



# Huntington Village Implant & Oral Surgeons

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Don't Miss  
Out on our  
Next Seminar

**Tuesday**

**March  
10th, 2015**

3 CE Credits

"CAD/CAM  
For Everyone"

Presenter:

Leonard  
Patella, DDS

Registration  
Dinner  
5:30 pm

Lecture  
6:00 - 9:00 pm

Dolan Family  
Health Center

284 Pulaski  
Road,  
Greenlawn,  
NY

This course is  
sponsored by  
the Suffolk  
County Dental  
Society, an  
ADA-CERP  
recognized  
provider of  
Cont. Ed. (CE)  
approved by  
the New York  
State Dental  
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and a design-  
ated PACE  
Program Pro-  
vider for the  
Academy of  
General  
Dentistry.

### Dental Implants: Ridge Preservation Through Socket Grafting

Kassim B, Ivanobski S, Matteos N: Current perspectives on the role of ridge (socket) preservation procedures in dental implant treatment in the aesthetic zone. *Austral Dent J* 59:48-56, 2014

#### Dr. Pruden's Comments:

The article below on ridge preservation through socket grafting was interesting in that it could not recommend routine socket grafting since superior clinical outcomes were not predictable. I have found socket grafting to be useful to preserve socket width when the buccal or labial plate of alveolar bone is less than 1 mm thick. Placement of this socket graft may not produce an adequate dimension of bone for implant placement and a secondary graft procedure may be necessary. Infected extraction sites are best allowed to heal and be treated with a full flap formal augmentation and barrier graft procedure.

**Clinical Significance:** Healing can be compromised with ridge preservation techniques, treatment can take longer, patients can be uncomfortable over an extended time, and the cost is greater than when the socket is left ungrafted. That said, in some cases, such as when considerable time will elapse between extraction and implant placement, the use of socket grafting procedures and materials may be advisable. The jury is still out.

**Background:** When a tooth is removed during adulthood, the alveolar process atrophies, ultimately producing a narrowed ridge and a palatal/lingual shift of the ridge's midline. If there is substantial tissue loss, it can be difficult to place an implant in a position that is suitable prosthodontically. Guided bone regeneration (GBR) procedures may be required. Ridge preservation or socket preservation refers to the placement of graft material in the socket with either a membrane or an advanced or rotated flap or both. Materials used for socket grafting include autogenous bone, allograft materials, and xenografts, either from other species or synthetic alternatives. Some are slow resorbing and some fast resorbing. The evidence concerning the advantages of ridge preservation procedures with respect to improved dental implant treatment outcomes was reviewed, along with the clinical aspects of socket grafting itself.

**Methods:** A PubMed search was done to identify published articles with the relevant information. Eventually 22 articles were chosen for analysis, including 6 human studies and 3 experimental studies on dogs related to implant outcomes in grafted sockets; 3 randomized clinical trials, and 2 experimental dog studies and 2 literature reviews comparing implant timing and protocols; and 3 studies and 1 systematic review analyzing differences in patient satisfaction and/or health-related quality of life (OHR-QoL) in relation to various implant placement treatment modalities.

**Results:** Several socket grafting materials and techniques have been shown clinically to increase alveolar ridge volume and improve surgical implant placement procedures. However, ridge dimensions often cannot be maintained and ridge volume can resemble that of a non-grafted socket. As a result, clinicians must warn patients of the chance of failure for these techniques and materials.

Evidence also suggests that additional simultaneous augmentation is needed for implant placement at grafted sites, but further study is needed to confirm this finding. If such augmentation is required, the usefulness of socket grafting becomes questionable because of the added cost and significantly longer time required for treatment compared to type 2 placement with simultaneous augmentation. Patients also may suffer prolonged psychological dissatisfaction with the longer treatment time and extended provisionalization period.

Sockets grafted using xenografts were found to have compromised healing profiles compared to non-grafted sockets. Further study is needed to better understand with this parameter. In addition, the treatment outcomes with early placement protocols are similar to those seen with socket-grafting techniques, again bringing into question the wisdom of choosing socket grafting. However, these procedures are recommended when it is preferable to have extended treatment times between the extraction of a tooth and the placement of the implant.

**Discussion:** None of the evidence in support of combining socket grafting techniques with the implant placement is insufficient to recommend this technique as a routine approach. Superior clinical outcomes with grafted versus non-grafted socket sites are not reliably achievable, so the added expense, longer treatment time, and patient discomfort are not justified for all cases.