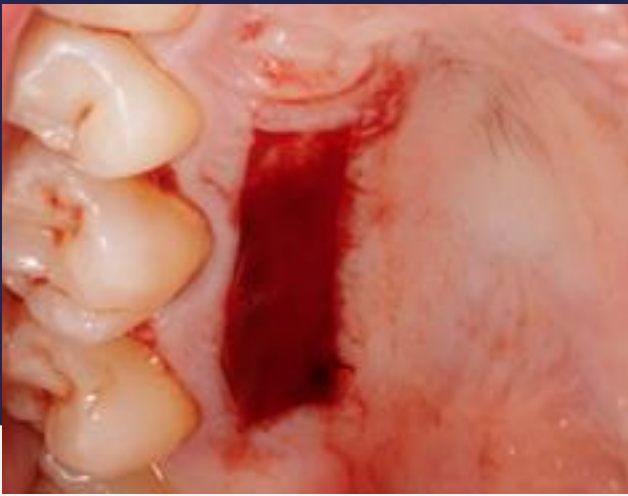


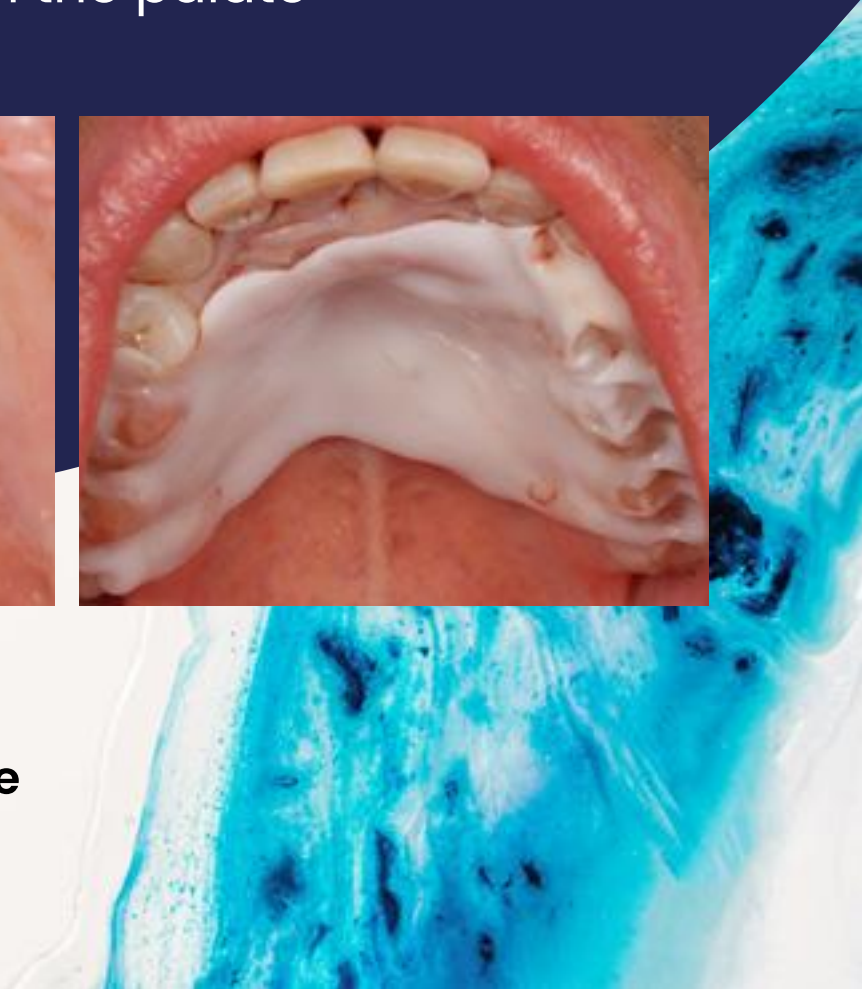


# The Elemental Workflow

to protect the donor site after  
harvesting tissue from the palate



**Protocol, Cases & Science**



Tal

Proto

Heating

Creatin

Placing

Post-o

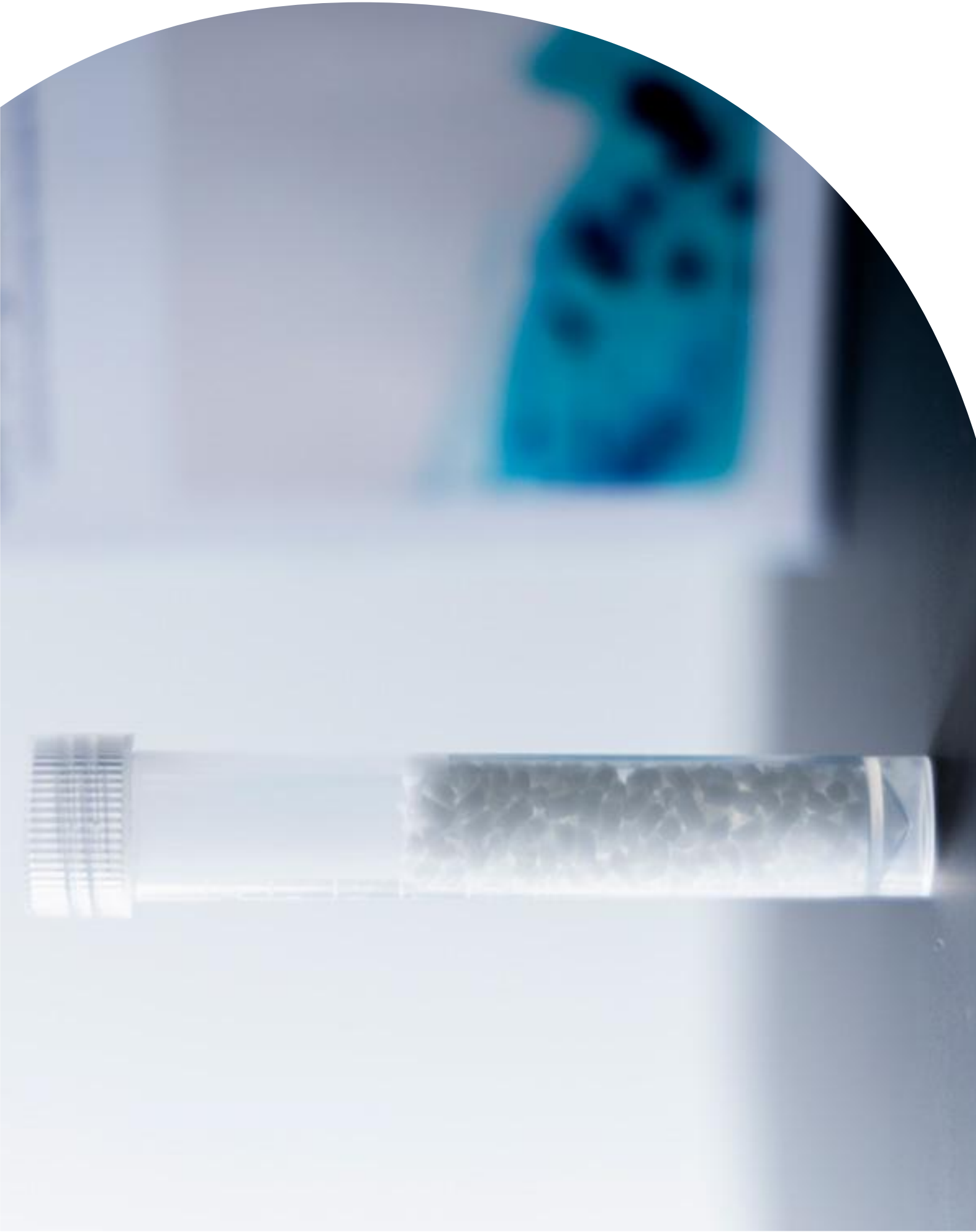
Case

Scien

In-vitro

Clinica

Freque



# before you start

**what you  
will need**



- Elemental Waterbath with mixing glass & tweezers
- Elemental Granulate

**The Elemental Workflow  
in a nutshell.**

**heating  
the material**



- To manipulate the material, it must be heated for 10 seconds.
- This can be done with 80°C water.

**creating the stent  
before the surgery**



- Pre-operatively, the heated material is shaped directly on the palate.
- The material sets & becomes solid stent in 1-2 minutes.

## Best practice

### Create the stent in advance, right before the surgery.

1. Clinically: If you create the stent in advance, the space where tissue is removed is left open for the blood clot to develop.

If you create the stent after harvesting the tissue, you'll push the material in this space.

2. Practically: creating the stent in advance will be faster & easier than creating the stent during the surgery.

## Heating the material.



Boil water or use an Elemental waterbath to heat water to 80°C.



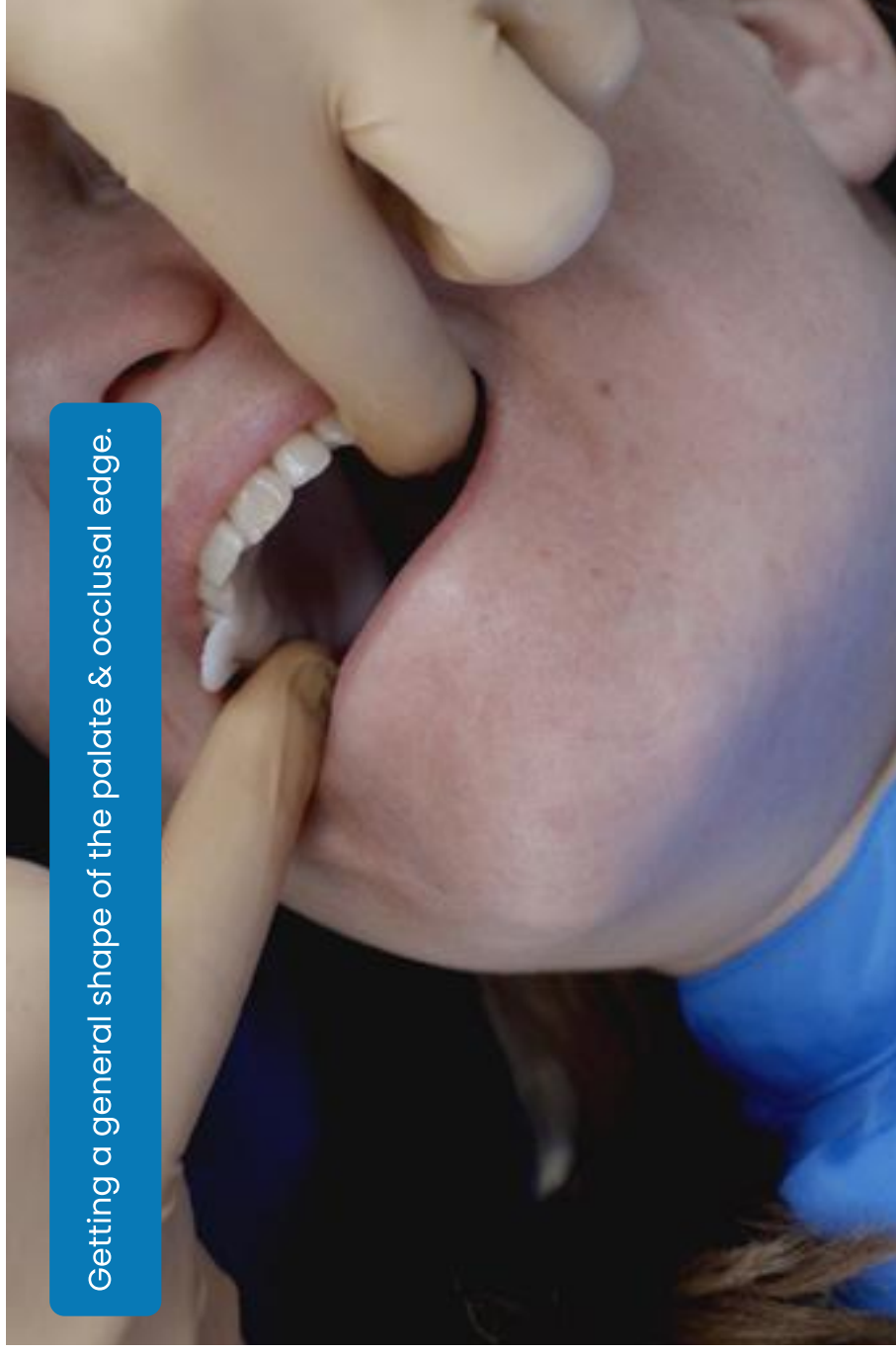
Stir the granules for 10 seconds in the heated water.

Dosage: 1 stent takes about 3 grams, which is 1/3 of a pack.

## Shaping the stent with 2 fittings.

Optimal retention & stability can be achieved by heating & fitting the material twice.

### 1<sup>st</sup> fitting: getting the general shape



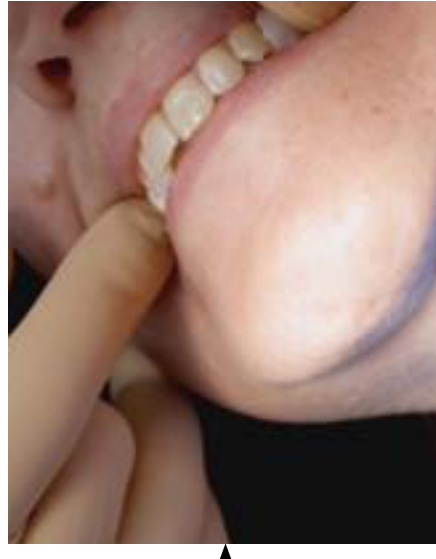
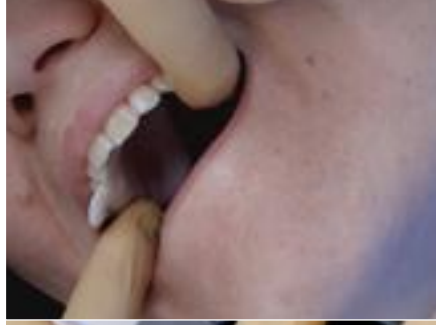
### 2<sup>nd</sup> fitting: getting the de



## Best practice

Use the **interdental embrasures & occlusal surfaces** to get retention.

## FITTING 1 Obtaining the general shape.



Cover the palate & occlusal surface of the molars with the heated material.

Ask the patient to bite down & hold for 1 minute for the material to set.

Scan to watch  
How to achieve retention with a palatal stent with

## Best practice

Use the **interdental embrasures & occlusal surfaces** to get retention.

## FITTING 2 Getting the details right.



Press the stent into the interdental spaces for extra retention.



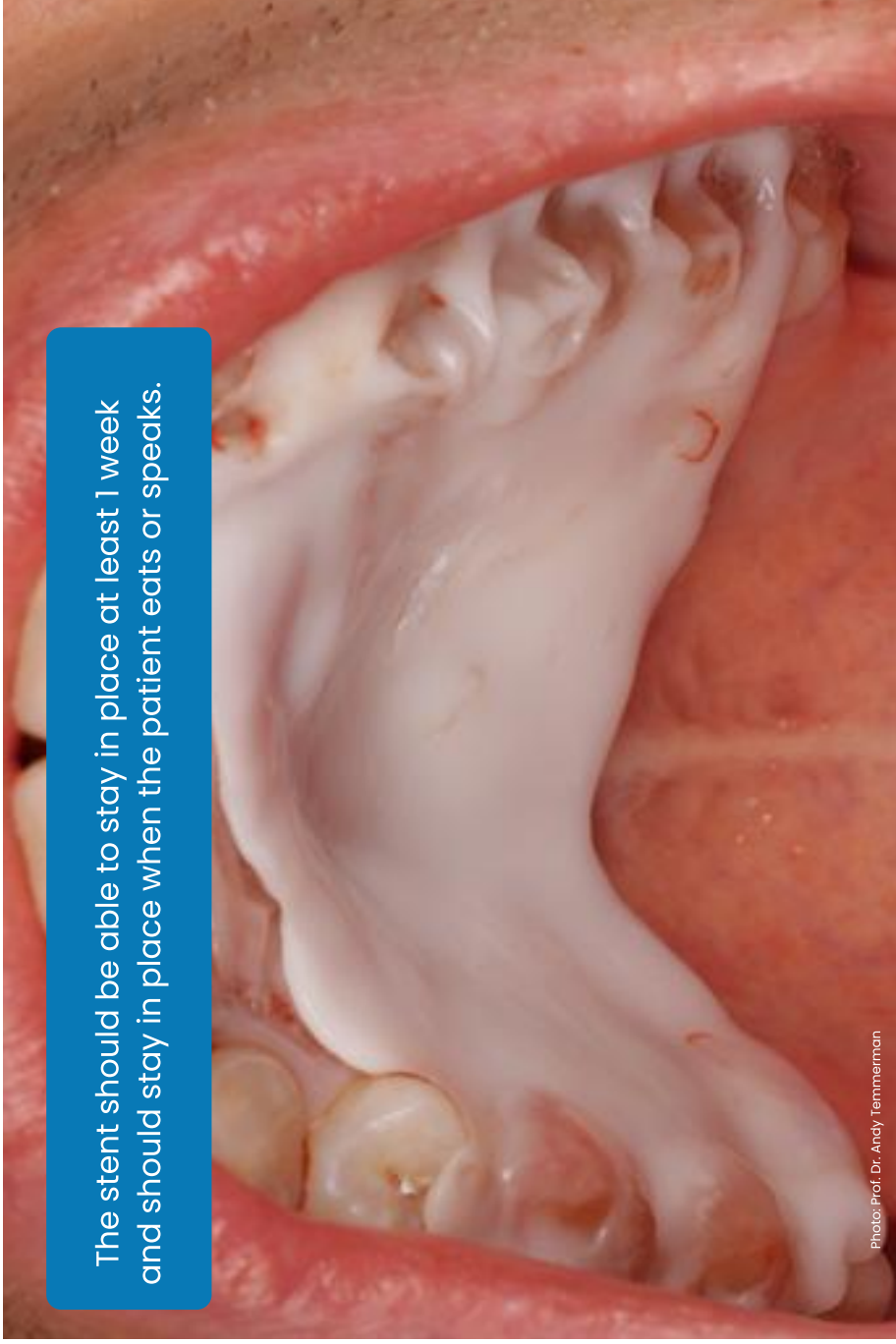
Ask the patient to bite down t

Scan to watch

How to achieve retention when  
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## 2 quality checks.

**Check whether the stent has stable retention.**

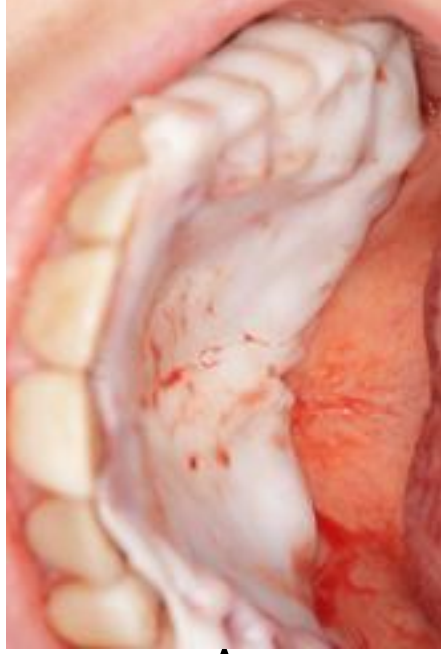


**Check whether the patient can place the stent and place it back.**





## Place the stent immediately after harvesting the graft.



Photos: Prof. Dr. Andy Temmerman

Immediately after harvesting the graft, cover the donor site with the stent. There is no need for suturing the donor site as the stent stabilizes the blood clot.

Without delays, you can cont

Scan to watch  
The Elementa  
for Palat

## Patients wear th

stimulate patient compliance of the importance & benefits i

- pain management
- healing
- comfort during eating
- general complications

Inform them they should wear days. While undesirable, patie

Tip: a premade example can be used to inform the patient about the benefits and stimulate patient compliance.

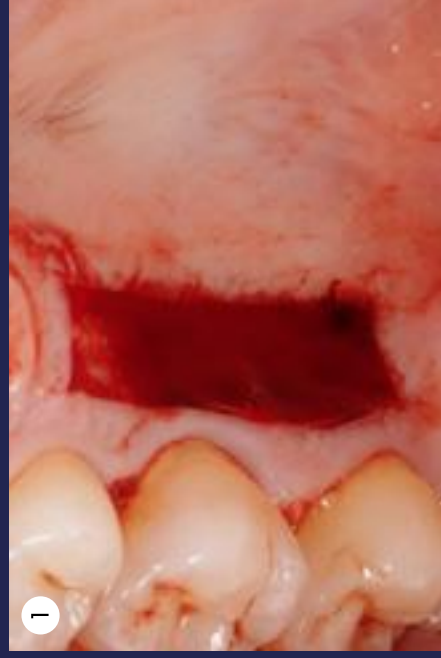




Clinic  
in priv

## Prof. Dr. Andy Temmerman

Free Gingival Graft to obtain increased keratinised tissue and root coverage



The free gingival graft is harvested.  
No sutures are placed on the donor site.



The Elemental stent, created chairside before the surgery, is placed immediately after harvesting the graft.



Without delays, the graft is placed on the recipient site.



Elemental dramatically reduces the post-operative discomfort (fig. 4) which is of utmost importance, but also the surgical time by not having to suture the donor site. (fig. 1-2)

## Prof. Dr. Andy Temmerman

Free Gingival Graft to obtain increased keratinised tissue and root coverage



1

The free gingival graft is harvested. No sutures are placed on the donor site.



2

The Elemental stent, created chairside before the surgery, is placed immediately after harvesting the graft.



3

Without delays, the graft is placed on the recipient site.



Elemental dramatically reduces the post-operative discomfort (fig. 4) which is of utmost importance, but also the surgical time by not having to suture the donor site. (fig. 1-2)

## Rutger Dhondt

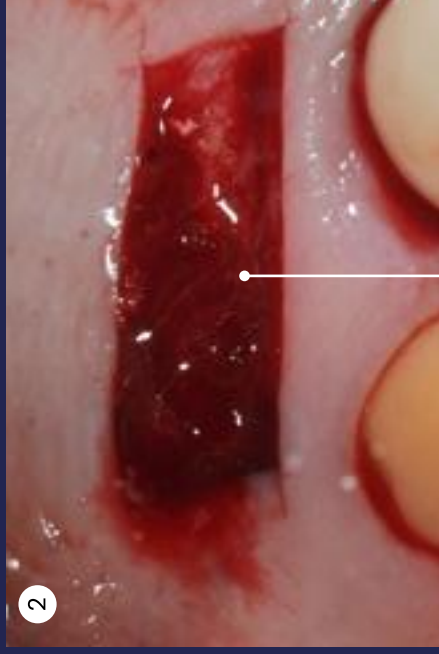
Free Gingival Graft to increase keratinized mucosa around implant



1 Right before the surgery, the material is shaped onto the palate to create the stent.



2 Clear interdental retention.



3 No sutures needed on donor site.



4 Blood clot is stabilized. Stable retention in the in



I create the stent right before the surgery (fig. 1) so I can place it immediately after harvesting the graft (fig. 2, 3).

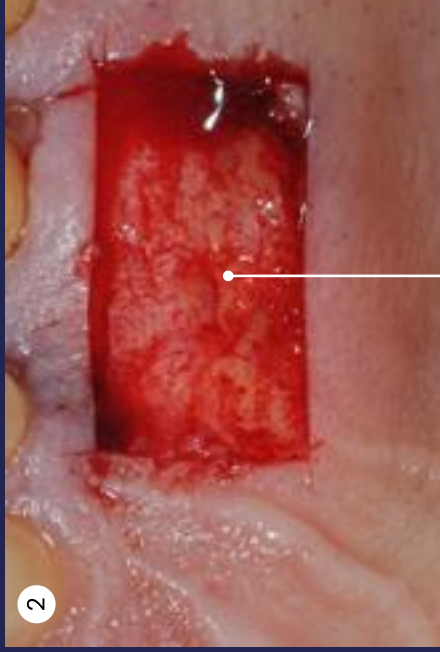
At follow-up, patients only m  
They don't even notice the d

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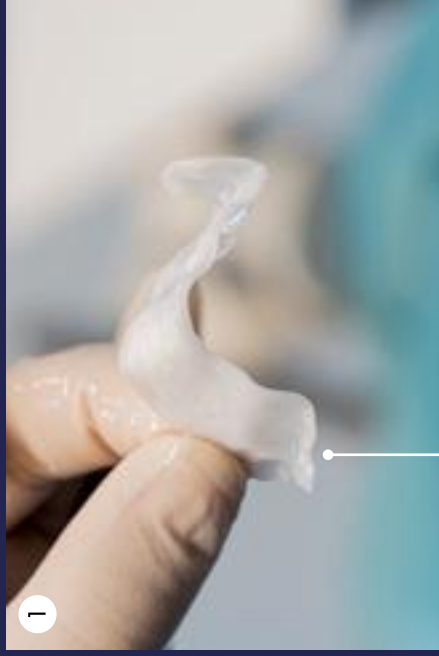


I create the stent right before the surgery (fig. 1) so I can place it immediately after harvesting the graft (fig. 2, 3).

At follow-up, patients only notice the graft. They don't even notice the donor site.

## Bo Molemans

Free Gingival Graft to obtain increased keratinised tissue and root coverage



1

Retention on occlusal surface  
and in interdental spaces.



2



3



The post-operative care on the donor site is reduced to a minimum, (fig. 3-4) saving 10-15 minutes of surgical time per case.



## Alexander De Greef

Free Gingival Graft to obtain increased keratinised tissue and root coverage

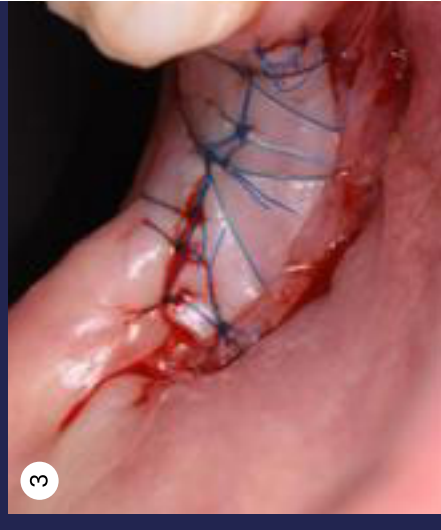


1

Right before the surgery, the material is shaped onto the palate to create the stent.



2



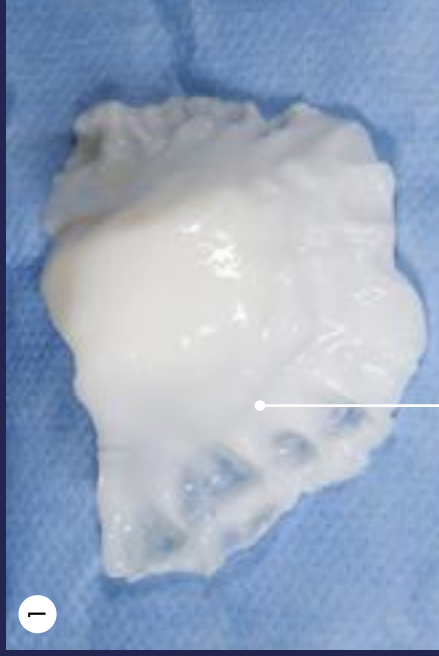
3



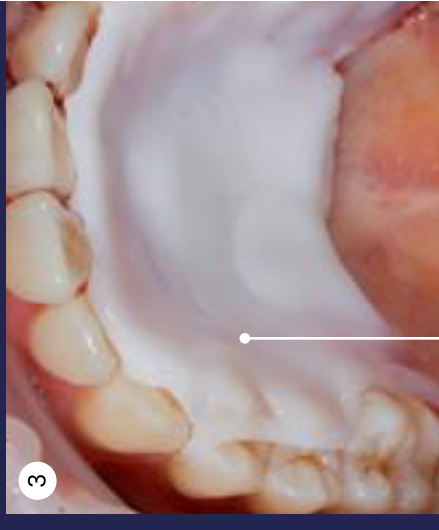
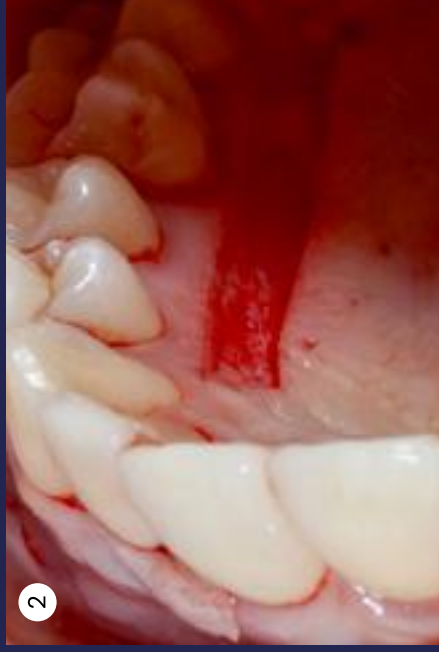
The healing in the first days post-operative is spectacular (fig. 4), patients are not complaining about post-operative discomfort anymore.

## Dr. Haakon Kuit

Free connective tissue graft to treat multiple recessions in the upper jaw



1 Right before the surgery, the material is shaped onto the palate to create the stent.



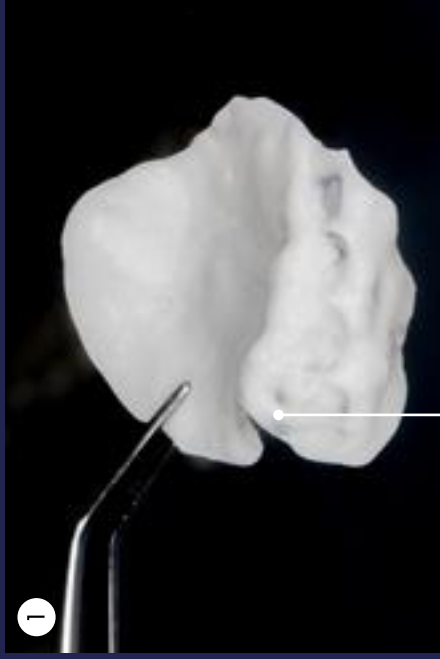
3 Blood clot is stabilized. Stable retention in the in



Protecting the donor site with the palatal stent (fig 3.), which is created chairside before the surgery (fig. 1), minimizes the post-operative pain for the patient.

## Guillaume De Moyer

Free Gingival Graft for soft tissue augmentation around implant site



Right before the surgery, the material is shaped onto the palate to create the stent.



Immediately after the graft, the donor site is closed without having



Right before the surgery I create the stent (fig. 1), so I can cover the donor site wound immediately after harvesting the graft (fig 2-3).

I don't lose time suturing the donor site, it's much faster on the recipient

## Guillaume De Moyer

Free Gingival Graft for soft tissue augmentation around implant site



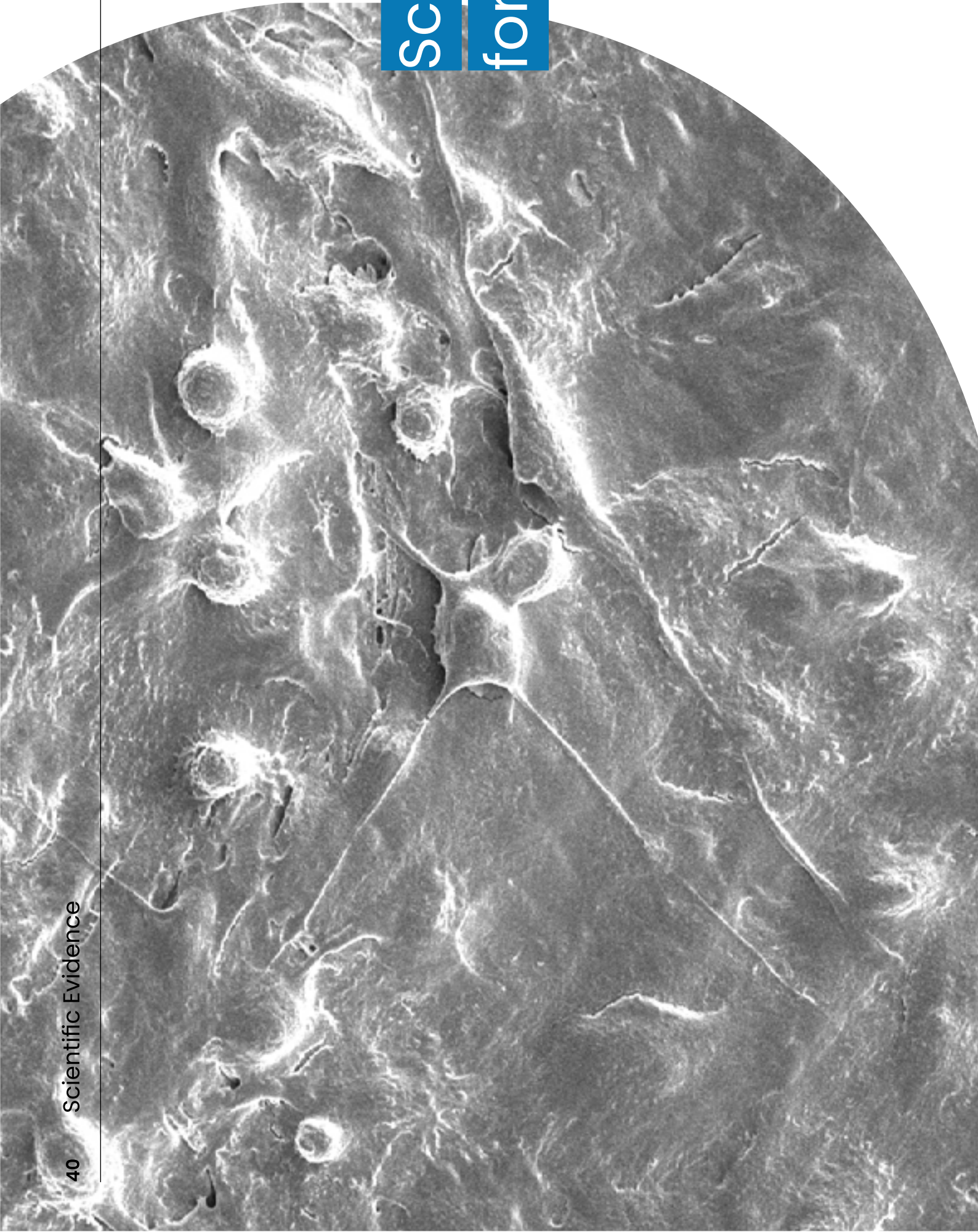
Right before the surgery, the material is shaped onto the palate to create the stent.



Right before the surgery I create the stent , so I can cover the donor site wound immediately after harvesting the graft.

The healing after 1 week (fig. resembles what I previous

# Scientific for Elem





**PATENTE**

Elemento  
infuses zi

This mark



**Bioco**



**Bacte**

Scan to watch

**Compatibility with Hu  
& Antibiofilm**

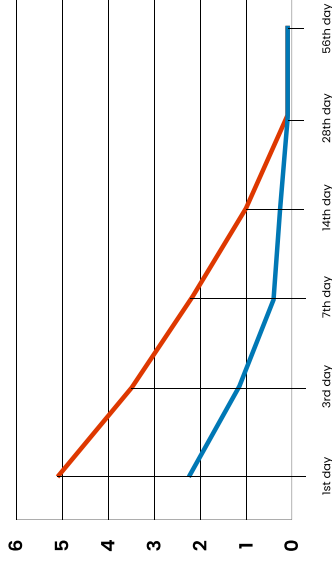
## Pre-operative, chair-side Zn-containing surgical stents affect morbidity and wound healing after free gingival graft harvesting: a randomized clinical trial.

Clinical Oral Investigations

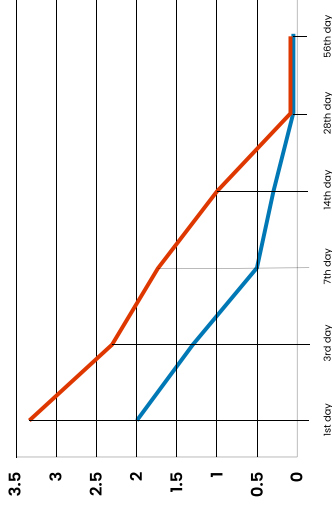
**Objective:** To compare a pre-operatively, chairside made, zinc-containing surgical stent (ZN) and suturing of a gelatin-based hemostatic agent (HA) on palatal wound healing and patient morbidity after free gingival graft surgery (FGG).

**Conclusion:** Pre-operatively, chair-side made, zinc-containing surgical stents provided significant benefits for wound healing parameters and patients' postoperative morbidity after FGG harvesting.

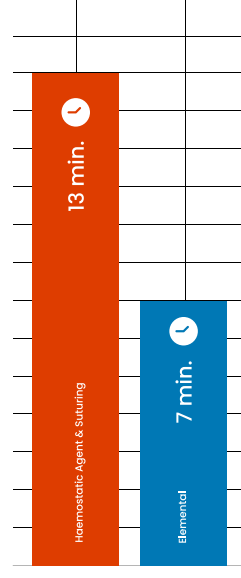
### Post-operative Pain on donor site



### Burning Sensation on donor site



### Surgical time on donor site



Group HA-S (Haemostatic Agent & Suturing)  
Group Zn-S (Elemental)



Experiments performed by KU Leuven University demonstrating **bacteriostatic properties**.

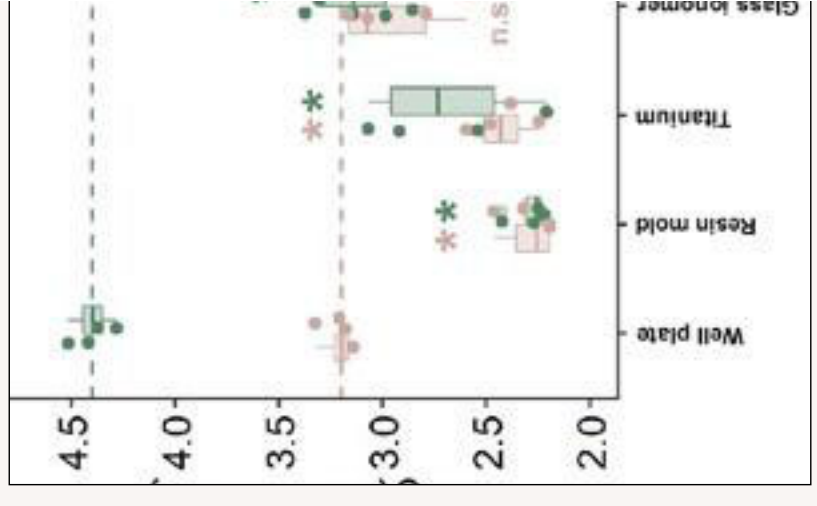
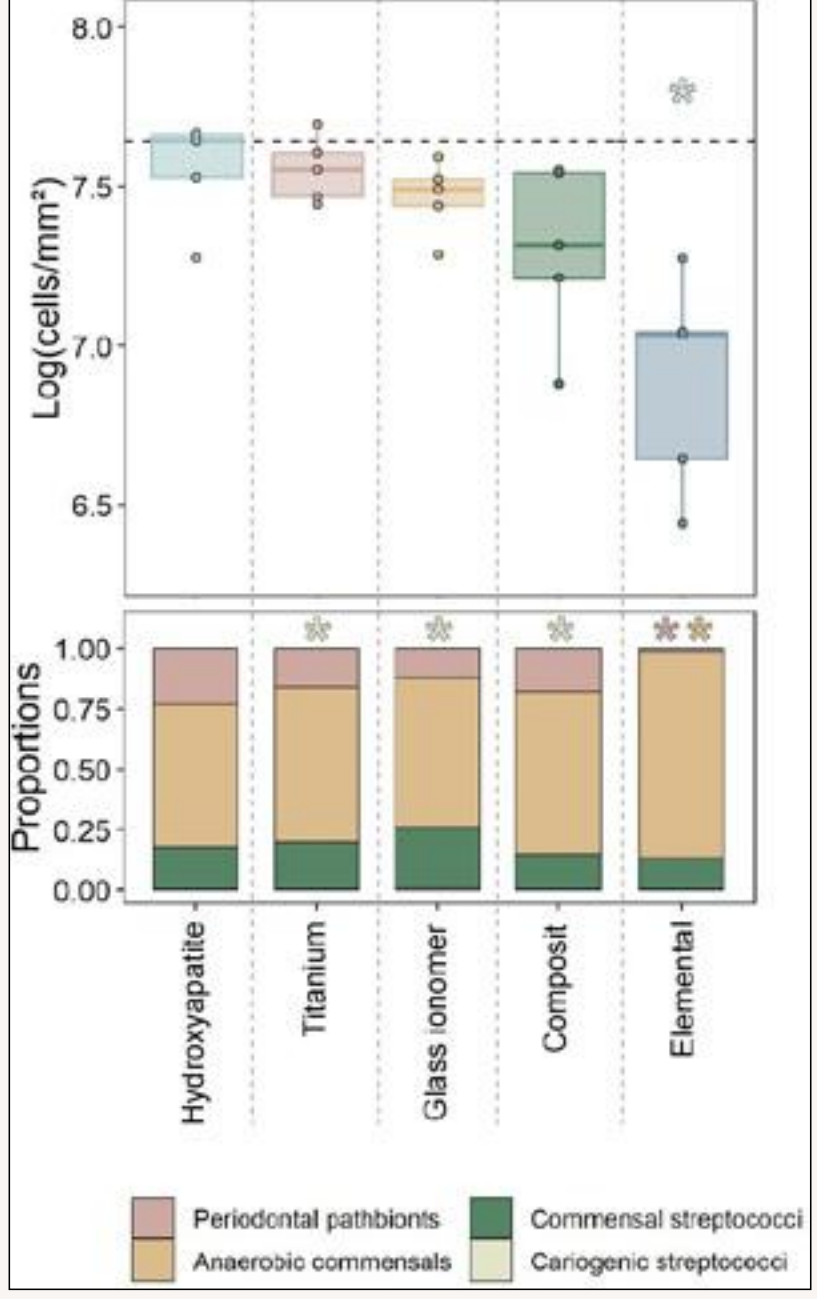
Experiments performed demonstrating **super**

✓ Oral biofilm growth inhibited on Elemental.

✓ The composition becoming less pathogenic.



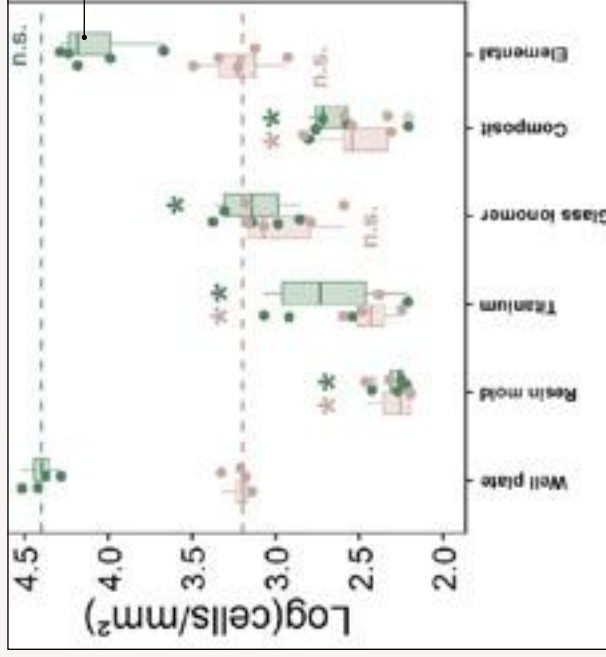
Human keratinocyte c growing best on Elemental



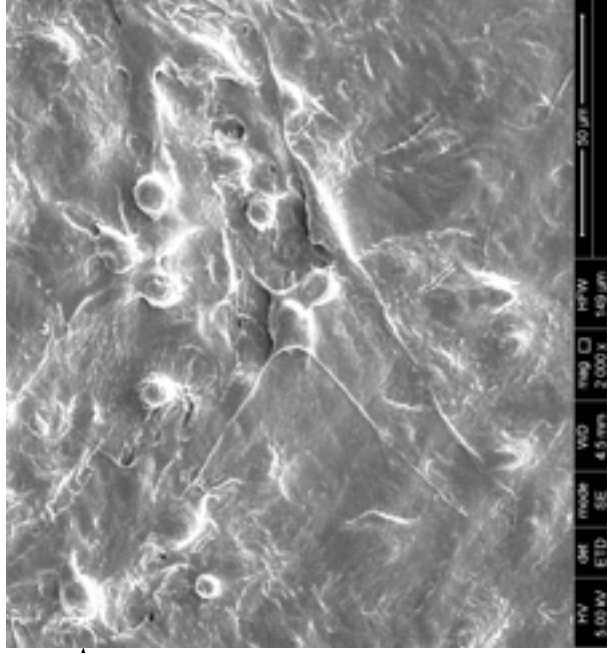


Experiments performed by KU Leuven University demonstrating **superior biocompatibility.**

✓ **Human keratinocyte cells growing best on Elemental.**

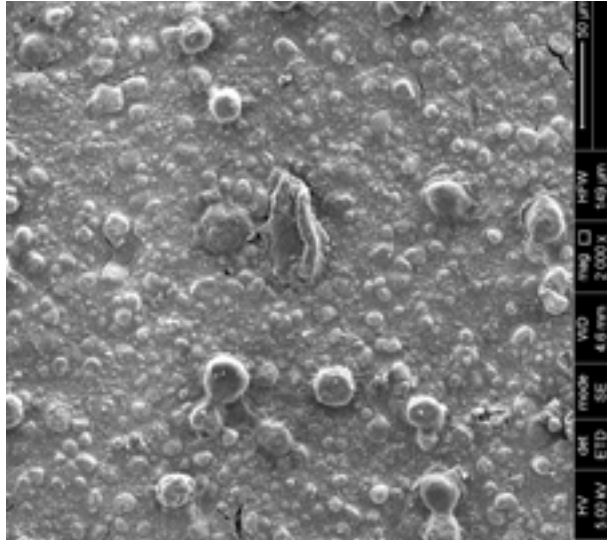


**Elemental**



*Elemental material fully covered in monolayer of healthy cells.*

**vs. Composite**



*Attached, unhealthy cells.*

### **How long does the patient wear the stent?**

Elemental can remain in the mouth for up to 30 days. In reality, depending on the case, this is between 5-10 days. Depending on the design of the stent, it can be removed by the patient or during a follow-up check shortly after treatment.

### **How much granulate is needed for 1 patient? (see page 6)**

This depends on the design of the stent. A package of granules contains 10 grams. A palatal stent on average requires  $\pm 3-4$  grams of granules.

### **How warm should it be heated? (see page 6)**

For optimal results, it is recommended to use water of 80 degrees Celsius and heat the material for at least 10 to 20 seconds.

### **How do I get retention? (see page 8)**

The material is flexible, yet sufficiently hard to maintain mechanical retention. Mechanical retention is mostly achieved in the interdental spaces, undercuts and occlusal surfaces. Alternatively, Elemental Granulate can also be chemically bonded with universal bonding agents.

### **Can Elemental Granulate be polished?**

Due to the thermoplastic properties of the material, frictional heat may cause remelting. If polishing is necessary, it is recommended to do this at a low speed and preferably with water cooling.

### **Can Elemental Granulate be reheated?**

Naturally, new material is always used. Reheated material is kneadable past

### **How is Elemental Granulate stored?**

Elemental Granulate contains organic materials. It reduces the attachment and growth of bacteria. The surgical site clean.

### **Can a patient consume hot drinks or food? Elemental Granulate?**

Hot drinks or food are generally not recommended. The patient can therefore eat and drink normally.

### **Can Elemental Granulate be used on metal?**

Although the recommended protocol can be used. To avoid adhesion of the stent to the metal, advance and apply it already hardened.

### **Does Elemental Granulate adhere to metal?**

When heated, Elemental Granulate adheres to metal. Therefore, the use of metal gloves is recommended.



# Graft the palate, avoid the pain.

“Since I use Elemental,  
I’m more proud of the care  
our clinic provides.”

Bo Molemans

 **elemental**<sup>®</sup>  
[www.withelemental.com](http://www.withelemental.com)

    [withelemental](#)