



**Título:** INTRAMEMBRANOUS OSSEOUS GRAFTING: INFLUENCE OF FACTORS SUCH AS MICROBIAL CONTAMINATION, PERIODONTAL BIOTYPE, PERIOSTEAL PRESERVATION, DEFECT SIZE OR HEALING TIME ON TRANSPLANTED BONE VOLUMEN AND DONOR SITE REPAIR. DEVELOPING SAFE ANTIMICROBIAL PROTOCOLS

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**Resumen:** Successful implant rehabilitation requires sufficient quantity and quality of bone. One of the most important treatment aspects for functional and esthetic success of implant supported rehabilitation is ridge volume reconstruction of the atrophic dento-alveolar process. Several factors can detrimentally affect bone augmentation procedures short and long term. Controversy exists on the influence of such factors as microbial contamination, periodontal biotype, periosteal preservation, cortical perforation, defect size and healing time. The present study was conducted to demonstrate specific microbial bone contamination and assess the clinical



and radiographic/tomographic outcome in patients undergoing sinus augmentation. Initially, a study protocol was designed to quantify the average bone volume that can be safely harvested from major intraoral sources and assess volume loss after transplantation in sinus augmentation. Our study also aimed to assess the potential influence of the periodontal biotype on the long term volume maintenance of the augmented sites and evaluated the functional and esthetic outcome of dental implants placed in the anterior region after ridge augmentation with block autografts. Moreover, we aimed to evaluate bone healing of large defect sites treated with cortical perforations, and a combination of particulate and block autografts, without the use of other membranes but the periosteum. Tomographic examination was performed to assess transplant volume maintenance post-augmentation and donor site repair. Lastly, our research aimed to evaluate human osteoblast cellular behavior after bone explant exposure to different antimicrobial agents so that a safe prophylactic antimicrobial protocol in bone transplantation could be established.