

STRAUMANN® EMDOGAIN®

Orchestrating periodontal regeneration
and oral wound healing.





Prof. Dr. Andrea Mombelli,
University of Geneva,
Switzerland

“The advantage of using a product which has been on the market for more than 25 years, is that we know the product and we know that it is safe.”

STRAUMANN® EMDOGAIN®

25 years of success and it's just the beginning.

Straumann® Emdogain® the pioneer biological solution containing enamel matrix derivative. This mixture of natural proteins can induce biological processes that usually take place during the development of the periodontium.

It stimulates certain cell types involved in the healing process of soft and hard tissues promoting tissue repair and renewal, leading to true periodontal regeneration and accelerated oral wound healing.

DID YOU KNOW?

→ A single batch of Straumann® Emdogain® takes approximately 50 days to manufacture and more than 30 steps are performed merely to ensure that

ENGINEERED FOR PREDICTABLE AND RELIABLE
REGENERATION OF PERIODONTAL TISSUES.

04

THE BIOLOGICAL SOLUTION THAT INDUCES
REGENERATION OF PERIODONTAL TISSUES.

06

HELP YOUR PATIENTS AVOID TOOTH LOSS.

08

BEST PRACTICE. PRACTICED BY THE BEST.

10

REVERSE GUM RECESSION NATURALLY WITH
OUR UNRIVALLED BIOLOGICAL SOLUTION.

12

STRAUMANN® EMDOGAIN® FOR
SIGNIFICANTLY ENHANCED WOUND HEALING.

14



ENGINEERED FOR PREDICTABLE AND RELIABLE REGENERATION OF **PERIODONTAL TISSUES.**

STRAUMANN® EMDOGAIN®:

- Indicated for the predictable treatment of intrabony and furcation defects (I,II, and III) as well as gingival recessions
- Improves wound healing around implants for better soft tissue management
- Enhances patient comfort post-surgery by reducing pain and swelling
- Leads to increased patient satisfaction due to better tooth prognosis, accelerated healing and improved esthetic results



STRAUMANN® EMDOGAIN® FOR PERIODONTAL REGENERATION

Periodontal disease is associated with the loss of tooth-supporting tissues that is irreversible and the main cause of tooth loss if left untreated. Straumann® Emdogain® is the gold standard for inducing safe and predictable regeneration of lost periodontal tissue. Long-term clinical studies have shown Straumann® Emdogain® to be an effective method to help save teeth and reverse gingival recession.

STRAUMANN® EMDOGAIN® FOR WOUND HEALING

Patients' main concerns in oral surgical treatment are esthetics, comfort and efficiency; Straumann® Emdogain® is the ideal solution as it satisfies all of these demands. By accelerating healing, it ensures less swelling and less pain, thus minimizing discomfort. Straumann® Emdogain® initiates and supports the natural healing process. As a result, patients recover faster and can begin to enjoy the esthetic outcomes they expect.

STRAUMANN® EMDOGAIN® IN FACTS AND FIGURES

> 25 years
on the market

**> 600 clinical
& 1,000 scientific
publications****

Stable results
documented
over 10 years
in two indications

> 2.5 million
patients treated*

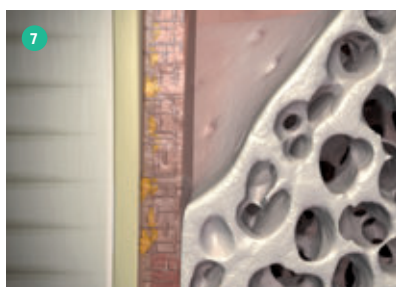
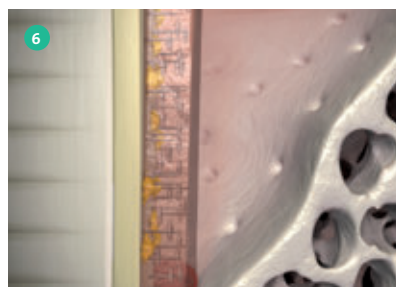
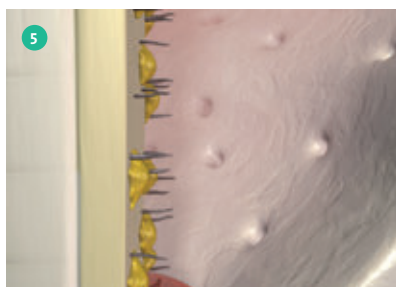
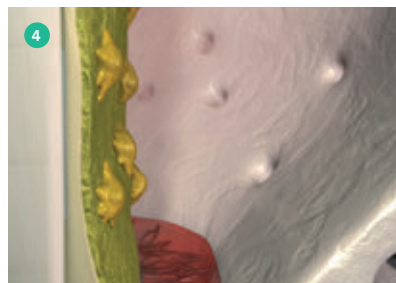
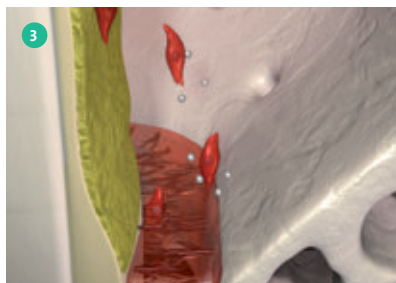
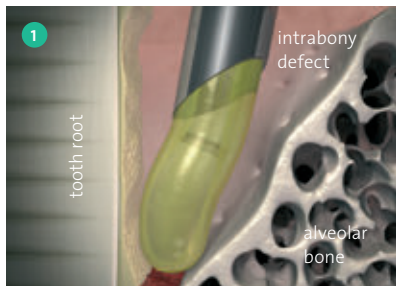
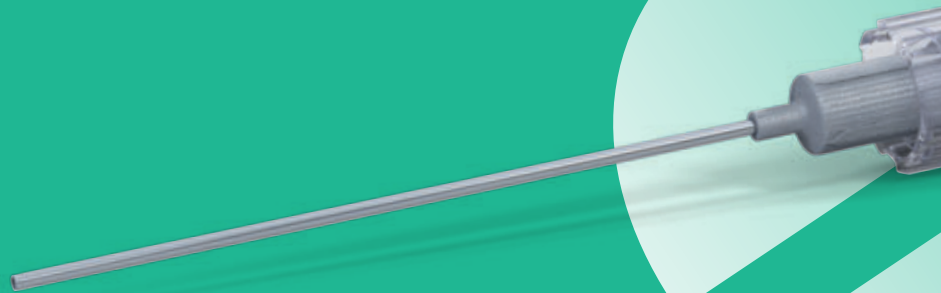
Extremely
well tolerated***

* Based on the number of syringes sold to date, globally

** According to PUBMED search for "Emdogain" or "enamel matrix derivative"

*** Based on a global post-surgical complication rate of less than 0.003 %

THE BIOLOGICAL SOLUTION THAT INDUCES REGENERATION OF PERIODONTAL TISSUES.



- 1 The enamel matrix derivative proteins in Straumann® Emdogain® precipitate on the surface of the root to form a matrix layer.
- 2 This matrix stimulates the attraction and proliferation of mesenchymal cells from the healthy areas of the periodontium.
- 3 These cells secrete natural cytokines and autocrine substances that promote cell proliferation.
- 4 Supporting cells are attracted to the site of healing and differentiate into cementoblasts, which contribute to the formation of the cementum in which the periodontal fibers will be fixed.
- 5 The newly formed cementum layer increases in thickness, extending the periodontal ligament.
- 6 Within months, the defect fills with newly formed periodontal ligament.
- 7 As the periodontal ligament forms, new bone continues to develop.
- 8 Over time, the periodontium, composed of cementum, the periodontal ligament and the alveolar bone is fully regenerated.



- * compared to open flap debridement alone
- ** compared to membranes
- *** compared to coronally advanced flap without Straumann® Emdogain®

Straumann® Emdogain®'s unique mixture of natural proteins forms a matrix that can induce biological processes that usually take place during the development of the periodontium and may stimulate certain cells involved in the healing

action of soft and hard tissues.⁷ By modulating the wound healing process, Straumann® Emdogain® induces the regeneration of a functional attachment in periodontal procedures as evidenced by human histological data.^{8,9}



MORE EFFICIENT

Straumann® Emdogain® provides higher clinical attachment level (CAL) gains and probing pocket depth (PPD) reductions,^{*}^{10,11} greater reductions in the horizontal depth of buccal class II furcations in mandibular molars^{** 12} and leads to more root coverage (RC).^{*** 13,14}



PROVEN REGENERATION

Straumann® Emdogain® supports the formation of new periodontal tissue¹ and the formation of periodontal attachment⁸ in conjunction with coronally advanced flap (CAF), as indicated by histological studies.



LONG-TERM STABILITY

The use of Straumann® Emdogain® leads to documented 10-year stable results in terms of osseous defect fill³ and root coverage.⁴



HELP YOUR **PATIENTS** AVOID TOOTH LOSS.

Straumann® Emdogain® is applied during surgical periodontal procedures. As demonstrated in human histological studies³, it promotes the predictable regeneration of cementum, periodontal ligament, and alveolar bone lost due to periodontal disease or trauma. The result of treatment with Straumann® Emdogain® is a significant improvement in the clinical outcome of periodontal surgery (compared with an open-flap debridement procedure alone) as shown by long-term clinical studies.¹

STRAUMANN® EMDOGAIN® SUPPORTS REGENERATIVE PERIODONTAL THERAPY FOR IMPROVED OUTCOMES

The goal of periodontal treatment is tooth preservation. Non-surgical scaling and root planing procedures are often not effective enough to eliminate periodontal disease. In such cases, surgical treatment is required to:

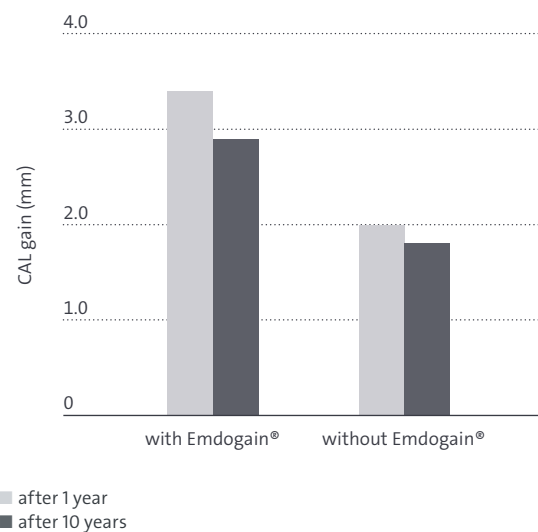
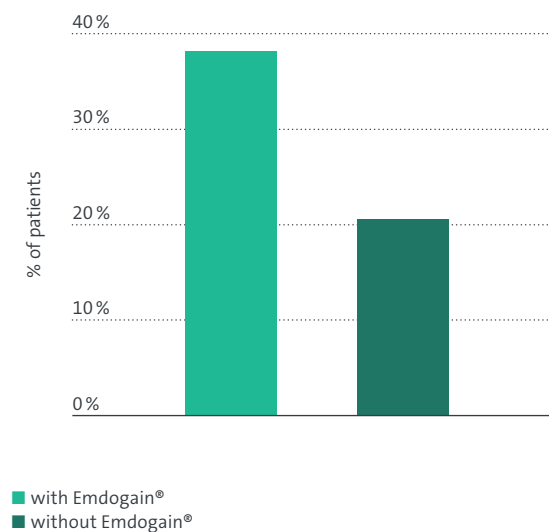
- Effectively remove granulation tissue and pathogenic bacteria from the periodontal pockets
- Treat residual intrabony and furcation defects, as they present a risk for recurrence and progression of periodontal disease

Add Straumann® Emdogain® to your periodontal surgical procedure and gain:

- Higher clinical attachment level (CAL) gains and probing pocket depth reductions^{4,5}, and long-term improved osseous defect fill⁶
- Significant reductions in the horizontal depth of buccal class II furcations in mandibular molars (compared with membranes)⁷
- Greater patient comfort due to enhanced wound healing⁸ and fewer complications (compared with the use of membranes)⁹

Straumann® Emdogain® leads to the predictable regeneration of intrabony defects: one year after surgery, (i.e. open flap debridement with or without Emdogain®) 38.3 % of the patients treated with Emdogain® had a clinical attachment level (CAL) gain of over 4 mm, compared to only 20.5 % of the patients treated with surgery alone.⁵

Straumann® Emdogain® provides significantly higher clinical attachment level (CAL) gains versus open flap debridement alone and clinical results can be maintained over 10 years.¹





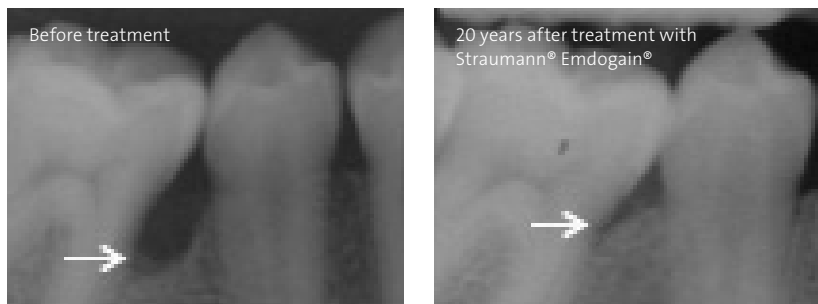
BEST PRACTICE. PRACTICED BY THE BEST.

Engineered to predictably and reliably regenerate periodontal tissues, Straumann® Emdogain® meets the specific clinical and esthetic needs of your patients.

REGENERATIVE THERAPY WITH STRAUMANN® EMDOGAIN® WORKS BEST WHEN:

- Used to treat contained defects; when treating non-contained defects, it is recommended to combine Straumann® Emdogain® with a bone graft substitute
- Used to treat residual pockets after inflammation has fully subsided
- Applied to a blood-free, dry surface¹⁰, which has been conditioned with Straumann® PrefGel®
- Combined with a minimally invasive surgical technique
- Patients demonstrate good oral hygiene, smoking restriction and control of systemic diseases such as diabetes

20 YEARS' FOLLOW-UP WITH STRAUMANN® EMDOGAIN®



Pictures courtesy of Prof. Carlos Nemcovsky, Tel Aviv University, Israel



**Prof. Dr.
Véronique Benhamou,
McGill University,
Canada**

“Trying to regenerate a patient’s periodontium with Straumann® Emdogain® in sites where inflammation is not resolved is like trying to plant new trees in a burning forest. First, you need to put out the fire and then you can worry about planting new trees.”



**Prof. Dr.
Leonardo Trombelli,
University of Ferrara,
Italy**

“Clinical evidence shows that considerable clinical improvements of periodontal lesions are achieved when Straumann® Emdogain® is used in combination with a state-of-the-art, simplified and minimally invasive surgical procedure such as the single-flap approach.”

REVERSE GUM RECESSION NATURALLY WITH OUR UNRIVALLED BIOLOGICAL SOLUTION.

Patient requests for root coverage treatment are increasing, mainly for esthetic reasons. Treatment of exposed root surfaces is important, not only for esthetic purposes, but also because they are associated with clinical issues such as root sensitivity and present an increased risk for non-carious cervical lesions and root caries.¹¹

The goal of a gum recession-related root coverage procedure is to achieve long-term root coverage. Among the various surgical approaches developed to achieve this, the most well-documented is the coronally advanced flap (CAF). Straumann® Emdogain® can supplement the CAF procedure or any root coverage procedure to stimulate regeneration of the periodontium.

ENGINEERED TO PREDICTABLY AND RELIABLY PROVIDE LONG-TERM ROOT COVERAGE



Pictures courtesy of Prof. Giovanni Zucchelli, University of Bologna, Italy

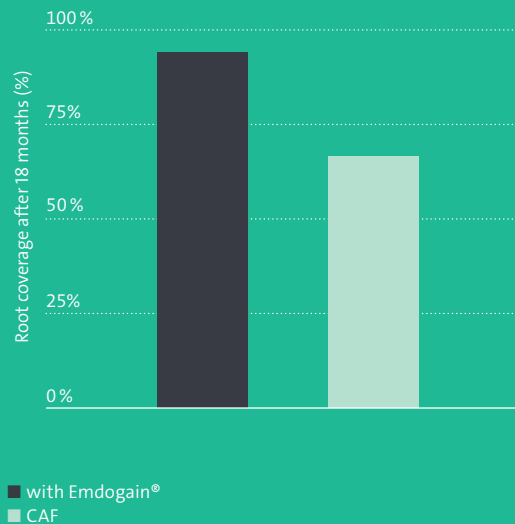
DID YOU KNOW?

→ Straumann® Emdogain® provides greater root coverage for improved esthetics



ADD STRAUMANN® EMDOGAIN® TO YOUR CORONALLY ADVANCED FLAP (CAF) PROCEDURES AND YOUR PATIENTS WILL BENEFIT FROM IMPROVED ESTHETICS THANKS TO:

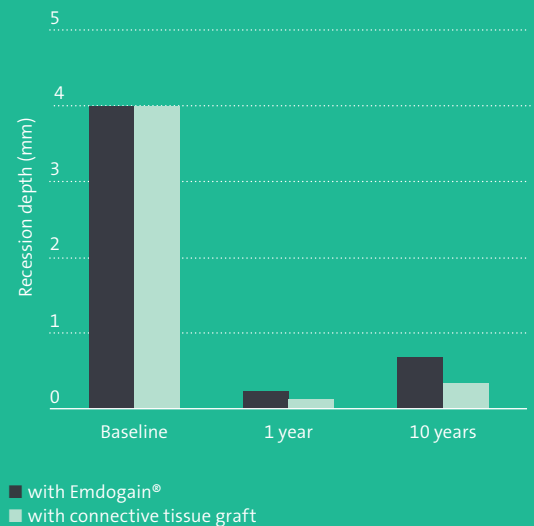
- More root coverage^{11,12}, documented over the long-term²
- More keratinized tissue¹²



Straumann® Emdogain® demonstrates significantly improved root coverage in comparison with CAF alone (93.8% vs. 66.5%¹²).

USE STRAUMANN® EMDOGAIN® IN CAF PROCEDURES INSTEAD OF A CONNECTIVE TISSUE GRAFT (CTG) AND BENEFIT FROM:

- True regeneration of the periodontal attachment, as shown in human histological studies¹³
- Comparable clinical results compared to a CTG procedure after 10 years²
- Improved patient comfort since no autologous tissue graft needs to be harvested¹⁴



At 1 and 10 years after surgery, there is no statistically significant differences in gingival recession depth changes between sites treated with a Coronally Advanced Flap (CAF) in combination with Emdogain® and sites treated with CAF + autologous tissue grafts.

“Because Straumann® Emdogain® improves soft-tissue healing, it helps me meet the high expectations of my patients in terms of esthetics.”



Prof. Dr. Giovanni Zucchelli,
University of Bologna, Italy

“When comparing the CAF procedure combined with either Straumann® Emdogain® or with a connective tissue graft, both treatments appear stable, clinically effective, and similar to each other on all measured parameters after 10 years.”



Dr. Michael K. McGuire,
Private practice,
Houston, TX, USA

STRAUMANN® EMDOGAIN® FOR SIGNIFICANTLY ENHANCED WOUND HEALING.

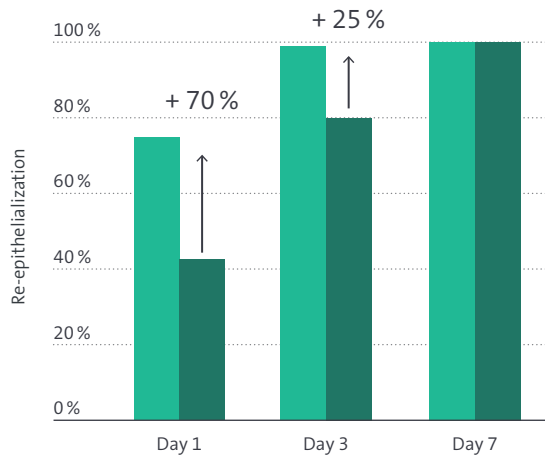
The goal of every dental surgical procedure is to create a functional and esthetically pleasing restoration. Unfortunately, surgical interventions always carry the risk of undesired effects, ranging from pain and swelling of oral soft tissues to woundhealing complications.

Straumann® Emdogain® accelerates healing and minimizes patient discomfort by ensuring less swelling, less pain, and a faster recovery from surgery*. Straumann® Emdogain® initiates and promotes a natural healing process, which leads to the esthetic outcomes patients expect.

STRAUMANN® EMDOGAIN® SUPPORTS THE SUCCESS OF YOUR IMPLANTATION PROCEDURES BY:

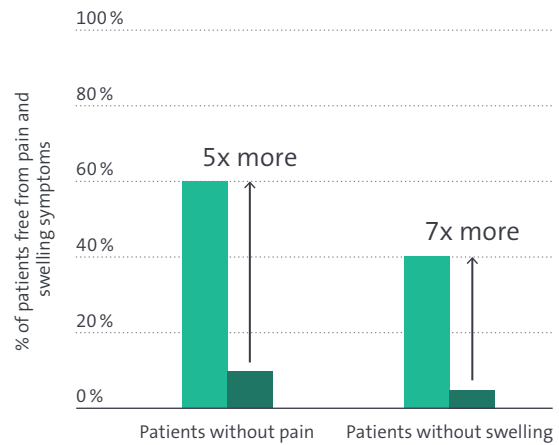
- Reducing the risk* of wound complications through stimulation of soft tissue healing and protection against oral pathogens^{15,16,17}
- Improving esthetic results* by accelerating soft-tissue formation and maturation and stimulating the formation of keratinized gingiva^{8,12,18,19}
- Improving patient comfort* by reducing early post-surgical inflammation and reducing the risk of post-surgical pain^{7,20,21}





■ with Emdogain® ■ without Emdogain®

Straumann® Emdogain® improves the rate of re-epithelialization and wound closure. The amount of re-epithelialization is 70% higher at day one and 25% higher at day three after surgery.²¹

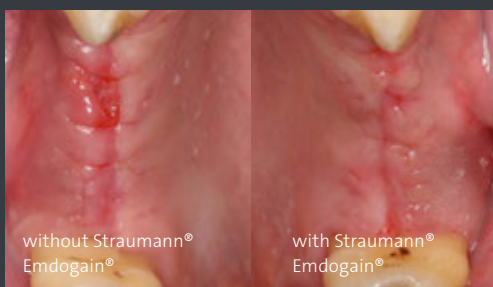


■ with Emdogain® ■ without Emdogain®

Significantly more patients are free of pain and swelling symptoms after treatment with Straumann® Emdogain® when compared to treatment with membranes (guided tissue regeneration – GTR) one-week post-surgery.⁷

DID YOU KNOW?

→ Straumann® Emdogain® accelerates oral wound healing of implant, periodontal and gingivectomy procedures for improved patient comfort and quality of life



Pictures courtesy of Prof. George Furtado Guimarães, Brazil

Clinical evidence of accelerated wound healing after implant placement with Straumann® Emdogain® in the same patient. The site treated with Straumann® Emdogain® shows advanced healing and less swelling and reddening 10 days post-surgery. Simultaneous implantation of two SLActive® Bone Level Implants in contralateral quadrants.¹⁶

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



Prof. Dr. David Cochran,
ITI president and University
of Texas Health Science
Center San Antonio, USA

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