumatic injuries but provide only qualitative information. Since studies have mainly addressed the frequency of adjustments [8,25-27], the absence of quantitative data may lead to excessively conservative or aggressive corrections, extending the number of follow-up visits.

In this study, the null hypothesis was partially rejected, as different regions of the mandibular

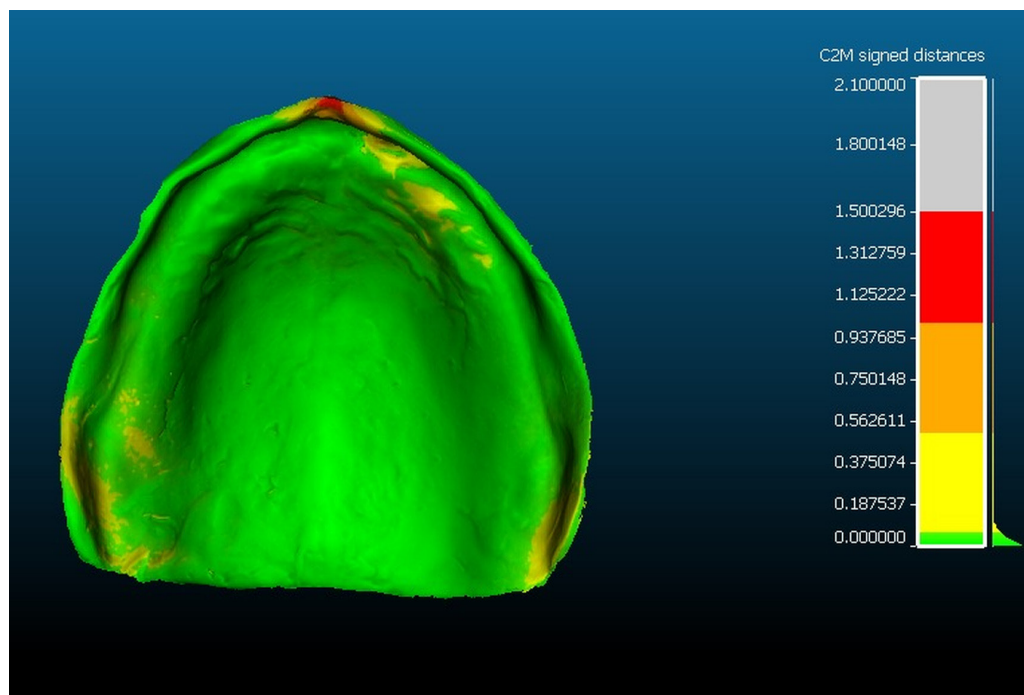


Figure 1. Color-coded map with quantitative deviations in a maxillary CD.

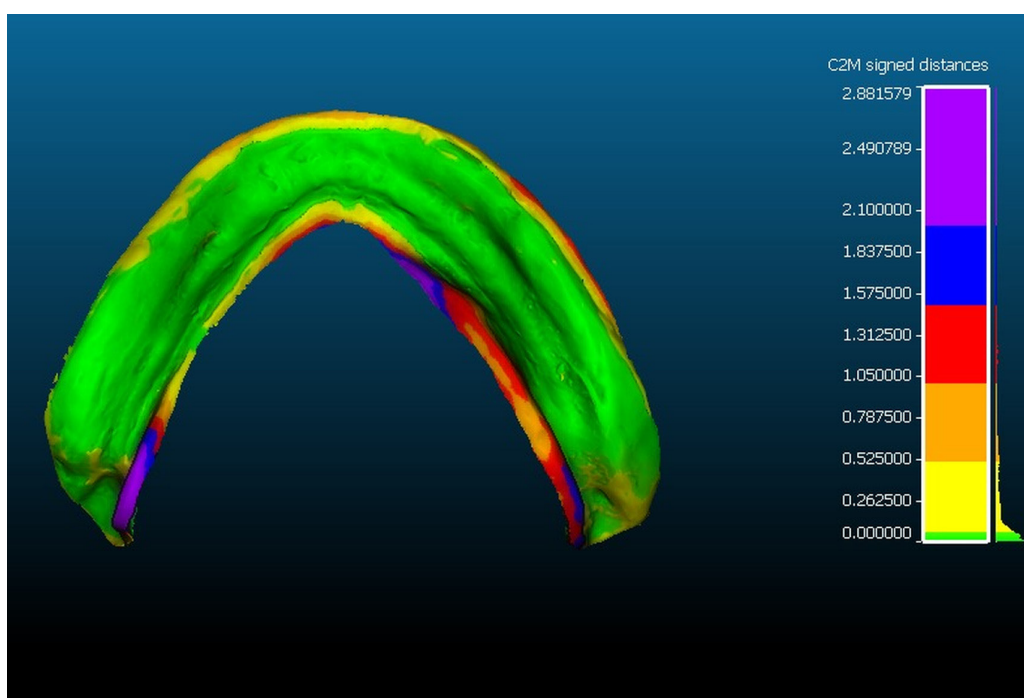


Figure 2. Color-coded map with quantitative deviations in a mandibular CD.

Table I. Mean and standard deviation (mm) of maxillary dentures adjustments

Region	Mean*	SD
Maxillary labial frenum	0.261 ^A	0.477
Maxillary right buccal sulcus	0.100 ^A	0.197
Maxillary left buccal sulcus	0.189 ^A	0.361
Posterior limit of the palate	0.256 ^A	0.782

*Equal letters indicate absence of significant differences (Tukey Post-Hoc Test $p > .05$).

Table II. Mean and standard deviation (mm) of mandibular dentures adjustments

Region	Mean*	SD
Mandibular labial frenum	0.250 ^B	0.532
Lingual frenum	0.189 ^B	0.334
Mandibular right buccal sulcus	0.228 ^B	0.394
Mandibular left buccal sulcus	0.317 ^B	0.473
Right lingual sulcus	0.906 ^A	0.837
Left lingual sulcus	0.772 ^A	0.925

*Different letters indicate significant differences (Tukey Post-Hoc Test $p < 0.05$).

CDs exhibited quantitative differences following adjustments, whereas no significant differences were observed among the maxillary regions. The mandibular lingual sulcus showed the greatest adjustment need (right: 0.906 ± 0.837 mm; left: 0.772 ± 0.925 mm). This region has been repeatedly reported as the most frequent site of ulceration [6,8,26,27], attributed to tongue dynamics, thin mucosa, and the risk of overextension from attempts to increase retention [26]. The present findings reinforce the importance of careful functional border molding in the lingual mandibular region, since excessive extension may compromise patient comfort and interfere with tongue movements during speech and mastication. Although increased flange extension is often pursued to improve denture retention and stability, the results suggest that overextension in this area may lead to a greater need for postinsertion corrections and additional follow-up visits.

In contrast, adjustments in the maxilla differed from previous studies, which often identified the posterior palatal seal [8,27] or vestibular sulcus [6,26] as the most frequently corrected regions. Here, all maxillary regions required only minimal to moderate adjustments. This may be related to the maximum extension technique used for CDs, in which preservation of the posterior palatal seal area is prioritized to improve denture retention and stability. The absence of significant differences among maxillary regions, in contrast to the mandibular findings, may also reflect the greater biomechanical challenges associated with mandibular denture adaptation, including reduced support area, increased mobility of surrounding tissues, and tongue-related functional dynamics.

Impression techniques also influence adjustment requirements, as slight overextensions can result from excess impression material or tray pressure, particularly in mobile areas. Besides,

the junction between mobile and nonmobile mucosa is not always distinct [26]. Nevertheless, Drago [25] reported no significant differences among impression or border molding methods on the number of postinsertion visits. However, the present findings suggest that small inaccuracies during border molding may have clinically relevant effects in anatomically sensitive regions, particularly in the mandibular lingual sulcus, where functional movements are more complex and tissue tolerance may be lower.

Digital quantification of postinsertion adjustments for CDs may help clinicians anticipate regions with greater likelihood of requiring correction. Quantitative mapping of material removal enables the identification of anatomical regions that are more prone to overextension and tissue trauma, contributing to more individualized denture refinement protocols. Such information may also support teaching and clinical training by providing objective reference values for postinsertion corrections.

Future studies should integrate patient-related variables into this analysis. Patient experience may be relevant, as first-time denture wearers have been reported to require more adjustments than experienced wearers [23]. The adaptation period is also a critical factor, as substantial improvement in masticatory performance occurs within 3 months of new denture use [24], which can influence the development of new lesions. Significant associations between adjustments and age, sex, and systemic conditions may also exist. Such relationships were not observed by previous studies [21,22], though D’Souza et al. [23] found an increased number of postinsertion visits by patients with cardiovascular disorders, while Kivovics et al. [26] reported greater frequency of traumatic ulcers among men – which may be related to diet habits of hard food [20].

Under the limitations of this study, the findings offer reference parameters to support more predictable and evidence-based post-insertion adjustments in CDs, potentially reducing follow-up visits and enhancing patient satisfaction. The greater material removal observed in the mandibular lingual sulcus suggests that this region requires special attention during post-insertion adjustments, in order to minimize traumatic lesions and improve patient comfort. Practitioners should carefully evaluate flange extension and tissue compression in this area during denture delivery and follow-up appointments, particularly in patients reporting discomfort during tongue movement or functional activities. Early identification and correction of denture borders may contribute to faster adaptation, fewer traumatic ulcers, and reduced need for additional adjustment visits.

CONCLUSION

Digital superimposition enabled objective quantification and mapping of postinsertion adjustments in complete dentures in this study. The mandibular lingual sulcus was identified as the area with the greatest extent of material removal in mandibular CDs, while maxillary CDs required smaller adjustments in all sites.

Data availability

The data analyzed during the current study are available from the corresponding author upon reasonable request.

Author's Contributions

NS, MKM, RT: Conceptualization. CMI, MKM, RT: Methodology. JAKS: Investigation. JAKS, YTTSR: Formal Analysis. NS: Resources. JAKS: Writing – Original Draft Preparation. YTTSR: Writing – Review & Editing. CMI, MKM, RT: Supervision.

Conflict of Interest

No conflicts of interest declared concerning the publication of this article.

Funding

The authors declare that no financial support was received.

Regulatory Statement

This study was conducted in accordance with all the provisions of the local human subjects oversight committee guidelines and policies of: Comitê de Ética em Pesquisa (CEP) da FOU SP. The approval code for this study is: CAAE 82295424.0.0000.0075.

REFERENCES

1. Organization WH. Global oral health status report: towards universal health coverage for oral health by 2030. Geneva: WHO; 2022.
2. Chen HM, Shen K, Ji L, McGrath C, Chen H. Global and regional patterns in edentulism (1990-2021) with predictions to 2040. *Int Dent J*. 2025;75(2):735-43. <https://doi.org/10.1016/j.identj.2024.11.022>. PMID:39743448.
3. Guan W, Li J, Liang Q, Huang Y, Li S, Xu X, et al. Disease burden and health inequality of older adults with edentulism and the projected trend until 2040: based on the global burden of disease study 2021. *Clin Oral Investig*. 2024;29(1):22. <https://doi.org/10.1007/s00784-024-06111-5>. PMID:39699767.
4. Carlsson GE, Omar R. The future of complete dentures in oral rehabilitation. A critical review. *J Oral Rehabil*. 2010;37(2):143-56. <https://doi.org/10.1111/j.1365-2842.2009.02039.x>. PMID:20002536.
5. Gaspar MG, Dos Santos MB, Dos Santos JF, Marchini L. Correlation of previous experience, patient expectation and the number of post-delivery adjustments of complete dentures with patient satisfaction in a Brazilian population. *J Oral Rehabil*. 2013;40(8):590-4. <https://doi.org/10.1111/joor.12070>. PMID:23663179.
6. Alzoubi NS, Kuraitby S, Almufatah A. Investigation of traumatic ulcer locations and healing progression during denture adjustment periods in Syrian complete denture patients. *Sci Rep*. 2025;15(1):23890. <https://doi.org/10.1038/s41598-025-08875-6>. PMID:40615480.
7. Pereira IL, Ito FA, Takahama Júnior A, Dos Santos TC, da Silva Santos PS, Cardoso CL, et al. Health promotion and diagnosis of oral diseases in institutionalized elderly people: an experience report. *Int J Environ Res Public Health*. 2025;22(7):1097. <https://doi.org/10.3390/ijerph22071097>. PMID:40724164.
8. Sadr K, Mahboob F, Rikhtegar E. Frequency of traumatic ulcerations and post-insertion adjustment recall visits in complete denture patients in an Iranian faculty of dentistry. *J Dent Res Dent Clin Dent Prospects*. 2011;5(2):46-50. <https://doi.org/10.5681/joddd.2011.010>. PMID:23019508.
9. Carlsson GE. Facts and fallacies: an evidence base for complete dentures. *Dent Update*. 2006;33(3):33. <https://doi.org/10.12968/denu.2006.33.3.134>. PMID:16700269.
10. Chowdhary R, Lekha K, Patil NP. Two-dimensional finite element analysis of stresses developed in the supporting tissues under complete dentures using teeth with different cusp angulations. *Gerodontology*. 2008;25(3):155-61. <https://doi.org/10.1111/j.1741-2358.2007.00210.x>. PMID:18282146.
11. Şirin Sarıbal G, Ersu N, Canger EM. Effects of conventional complete dentures and implant-supported overdentures on alveolar ridge height and mandibular bone structure: 2-year and 6-year follow-up study. *Clin Oral Investig*. 2022;26(9):5643-52. <https://doi.org/10.1007/s00784-022-04519-5>. PMID:35488134.
12. Chiesa-Estomba CM, Mayo-Yanez M, Vaira LA, Maniaki A, Feng AL, Landa-Garmendia M, et al. Oral cavity cancer

- secondary to dental trauma: a scoping review. *Biomedicines*. 2024;12(9):12. <https://doi.org/10.3390/biomedicines12092024>. PMID:39335539.
13. Grande F, Pavone L, Molinelli F, Mussano F, Srinivasan M, Catapano S. CAD-CAM complete digital dentures: an improved clinical and laboratory workflow. *J Prosthet Dent*. 2025;133(6):1430-5. <https://doi.org/10.1016/j.prosdent.2024.11.016>. PMID:39734114.
 14. Wang Y, Li Y, Liang S, Yuan F, Liu Y, Ye H, et al. The accuracy of intraoral scan in obtaining digital impressions of edentulous arches: a systematic review. *J Evid Based Dent Pract*. 2024;24(1):101933. <https://doi.org/10.1016/j.jebdp.2023.101933>. PMID:38448118.
 15. Oh WS, Morris HF. The principles of functional and mucostatic impressions for complete denture bases: a review. *Compend Contin Educ Dent*. 2017;38(10):664-7, quiz 8. PMID:29140094.
 16. Iegami CM, Lopes Dde M, Nakamae AE, Uehara PN, Tamaki R. Different occlusal schemes in a persistent protruding complete denture wearer. *Case Rep Dent*. 2016;2016:7418686. <https://doi.org/10.1155/2016/7418686>. PMID:27069698.
 17. Liu R, Zhao L, Xu L. Research status, technical challenges, and clinical application of digitally fabricated complete dentures: a systematic review. *J Prosthet Dent*. 2025;134(4):1107e1-12. <https://doi.org/10.1016/j.prosdent.2025.06.008>. PMID:40579308.
 18. Pompa G, Giovannetti A, Gentile T, Di Carlo S. Control factors in removable complete dentures: from the articulation quintet to kinetic contact. *Ann Stomatol (Roma)*. 2010;1(2):14-9. PMID:22238706.
 19. Barbosa WF, Iegami CM, Uehara PN, Furuyama RJ, Tamaki R. In vivo comparison of the masticatory efficiency of artificial teeth with two different cusp heights in complete dentures: a preliminary study. *J Prosthodont*. 2017;26(3):206-10. <https://doi.org/10.1111/jopr.12380>. PMID:26496624.
 20. Cleary TJ, Hutter L, Blunt-Emerson M, Hutton JE. The effect of diet on the bearing mucosa during adjustment to new complete dentures: a pilot study. *J Prosthet Dent*. 1997;78(5):479-85. [https://doi.org/10.1016/S0022-3913\(97\)70063-5](https://doi.org/10.1016/S0022-3913(97)70063-5). PMID:9399190.
 21. Brunello DL, Mandikos MN. Construction faults, age, gender, and relative medical health: factors associated with complaints in complete denture patients. *J Prosthet Dent*. 1998;79(5):545-54. [https://doi.org/10.1016/S0022-3913\(98\)70176-3](https://doi.org/10.1016/S0022-3913(98)70176-3). PMID:9597608.
 22. Dervis E. Clinical assessment of common patient complaints with complete dentures. *Eur J Prosthodont Restor Dent*. 2002;10(3):113-7. PMID:12382606.
 23. D'Souza NL, Vasconcelos A, HajHamid B, Somogyi-Ganss E. Comparison of postinsertion adjustments between conventional and immediate complete dentures and their association with denture survival. *J Prosthet Dent*. 2025;134(4):1207.e1-8. <https://doi.org/10.1016/j.prosdent.2025.06.025>. PMID:40628577.
 24. Eberhard L, Oh K, Eiffler C, Rammelsberg P, Kappel S, Schindler HJ, et al. Adaptation to new complete dentures-is the neuromuscular system outcome-oriented or effort-oriented? *Clin Oral Investig*. 2018;22(6):2309-17. <https://doi.org/10.1007/s00784-017-2331-8>. PMID:29484547.
 25. Drago CJ. A retrospective comparison of two definitive impression techniques and their associated postinsertion adjustments in complete denture prosthodontics. *J Prosthodont*. 2003;12(3):192-7. [https://doi.org/10.1016/S1059-941X\(03\)00082-2](https://doi.org/10.1016/S1059-941X(03)00082-2). PMID:14508741.
 26. Kivovics P, Jahn M, Borbely J, Márton K. Frequency and location of traumatic ulcerations following placement of complete dentures. *Int J Prosthodont*. 2007;20(4):397-401. PMID:17695871.
 27. Saraswati S, Razdan P, Smita, Aggarwal M, Bhowmick D, Priyadarshni P. Traumatic ulcerations frequencies and postinsertion adjustment appointments in complete denture patients. *J Pharm Bioallied Sci*. 2021;13(Suppl 2):s1375-80. https://doi.org/10.4103/jpbs.jpbs_207_21. PMID:35017992.
 28. Pascoal ALB, Paulino MR, Oliveira AGRC, Carreiro AFP, Mestriner Júnior W, Calderon PS. A randomized clinical trial of a simplified technique for complete denture fabrication: patient perceptions, masticatory efficiency, temporomandibular disorders and quality of dentures. *Braz Dent Sci*. 2024;27(3):e4353. <https://doi.org/10.4322/bds.2024.e4353>.

Yolanda de Toledo Salvado da Ressurreição
(Corresponding address)

Universidade de São Paulo, Faculdade de Odontologia, Departamento de Prótese, São Paulo, SP, Brazil.
Email: yolanda.ressu@alumni.usp.br

Editor-in-chief: Sergio Eduardo de Paiva Gonçalves

Editor: João Maurício Ferraz da Silva

Date submitted: 2026 Feb 26

Accept submission: 2026 Jul 14