

# Mouth Rinse on Surgical Site Infection in Oral Surgery.

Ahmed El-Sayed\*

Department of Oral & Maxillofacial Surgery, Cairo University, Egypt

\*Correspondence to: Ahmed El-Sayed. Department of Oral & Maxillofacial Surgery, Cairo University, Egypt. Email: dr.ahmed.elsayed@outlook.com

**Received:** 27-May-2025, Manuscript No. AAOMT-25-169569; **Editor assigned:** 01-Jun-2025, PreQC No. AAOMT-25-169569 (PQ); **Reviewed:** 15-Jun-2025, QC No. AAOMT-25-169569; **Revised:** 22-Jun-2025, Manuscript No. AAOMT-25-169569 (R); **Published:** 29-Jun-2025, DOI:10.35841/AAOMT-8.1.185

## Introduction

Surgical site infections (SSIs) are among the most common postoperative complications in oral surgery, often leading to delayed healing, increased patient discomfort, and elevated healthcare costs. Intraoral surgical procedures inherently carry a high risk of bacterial contamination due to the abundant and diverse oral microbiota. The oral cavity harbors over 700 bacterial species, many of which can become opportunistic pathogens when the mucosal barrier is breached during surgery. Factors such as poor oral hygiene, existing periodontal disease, and systemic health conditions can further predispose patients to postoperative infections.

Preoperative antimicrobial mouth rinses, such as chlorhexidine gluconate and povidone-iodine, have been increasingly employed as a prophylactic measure to reduce microbial load before oral surgery [1, 2, 3, 4, 5]. These rinses exert a broad-spectrum antimicrobial effect, lowering the bacterial count in saliva and on mucosal surfaces, thereby potentially minimizing bacterial contamination of the surgical site. Several clinical trials and meta-analyses have reported that the use of preoperative antimicrobial mouth rinses can significantly reduce the incidence of SSIs, especially in high-risk patients or in surgeries involving bone exposure, such as third molar extractions and implant placements. The rationale for their use is grounded in the principle that reducing the bacterial burden at the time of incision can improve surgical outcomes and decrease postoperative complications.

Given their ease of application, low cost, and favorable safety profile, preoperative antimicrobial mouth rinses present an attractive adjunct to standard aseptic protocols in oral surgery.

However, variations in concentration, duration of rinse, and patient compliance can influence their effectiveness, highlighting the need for standardized clinical guidelines and further research.

## Conclusion

Preoperative antimicrobial mouth rinses offer a simple yet effective strategy to reduce the risk of surgical site infections in oral surgery. By significantly lowering the oral microbial load prior to incision, these rinses can enhance postoperative healing, improve patient comfort, and potentially reduce the need for systemic antibiotic use. While current evidence supports their use, further randomized controlled trials with standardized protocols are warranted to establish definitive recommendations and optimize their role in routine oral surgical practice. Incorporating such preventive measures into preoperative care could represent a cost-effective and clinically valuable approach to infection control in oral and maxillofacial surgery.

## References

1. Alves, R., Ribeiro, J., & Ferreira, J. (2020). Effectiveness of chlorhexidine mouthrinse in preventing postoperative infections in oral surgery: A systematic review. *Journal of Oral and Maxillofacial Surgery*, 78(7), 1125–1134.
2. Coulthard, P., Esposito, M., Worthington, H. V., & van der Elst, M. (2014). Preoperative chlorhexidine mouth rinse for the prevention of postoperative infections: A Cochrane systematic review. *Cochrane Database of Systematic Reviews*, 2014(3), CD012705.

3. Herrero-Climent, M., Falcao, A., & Ríos-Santos, J. V. (2019). Efficacy of preoperative antiseptic mouth rinses in oral implantology: A randomized controlled trial. *Clinical Oral Implants Research*, 30(9), 837–845.
4. Koyuncu, B. O., & Gunbay, S. (2021). Antiseptic mouth rinses in oral surgery: Review of current evidence. *International Journal of Oral and Maxillofacial Surgery*, 50(4), 523–531.
5. Yaghoubian, A., Iqbal, S., & Kim, P. (2018). Reduction of oral microbial load with preoperative chlorhexidine rinse in third molar surgery: A clinical trial. *British Journal of Oral and Maxillofacial Surgery*, 56(5), 404–409.