

Straumann® Emdogain®  
Orchestrating  
wound healing.









# Straumann® Emdogain®.

## Making surgery more tolerable for your patients.

Esthetics, comfort and efficiency are increasingly demanded by your patients. Emdogain® is the solution you have been searching for to meet these demands. Emdogain® accelerates healing and minimizes discomfort for your patient by providing less swelling, less pain and faster recovery from surgery. Furthermore, it initiates and promotes a natural healing process that leads to the esthetic outcome your patient desires.

Your primary goal is to create a functional and esthetically pleasing restoration for your patient. Unfortunately, surgical interventions used to achieve this, always bear the risk of complications such as pain, swelling and discomfort.

You can increase your patients' acceptance and tolerance of oral surgery by:

- informing the patient about possible undesired effects of the procedure
- applying surgical techniques that reduce invasiveness
- using additional products to improve healing; reduce pain, swelling, the risk of infections and wound complications.

- Significantly enhancing wound healing. 4
- Make a difference in implantology. 6
- Make a difference in periodontology. 8
- Differentiate your dental practice. 10





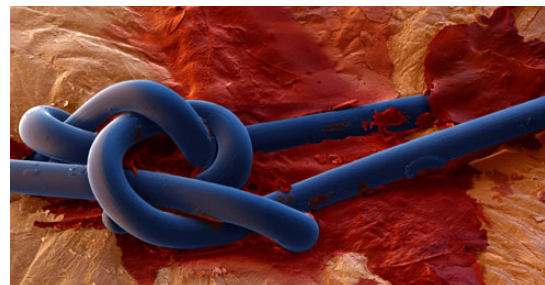
# Straumann® Emdogain®.

## Significantly enhancing wound healing.

### CONSIDER THE BIOLOGY BEHIND EVERY SURGICAL WOUND.

The healing of any surgical wound is determined by a dynamic, complex sequence of blood clot formation, inflammation, new tissue formation, remodeling and maturation.

The quality of the final outcome of any oral surgical procedure is intricately linked to these biological processes of wound healing.



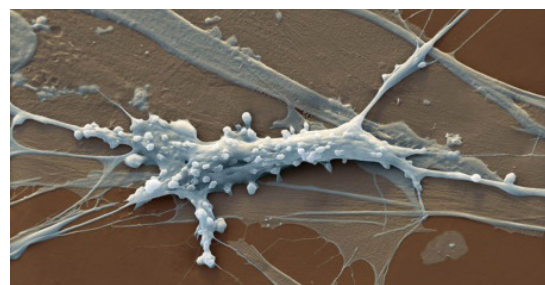
Surgical incision after primary closure

### A NOVEL CONCEPT TO IMPROVE HEALING.

Emdogain® is one of the best documented products in dental regeneration. Its excellent clinical tolerability<sup>1,2</sup> has been demonstrated in over two million surgical applications.

Emdogain® contains enamel matrix proteins (amelogenins). When applied to the wound, these proteins form an extracellular matrix that stimulates cells and processes that are fundamental for wound healing.<sup>3</sup>

These properties make Emdogain® a unique solution to stimulate and accelerate the healing of wounds and regeneration of tissues.



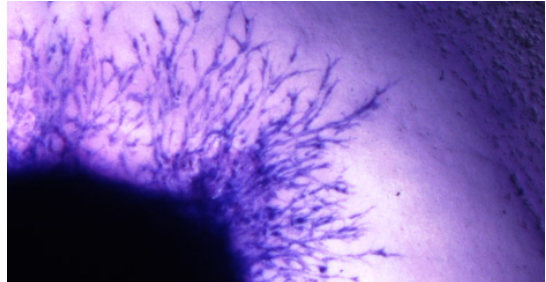
Straumann® Emdogain® stimulates fibroblasts



## ACCELERATE HEALING. EXCEL IN QUALITY.

Emdogain® stimulates various cell types and cellular processes that are crucial for the healing of oral tissues<sup>3,4,5,6</sup>. Emdogain® stimulates these cells to migrate and proliferate and produce extracellular matrix and growth factors like collagen, Transforming Growth Factor  $\beta$  (TGF- $\beta$ ) or Vascular Endothelial Growth Factor (VEGF)<sup>7,8</sup> which are essential for wound healing. Preclinical and clinical studies have demonstrated that the application of Emdogain® in oral surgical procedures:

- accelerates early wound closure and re-epithelialization by 70 % in the early healing phase<sup>9</sup>
- doubles the speed of soft tissue thickness build-up<sup>10,11</sup>
- significantly improves keratinization in the early healing phase<sup>12,13</sup>
- significantly decreases inflammation<sup>9,14</sup> by modulating the production of inflammatory factors related to wound healing<sup>9,15,16,17</sup>
- significantly improves post-surgical revascularization<sup>18,19</sup>
- provides an antimicrobial and antiseptic action towards oral pathogens<sup>20</sup>



Emdogain® stimulates the formation of new blood vessels (angiogenesis).<sup>8</sup> Picture provided with courtesy of Prof. Magnus Ågren.

“Emdogain® improves healing of oral mucosa incisional wounds by promoting different biological events occurring during healing.”

Prof. Miron Weinreb, Tel Aviv University, Israel.



# Make a difference in implantology.

## A unique solution to increase the predictability of oral soft tissue healing.

### THE ROLE OF EARLY SOFT TISSUE HEALING AFTER ORAL IMPLANT SURGERY

The first days after any implantation procedure are always associated with an elevated risk for wound healing complications. After implant placement, patients are often affected in their daily routines by post-surgical pain and swelling. A fast and complication-free healing period helps to improve patient acceptance of the treatment.

### HOW DOES EMDOGAIN® SUPPORT THE SUCCESS OF YOUR IMPLANTATION PROCEDURES?

Emdogain® stimulates the early wound healing process. It supports the success of your implantation procedure by:

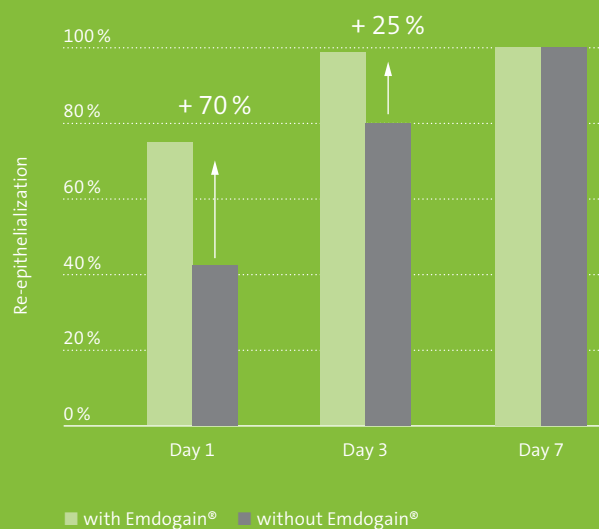
- reducing the risk of wound complications by stimulating soft tissue healing and protecting against oral pathogens<sup>9,19,20</sup>
- improving the esthetic result by accelerating soft tissue formation and maturation and by stimulating the formation of keratinized gingiva<sup>10,11,12,13</sup>
- improving patient comfort by reducing early post-surgical inflammation and reducing the risk for post-surgical pain<sup>21,22,23</sup>

Based on these advantages, the use of Emdogain® is especially recommended in invasive and esthetic dental implant procedures or in situations, where a stimulation of healing is indicated.

“Emdogain® is a really unique protein mixture. It influences a number of different cells and a number of different processes. It really helps the wound healing and wound closure in the oral cavity.”

Prof. David Cochran, San Antonio, USA.





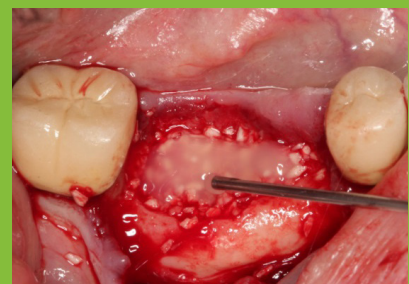
Emdogain® improves the rate of re-epithelialization and wound closure. The amount of re-epithelialization is 70 % higher at day 1 and 25 % higher at day 3 after surgery.<sup>9</sup>



Pictures provided with courtesy of Prof. George Furtado Guimarães.<sup>19</sup>

Clinical case of accelerated wound healing after implant placement in the same patient. The Emdogain® treated site shows advanced healing, less swelling and reddening 10 days post-surgery. Simultaneous implantation of 2 SLActive® Bone Level Implants in contralateral quadrants.

Application of Emdogain® as part of a socket preservation procedure after first-molar extraction. Emdogain® is used in conjunction with bone graft material and applied on top of the augmentation before wound closure to prevent wound dehiscence.



Picture provided with courtesy of Dr. Robert Miller.



# Make a difference in periodontology.

## A leading solution for soft tissue management and patient comfort.

### THE ROLE OF EARLY HEALING AFTER PERIODONTAL SURGERY

Early wound stability and uneventful healing are critical for the success of every periodontal regenerative or recession coverage procedure. As such procedures inevitably cause surgical wounds and discomfort, your patient's quality of life will be directly impacted by post-surgical pain, swelling and inflammation. Therefore modern approaches in periodontology need to consider both the clinical success and the patient related outcomes.

### HOW DOES EMDOGAIN® SUPPORT THE SUCCESS OF YOUR PERIODONTAL SURGICAL PROCEDURES?

Many clinicians who use Emdogain® regularly notice accelerated wound healing during the treatment of their patients. A customer survey performed in three countries with more than one hundred clinicians demonstrates that 90 % of Emdogain® users clearly confirm the statement:

**“Emdogain® improves soft tissue wound healing.”**

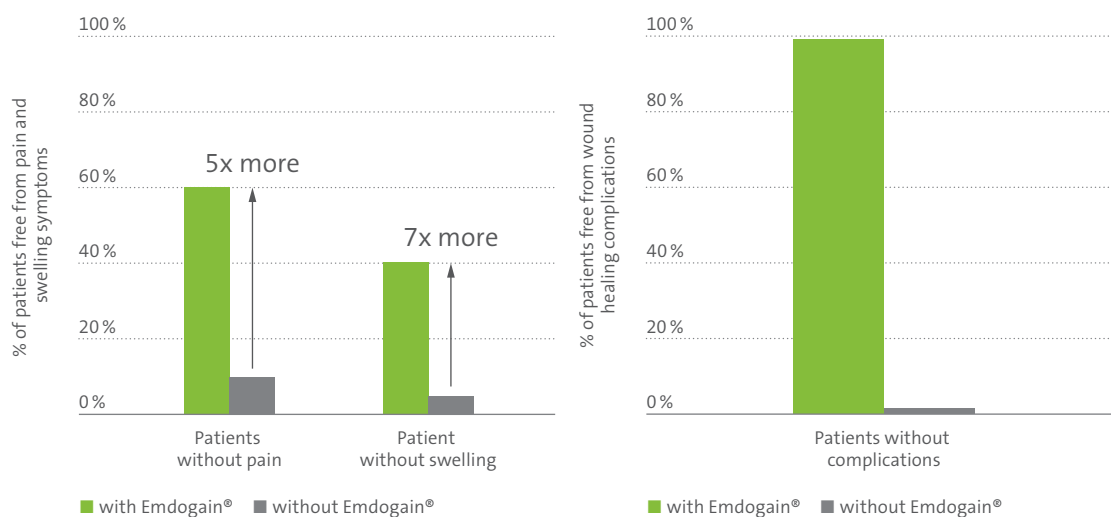
This improved healing helps you in your daily periodontal procedures to:

- reduce the risk of wound healing complications as part of regenerative procedures when compared to alternative technologies using a membrane such as guided tissue regeneration (GTR)<sup>24</sup>
- reduce patient discomfort and improve quality of life by reducing the risk of pain, inflammation and swelling compared to GTR<sup>21,22</sup>
- improve the esthetic outcome by increasing of soft tissue volume and the formation of keratinized gingiva after root coverage procedures<sup>10,12,13</sup>

Emdogain® is very well tolerated and the risk for post-surgical complications is extremely low.<sup>1,2</sup> Therefore the use of Emdogain® as an adjunct to your daily periodontal surgeries is recommended to improve wound healing.







Significantly more patients are free of pain and swelling symptoms after treatment with Emdogain® compared to treatment with membranes (guided tissue regeneration – GTR) one week post-surgical.<sup>22</sup>

Nearly all patients are free from post-surgical wound healing complications after Emdogain® treatment compared to patients treated with guided tissue regeneration (GTR).<sup>24</sup>

“Everybody who is creating a wound in the oral cavity, for instance in the context of conventional periodontal surgery, connective tissue harvesting, tooth extraction or even implant placement can use Emdogain® to improve early wound healing. In fact, it is the only product on the market which can be used for this indication, but I have the impression that not many clinicians are aware of this!”

Prof. Anton Sculean, University of Bern.

# Differentiate your dental practice.

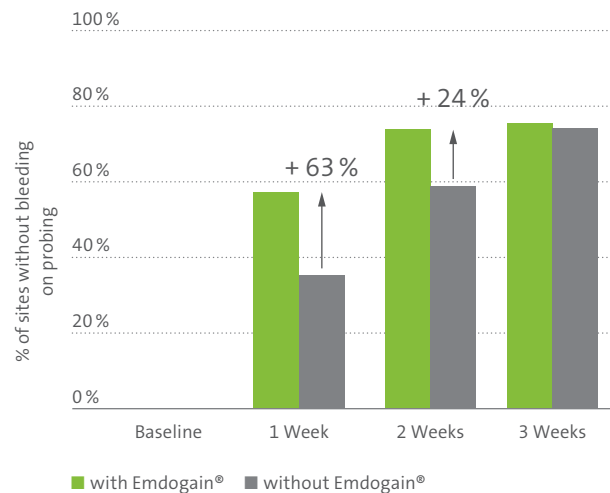
## A simple routine to secure confidence in your daily procedures.

### WOUND HEALING IN DAILY DENTAL TREATMENT

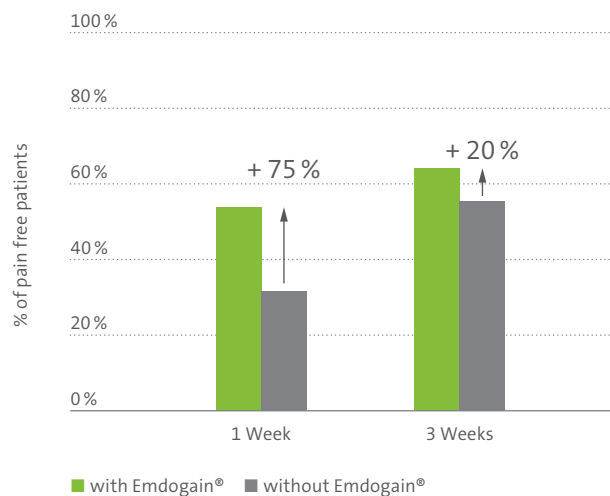
Routine dental treatment such as scaling and root planing, tooth extractions or resective procedures can cause soft tissue wounds. Although most of these wounds heal uneventfully, they are associated with a considerable level of swelling, pain and discomfort for your patient. Any wound bears the risk of complications, especially in patients with impaired wound healing capability, such as the elderly or those with medical conditions such as diabetes.

### IT HAS BEEN DEMONSTRATED IN STUDIES THAT EMDOGAIN® ACCELERATES WOUND HEALING. HOW IS THIS RELEVANT IN YOUR EVERYDAY CLINICAL PRACTICE?

As Emdogain® is simple to apply and well tolerated by patients, you can be confident achieving a higher level of patient satisfaction. Emdogain® specifically helps you to facilitate soft tissue wound healing and prevent complications, e.g., after tooth extraction procedures.



Patients treated with Emdogain® show faster healing and recovery after scaling and root planing procedures.<sup>23</sup>



With Emdogain® more patients are free from pain after scaling and root planing procedures.<sup>23</sup>





Distinguish your practice by meeting your patients' requirements. Adopt Emdogain® to achieve patient satisfaction.

- Oral surgeries always bear the risk of undesired suffering of your patients such as pain and swelling of the soft tissues or wound healing complications – Emdogain® can increase your patients' tolerance of surgical interventions by reducing these unwanted side effects.
- The goal of every surgical procedure around teeth or dental implants is to restore the natural soft tissue architecture and esthetics for your patient – Emdogain® supports the soft tissue build-up and formation of keratinized gingiva necessary to achieve pleasing esthetic results.
- After any surgery, your patients suffer from discomfort and reduced quality of life – Emdogain® accelerates the healing process, which reduces the length and impact of surgery on your patient's daily life.

**INCREASE THE QUALITY OF LIFE FOR YOUR PATIENT BY USING STRAUMANN® EMDOGAIN®.**



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