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# Which Denture Should Be Inserted First? A Review

Dr. Puvvada Venkata Vaibhav <sup>1</sup>, Dr. B. Lakshmana Rao <sup>2</sup>, Dr. K. Sudheer <sup>3</sup>, Dr. Sudha Rani. P <sup>4</sup>,

Dr. P. Ravi Teja <sup>5</sup>

Final Year Post Graduate Student, Department of Prosthodontics, Lenora Institute of Dental Sciences,  
Rajahmundry, India<sup>1</sup>

Professor & HOD, Department of Prosthodontics, Lenora Institute of Dental Sciences, Rajahmundry, India<sup>2</sup>

Professor, Department of Prosthodontics, Lenora Institute of Dental Sciences, Rajahmundry, India<sup>3</sup>

Second Year Post Graduate Student, Department of Prosthodontics, Lenora Institute of Dental Sciences,  
Rajahmundry, India<sup>4</sup>

First Year Post Graduate Student, Department of Prosthodontics, Lenora Institute of Dental Sciences,  
Rajahmundry, India<sup>5</sup>

**ABSTRACT:** The sequence of denture insertion—whether the maxillary or mandibular denture should be placed first—is a crucial step in complete denture prosthodontics. This decision impacts retention, stability, occlusal balance, and neuromuscular adaptation. Prosthodontic textbooks present different perspectives based on clinical principles, biomechanical factors, and anatomical considerations. While some advocate inserting the maxillary denture first due to its superior retention and esthetic role, others emphasize inserting the mandibular denture first to establish occlusion and stability. This review examines classical and contemporary prosthodontic literature to analyze both approaches and provide clinical recommendations.

### I. INTRODUCTION

Complete denture fabrication follows a sequence of clinical steps to ensure function, esthetics, and patient comfort. Among these steps, the order of denture insertion remains a topic of discussion. The placement sequence affects retention, occlusion, and adaptation, making it a key consideration in prosthodontic practice.

There are different schools of thoughts regarding placement of complete dentures in the patient mouth. First school of thought suggesting insertion of Maxillary complete denture, and Second school of thought is insertion of Mandibular Complete denture followed by Maxillary complete denture.

This review critically evaluates these approaches to determine the most effective denture insertion sequence.

### II. THE MAXILLARY-FIRST APPROACH

Many prosthodontic textbooks recommend inserting the maxillary denture first due to several advantages:  
The Rationale Behind Denture Insertion Sequence

Maxillary Denture First Approach

Several prosthodontic textbooks advocate inserting the maxillary denture first due to the following reasons:

- **Superior Retention and Stability:** The maxillary denture typically benefits from a larger surface area, palatal coverage, and a favorable relationship with the soft tissues. Unlike the mandibular denture, which is more prone to displacement due to tongue and cheek movements, the maxillary denture relies on suction and atmospheric pressure for retention (Boucher's Prosthodontic Treatment for Edentulous Patients).<sup>1</sup>





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- Occlusal Guidance for the Mandibular Denture: Placing the maxillary denture first provides a stable occlusal template, allowing the mandibular denture to be positioned accurately in centric relation (Zarb et al., *Prosthodontic Principles*). This approach ensures proper occlusion, particularly in balanced occlusal schemes.<sup>2</sup>
- Aesthetic and Phonetic Considerations: The maxillary denture determines anterior tooth display, lip support, and phonetic adaptation. It serves as a reference point for mandibular tooth positioning, which is critical in cases requiring esthetic harmony (Sharry's *Complete Denture Prosthodontics*).<sup>3</sup>
- Easier Adaptation for the Patient: Since the maxillary denture remains relatively stable, patients can adapt more quickly, allowing the clinician to fine-tune the mandibular denture to match the maxillary occlusion. (Jacobson & Krol, 1983).<sup>4</sup>
- Improved Patient Adaptation: Patients tend to adjust more easily to the presence of an upper denture, as it does not interfere with tongue movement (Winkler, 2002).<sup>5</sup>

### III. MANDIBULAR DENTURE FIRST APPROACH

Some textbooks and clinicians prefer inserting the mandibular denture first, citing the following reasons:

- Establishing a Stable Occlusal Plane: The mandibular denture is more challenging to stabilize due to the limited support from the resorbed alveolar ridge. Placing it first allows for occlusal adjustments before positioning the maxillary denture (Sheldon Winkler's *Essentials of Complete Denture Prosthodontics*).<sup>5</sup>
- Functional Mandibular Movements: The mandible dictates functional movements and occlusal dynamics. By placing the mandibular denture first, clinicians can better evaluate its stability and ensure proper positioning before finalizing the maxillary denture (McCracken's *Removable Partial Prosthodontics*).<sup>6</sup>
- Patient Adaptation to Mandibular Prosthesis: Since the mandibular denture is more challenging for patients to tolerate due to tongue and muscle movement, inserting it first allows the patient to focus on adapting before adding the maxillary denture.
- Lower Ridge Considerations: In patients with a well-formed mandibular ridge and a resorbed maxillary ridge, inserting the mandibular denture first can improve adaptation (Rahn & Ivanhoe, 2012).<sup>7</sup>
- Functional Occlusion: If the patient has significant difficulty with mandibular denture retention, stabilizing it first may be beneficial (Heartwell & Rahn, 2006).<sup>8</sup>

### IV. CLINICAL CONSIDERATIONS IN DENTURE INSERTION SEQUENCE

#### Ridge Resorption and Retention

- Severely resorbed mandibular ridges: A mandibular-first approach may be beneficial to establish stability.
- Good maxillary retention: A maxillary-first approach is preferable when the maxillary denture has sufficient suction and stability.

#### Occlusal Considerations

- Balanced Occlusion: In cases requiring bilateral balanced occlusion, inserting the maxillary denture first helps establish a reference for occlusal adjustment.
- Monoplane Occlusion: In cases with severe ridge atrophy, monoplane occlusion with minimal interference may allow for a mandibular-first approach.

#### Neuromuscular Adaptation

- Maxillary denture stability reduces patient discomfort: Most patients find the maxillary denture more comfortable due to its suction effect.
- Mandibular denture discomfort requires careful adaptation: Patients often struggle with mandibular dentures, making early adaptation crucial.

### V. CONCLUSION

While the maxillary-first approach is preferred due to its stability and occlusal advantages, individual patient needs must be considered. Clinical experience, coupled with evidence-based practices, should guide the final decision.



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