

# Bone changes in ridge split with immediate implant placement: A systematic review

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## Abstract

### Introduction

Alveolar width deficiency represents loss of buccal cortical or/and medullary bone. Deficiency of the buccal represents significant difficulty in implant reconstruction. A variety of implant-driven bone augmentation techniques for the deficient alveolar bone have been proposed. Alveolar ridge split is an excellent tool for regaining alveolar ridge width.

### Material and method

Publications on the subject in English were searched to select articles up to June 2015. A systematic review was conducted searching an electronic database (MEDLINE, Pub- Med and Cochran) for articles in pre-reviewed journals concerning studies on humans. Two independent reviewers screened 815 papers.

### Result

A consensus on the studies to be selected was reached after discussion; 804 articles were excluded on the basis of the title and abstract. Kappa score for the selection of the paper was 0.89. Full-text articles were obtained for the 11 selected publications. The 11 full texts were independently assessed by the two reviewers and 3 studies were found to qualify for inclusion.

### Conclusion

Alveolar ridge splitting might be considered a predictable approach that demonstrates a high implant survival rate, adequate horizontal bone gain and minimal postoperative complications. Weak evidence showed the effect of flap design and immediate implantation on marginal bone loss and survival rate.

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