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Socket Preservation 101: What Works?

By Jeff Lineberry (/spear-review/author/jeff-lineberry/) on April 9, 2018 | (/bookmarks/bookmark/35029)

In a past article about socket preservation (https://www.speareducation.com/spear-review/2014/06/to-graft-or-not-to-graft/#.VDgK6xZ7SZQ), I discussed the importance of considering what will happen after we remove teeth and how it can impact the future overall bone volume and quality in the extraction site. And with dental implants being a growing part of treatment for missing teeth, it is something that has to be considered. Once we realize that a tooth is going to be lost, there are a variety of methods and materials to help with socket preservation. We preserve the bone by not necessarily stopping the bone from resorbing, but we can help decrease the dimensional changes and volumetric contraction post-extraction.

Which socket preservation method do you choose and what works?

Bovine bone, mineralized versus demineralized allograft, autogenous bone, tricalcium phosphate, membrane versus non-membrane, etc. Well, the good news is that most, if not a preservation techniques work or help by decreasing dimensional changes in the te

area. But, often times the question is: *What socket preservation method is best?* Well, what we find is that there is no one *best* way and, in fact, some research states: “The scientific evidence does not provide clear guidelines in regards to the type of biomaterial, or surgical procedure.”[1]

In fact, another review paper states: “There is limited data regarding the effectiveness of alveolar ridge preservation therapies when compared to the control. Overall the socket intervention therapies did reduce alveolar ridge dimensional changes post-extraction, but were unable to prevent resorption. Histology did demonstrate a large proportion of residual graft material that may account for some of the difference in alveolar ridge dimensions at follow up.”[2]

Recent research does show that the use of demineralized allograft (DFDBA) versus mineralized allograft (FDBA) accounts for more vital bone versus residual graft material present in the socket after grafting.[3] In fact, “this study provides the first histologic and clinical evidence directly comparing ridge preservation with DFDBA versus FDBA in humans and demonstrates significantly greater new bone formation with DFDBA.”

When it comes to having to raise a full thickness flap, recent research shows that “significantly more negative results than that of the less-demanding flapless procedure, with an increased width resorption of the post-extraction site.”[4]

With implants becoming more common in dentistry, it is important to consider whether or not your patient is considering implants in the future. If so, the research is clear - doing nothing will definitely lead to significant changes in the overall bony architecture surrounding the extraction site and doing something will help. So, what’s best? Stayed tuned as research continues to search for what will provide the best long term, but at least consider doing something!

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References:

1. *Clin Oral Implants Res.* 2012 Feb;23 Suppl 5:22-38. doi:10.1111/j.1600-0501.2011.02331.x. **Surgical protocols for ridge preservation after tooth extraction. A systematic review.** Vignoletti F[1], Matesanz P, Rodrigo D, Figuero E, Martin C, Sanz M.
2. *Clin Implant (https://www.speareducation.com/spear-review/category/implants) Dent Relat Res. (http://www.ncbi.nlm.nih.gov/pubmed/22405099)* 2014 Feb;16(1):1-20. doi: 10.1111/j.1708-8208.2012.00450.x. Epub 2012 Mar 8. **Bone healing after tooth extraction with or without an intervention: a systematic review of randomized controlled trials.** Morjaria KR[1], Wilson R, Palmer RM.
3. *J Periodontol.* 2012 Mar;83(3):329-36. doi: 10.1902/jop.2011.110270. Epub 2011 Jul 12. **Histologic comparison of healing after tooth extraction with ridge preservation using mineralized versus demineralized freeze-dried bone allograft.** Wood RA[1], Mealey BL.
4. *J Periodontol.* 2014 Jan;85(1):14-23. doi: 10.1902/jop.2013.120711. Epub 2013 May 20. **Extraction socket healing in humans after ridge preservation techniques: comparison between flapless and flapped procedures in a randomized clinical trial.** Barone A[1], Toti P, Piattelli A, Iezzi G, Derchi G, Covani U.

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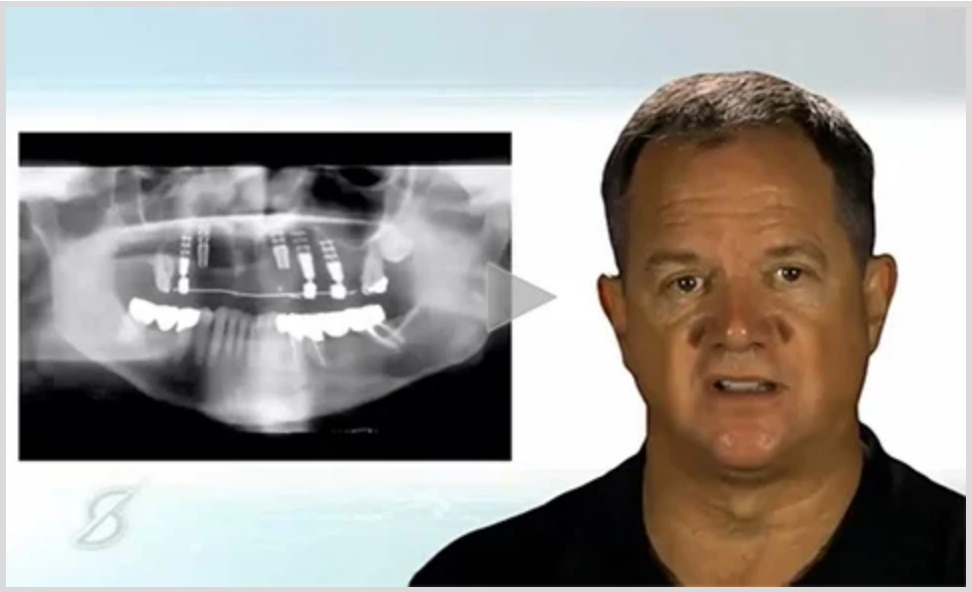

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