

# FROM ZERO TO HERO

With Emdogain in KOL Development

*Introducing:  
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Emdogain: A Game Changer, May 7, 2012*

Just like the first time I stepped onto the University of Georgia football field to lead 86,000 fans in a cheer, the first time I placed Emdogain into a periodontal defect was a nervous but exhilarating experience. When my first patient came back for his two-week postoperative appointment and reported no pain or swelling, my excitement grew exponentially. The addition of Emdogain to my practice has not only been a practice builder, but it truly has been a game changer. Its addition to my practice has helped me achieve outstanding results in otherwise extremely challenging situations.

Emdogain fools the body into forming new bone, cementum, and attachment fibers, hence promoting periodontal regeneration. It consists of a mixture of enamel matrix proteins and their derivatives<sup>1,2</sup>, and propylene-glycolic-alginate (PGA) as a carrier. Enamel matrix proteins (amelogenins) are taken from developing porcine tooth buds. By reintroducing EMP, you are signaling a biologic response from the body to do what it did naturally during creation. Enamel matrix proteins are only in the body at this time of creation. In tooth development, the secretion of these proteins onto the developing root surface precedes the formation of tooth attachment. A similar action occurs when the proteins are placed on a root surface that has lost bone and attachment from disease. When applied to the root surface during surgery, these proteins assemble into an insoluble matrix layer that promotes the attachment of mesenchymal cells. These cells produce new matrix components and growth factors that participate in the regain of tooth attachment. Emdogain also has the ability to inhibit epithelial cell growth that could interfere with proper tissue and bone reformation.

It remains unclear exactly how this “magic fairy dust” — as it is referred to in our practice — serves as a stimulus to prompt stem cells in the periodontal ligament to divide and differentiate, thus producing the additional proteins required for regeneration of the periodontium. It has been demonstrated, however, that Emdogain mimics the biological process of natural tooth development and thus enables the regeneration of new periodontal tissue.<sup>4</sup> Enamel matrix proteins will naturally bond with fibronectin, a key wound healing component in the body, as well as act as a key receptor to existing but yet dormant growth factors including Veg-F, therefore upregulating Veg-F. A key to its success in my practice has been the significant reduction of postoperative discomfort and edema.

Emdogain is indicated for treatment of the following conditions: intrabony defects due to moderate or severe periodontitis, mandibular degree II furcations with minimal interproximal bone loss, coronally advance flap for treatment of gingival recession defects, and minimally invasive surgery technique in the esthetic zone.

## References

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