

Consensus Report by the Italian Academy of Osseointegration on the Use of Graft Materials in Postextraction Sites

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Purpose: After tooth extraction, a modeling and remodeling phase of bone and soft tissues occurs. It has been fully demonstrated that bone resorption as high as 50% can take place regarding ridge width and a variable amount concerning ridge height, making it difficult to perform implant surgery. **Materials and Methods:** Active members of the Italian Academy of Osseointegration (IAO) participated in this Consensus Conference, and three systematic reviews were conducted before the meeting to provide guidelines on alveolar ridge preservation procedures. The systematic reviews covered the following topics: (1) What material best preserves the dimensions of the ridge horizontally and vertically?; (2) what material favors the formation of the highest quantity of new bone?; (3) which technique would best seal the socket?; and (4) what effect does alveolar ridge preservation have on soft tissues? **Results:** The main conclusions reached by the assembly were that alveolar ridge preservation is advisable after dental extraction, particularly in esthetic areas, in proximity of anatomical structures (ie, maxillary sinus, inferior alveolar nerve, and mental foramen), whenever the treatment plan requires delayed placement, and whenever patients ask to postpone implant insertion for various reasons. Socket debridement is advised before the use of a “regenerative material,” and xenograft is considered the gold standard material to maintain ridge dimensions. Another indication is antibiotic therapy, which is recommended in the case of alveolar ridge preservation (amoxicillin 2 g 1 hour before the intervention and 1 g every 12 hours for 6 days). A membrane or autologous soft tissue should be used to seal the socket and protect the regenerative material, and the indicated reentry time (implant insertion) is 4 to 6 months. **Conclusion:** This Consensus Conference agreed that the adoption of alveolar ridge preservation can effectively prevent physiologic bone loss, especially in esthetic areas. It is recommended to cover the xenograft material with a membrane or autologous soft tissue, and antibiotic therapy is advisable. *Int J Oral Maxillofac Implants* 2022;37:98–102. doi: 10.11607/jomi.9290

Keywords: antibiotics, bone regeneration, dental implants, postextraction site, surgery

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Submitted February 8, 2021; accepted August 7, 2021.

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Dental extraction is one of the most common surgical procedures in dental practices, and the subsequent spontaneous socket healing process is a basic topic of research and discussion that is found in biomedical and clinical-based dental sciences.¹

The last phase of spontaneous healing is known as modeling and remodeling, whose aim is to restore the lost architecture and functionality of the alveolus and lasts for several months.²

It has been fully demonstrated that during this process, as much as 50% of ridge width and a variable amount of ridge height can resorb; this resorption is more substantial on the buccal aspect of the alveolus. This resorption phase leads to certain anatomical changes, which make a correct restoration with dental implants extremely challenging, both functionally and esthetically.³

One of the simplest surgical approaches to counteract such alterations is probably the renowned alveolar ridge preservation technique, in which the use of different grafting materials placed into the socket, with or without any sort of sealing material to cover the graft, aims to contrast the alveolar resorption.^{4,5}

However, over the last two decades, different methods to counteract resorption during the healing phase