

Digital Removable Prosthodontics, CAD/CAM Milling and 3D Printing Technology.

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Abstract

Computer-Aided Design – Computer-Aided Manufacturing (CAD/CAM) technology has significantly improved modern dentistry. CAD/CAM applications in dentistry include fabricating inlays, onlays, crowns, fixed partial dentures, and implant abutments/prostheses. Recently, computer-aided technology has been a new method commercially available for fabricating removable prostheses. This system facilitates impressions, interocclusal records, and tooth selection to be completed in one appointment. The dentures are manufactured using CAD/CAM technology and placed as early as the second appointment. Several commercial manufacturers worldwide fabricate removable prostheses with computer-aided design and computer-aided manufacturing (CAD/CAM) technology for dentists. These manufacturers have definitive protocols and offer exclusive dental materials, techniques, and laboratory support. CAD/CAM technology allows clinicians to design removable prostheses and create natural-looking superstructures. In addition, the CAD/CAM technique provides a precise fit, reduces the number of visits and the cost of the procedure, and eliminates dimensional inaccuracies due to conventional processing techniques. This presentation aims to describe a simple process for removable prosthesis procedures using CAD/CAM technology and review available systems.

Objectives:

- Discuss the latest trends in digital removable prosthodontics.
- Identify current treatment options for edentulous patients.
- Describe new standards for the treatment of edentulism.
- Review intraoral scanners and CAD/CAM technology in prosthodontics.