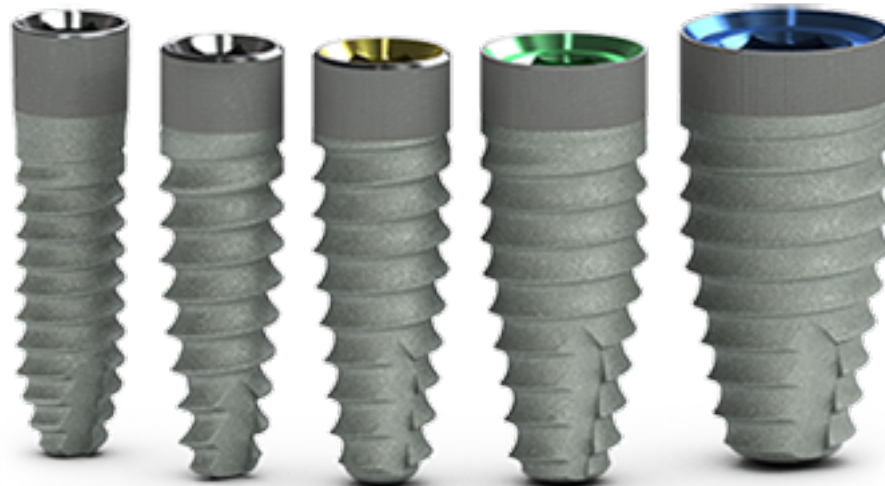


Implant Dentistry: Learn Today, Do Tomorrow



change

[illegible]

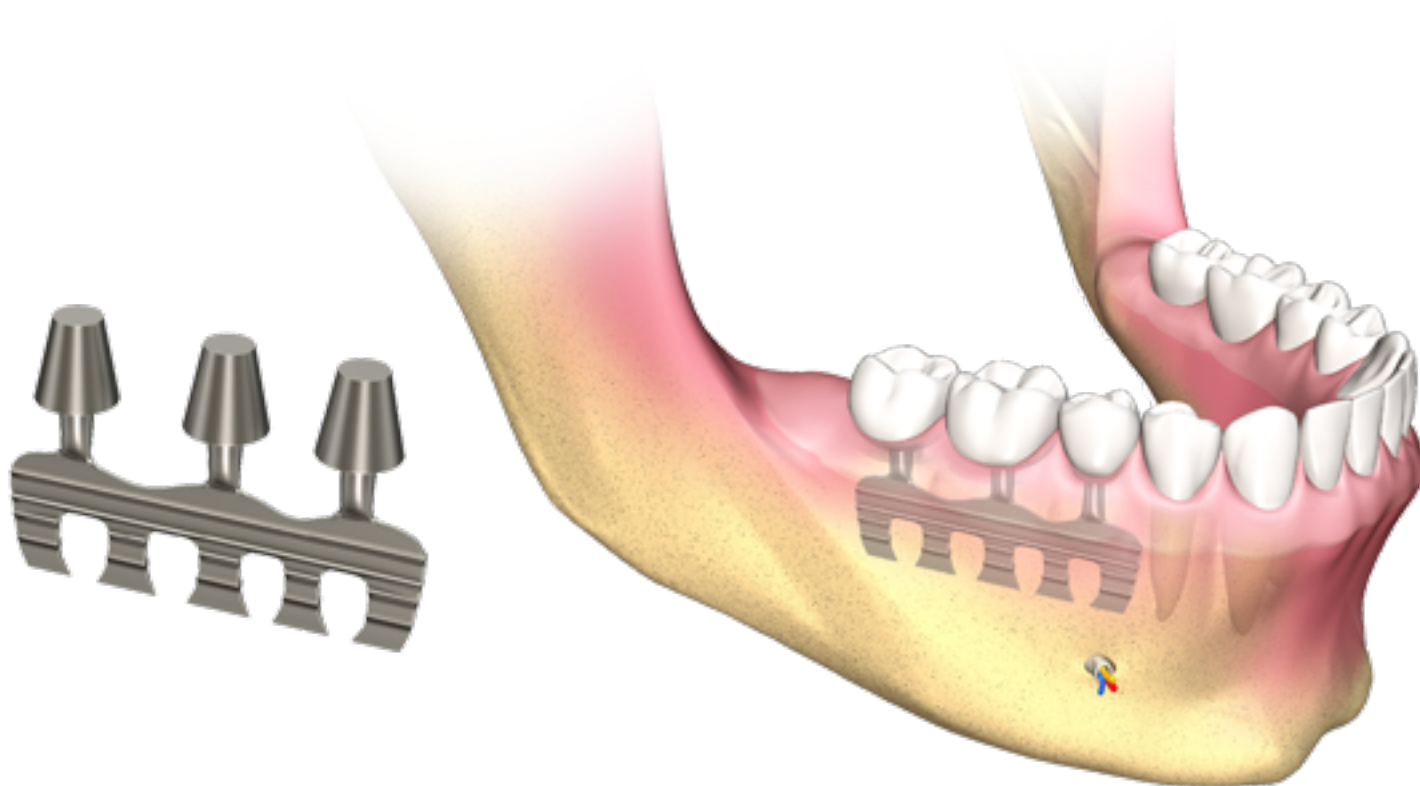
HISTORY OF DENTAL IMPLANTS



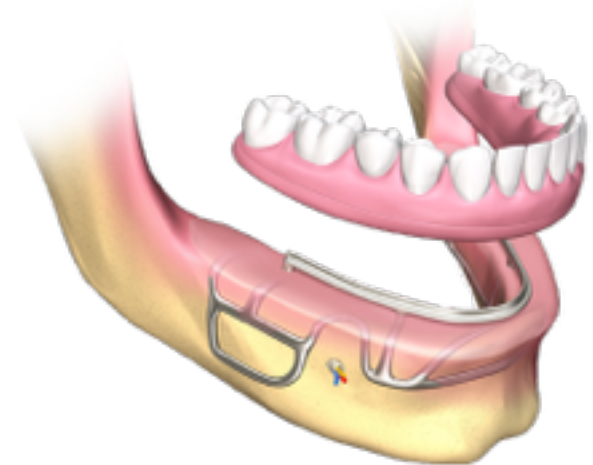
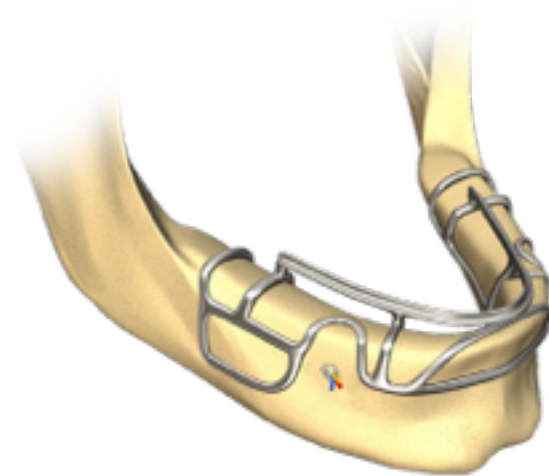
Evolution of Implant Dentistry

- Ancient Egyptians used shells & ivory
- 600A.D. Mayan mandible with shells
- 1931: Strock (USA) screw shape
- 1947: Formiggini (Italy) disputes tooth shape
- 1941: Dahl (Sweden) Subperiosteal
- 1967: Linkow (USA) Blade
- 1950's: Dr. P.I. Branemark -orthopedic surgeon defined osseointegration
- 1965: Dr Branemark First implant placed in human after years of animal research
- 1970's: Osseointegration
- 1982: Toronto Conf introduced implants to North America
- 1980's: Research
- 1990's: Esthetics
- 2000's: Ethics

1967: Linkow (USA) Blade



1941: Dahl (Sweden) Subperiosteal



HISTORY OF DENTAL IMPLANTS



Esthetic Dentistry of Royalty

Ninth Century Mayan Skull

Replacing Missing Teeth



This prosthesis dates between the fifth and fourth centuries BC and was found in Sidon.

Ancient Bridge



First Osseointegrated Implants



Mandible found in Honduras in 1931 has 3 pieces of shell to replace lower incisors. Dates from about AD 600 and is the earliest example of successful endosseous implants.

What is Osseointegration?

Coined by Dr. P.I. Branemark in 1965

Orthopedic surgeon in Sweden

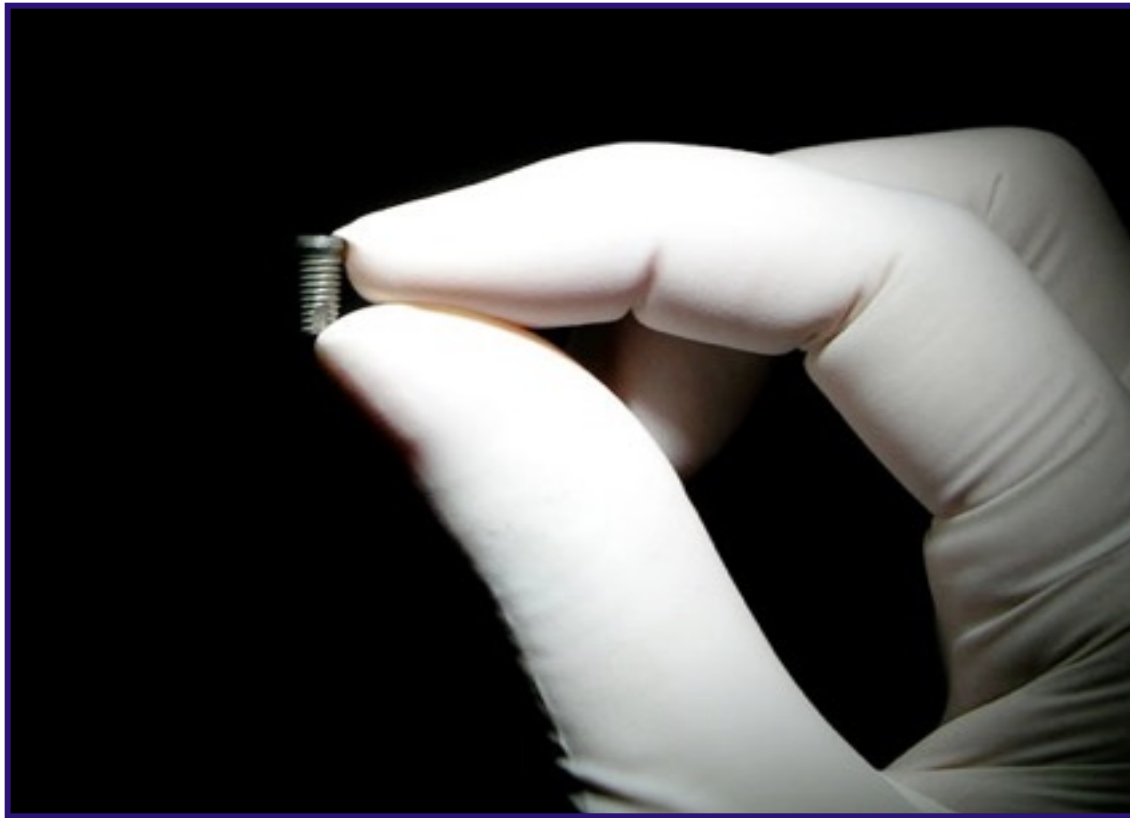
“Direct contact of living bone with the surface of an implant at the light microscopic level of magnification.”

Simply put – the bone bonds to the implant.

- In 1952, Branemark found it impossible to recover bone-anchored titanium microscopes he was using in research
- The titanium cylinders were implanted into the femurs of rabbits
- Osseointegration occurred:
 - Biocompatible material, titanium
 - Non traumatic surgical procedure
 - Implant “fixed” at surgery
 - No micro movement on implant during healing phase
 - Placed at or below the crest of the ridge
 - Protected from “load”

- In 1965:
 - first titanium root-form implant were placed in an edentulous patient by Branemark
- 40 years later:
 - these implants are still in function
- In 1981:
 - Branemark introduced this technology and a surgical protocol to North America

Why Implants?



Why Implants?

What is your experience with implant dentistry?

Which one of you have a family member or friend that have implants?

Tell me about their experience?

**What is it that you don't want to hear the pts say...?

Why Implants?

- For every **2 minutes** the doctor is with a patient, an auxiliary member is with them for 30 minutes
- Patients **trust YOU** and look for confirmation of treatment
- YOU can **“plant seeds”** of treatment options
- Case acceptance depends on patient's trust and confidence in treatment
- Staff reinforces patient trust and confidence in treatment plan.


DON'T EAT WITH THEM on time!
Appointment

THEM LIKE I USED TO WITH MY TEETH!
Denture takes too long to get!
MY LOWER DENTURE KEEPS MOVING AROUND!!

MY DENTURE HURTS!!

Doesn't look like my natural teeth!

No matter what job you have in life,
your success will be determined
5% by your **academic credentials**,
15% by your **professional experiences**,
and **80%** by your **communication skills**.

A decorative orange wavy bar at the bottom of the slide.

- How do we greet the patient?
- Do we help them with their coats?
- How do we bring patient in the op?
- How do we take care of the guest waiting?
- Have you sat in you waiting room?
 - Are the chairs comfortable?
 - Are the magazines up to date?
 - Are the rest rooms clean?
- How do we leave the patient at the end of the appt?
- Do we call the pt next day, even if it's a Saturday?

PROS & CONS

Treatment Plans

Pros and Cons : BRIDGE

<u>PROS</u>	<u>CONS</u>
Esthetic	Long Term Esthetics
Fast	Bone Loss
Stable	To Redo
No Surgery	Decay
Insurance covers	Perio
	Hygiene
	Endo
	Trim vital teeth
	Sensitivity



BRIDGE

IMPLANT

\$\$	\$\$
Insurance	NO Insurance
3 Years 80% Success	3 years 96 - 98 % Success
5 - 7 Years 75% Success	5 - 7 Years 96 - 97 % Success
10 Years 50% Success	10 Years 95% Success
RCT, Decay, Perio	NO RCT, NO Decay
\$\$\$ - Repair	PRICELESS!!

Treatment Plans

Pros and Cons : PARTIALS

<u>PROS</u>	<u>CONS</u>
Esthetic	Long Term Esthetics
Fast	Bone Loss
Insurance covers	To Redo,
No Surgery	Decay & Abrasion
	Hooks show...
	Hygiene
	Food Retention...
	Sores
	Sensitivity
	Broken Clasps



PARTIALS...





Treatment Plans

Pros and Cons :DENTURES

<u>PROS</u>	<u>CONS</u>
Esthetic	Long Term Esthetics
Fast	Bone Loss
Insurance covers	To Redo
No Surgery	Sores!
	Food stuck under...
	Electric Shocks
	Unstable...
	Adhesive
	Soft Nutrition
	Indigestion Products



Fear of loss is a powerful motivator!!



Consequences of Tooth Loss – On bony structures

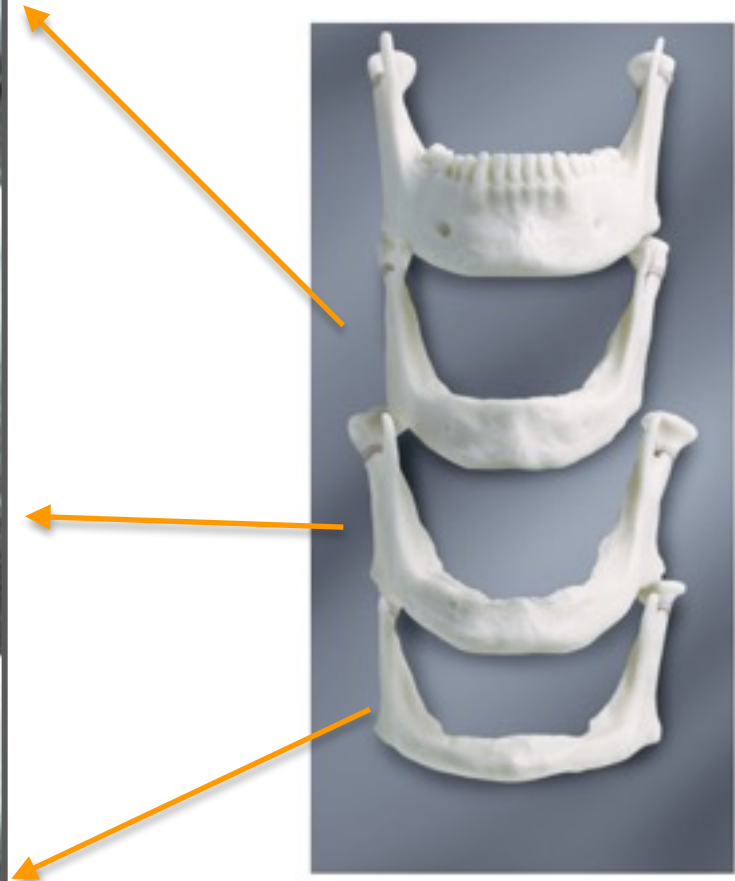
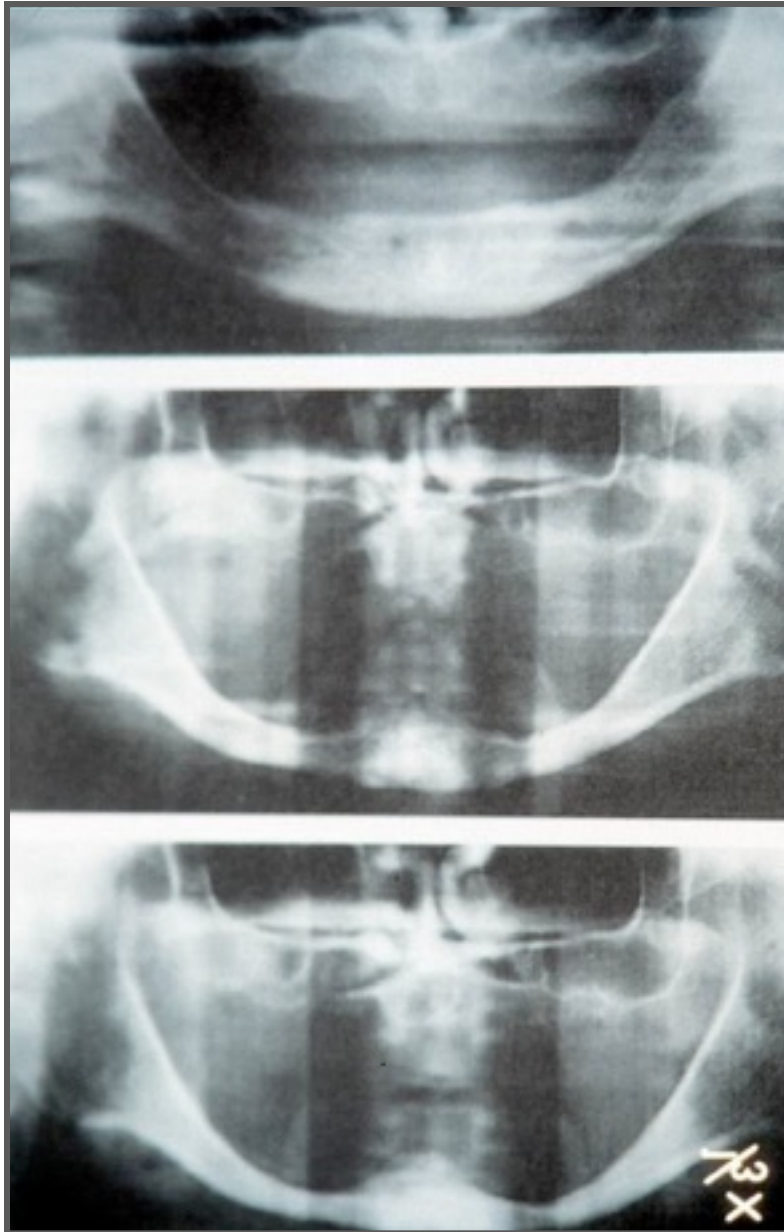
- ✱ Effect on the bony structures
 - ✱ Bone needs stimulation to maintain form, density, and strength
 - ✱ Loss of teeth = Loss of stimulation
 - ✱ resulting in decreased density and dimensions (width and height)
 - ✱ Loss may be affected by:
 - ✱ Sex (male or female)
 - ✱ Parafunction
 - ✱ Poor or ill-fitting dentures

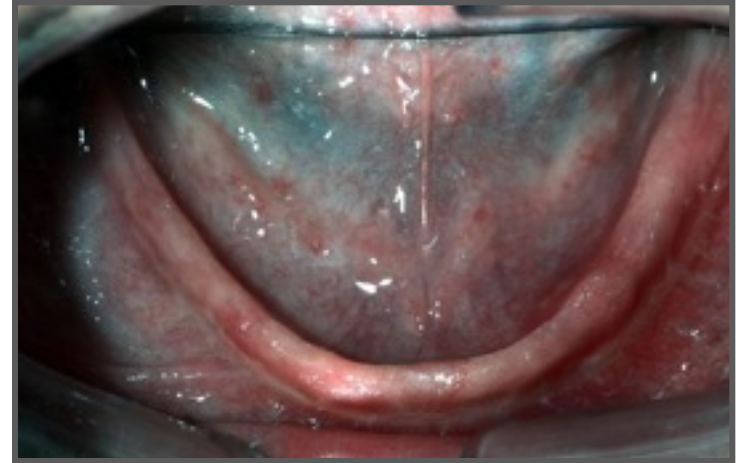
- The amount of **bone loss** in the first year after tooth loss is almost **10 times greater** than the following years



Bone Loss in the Mandible

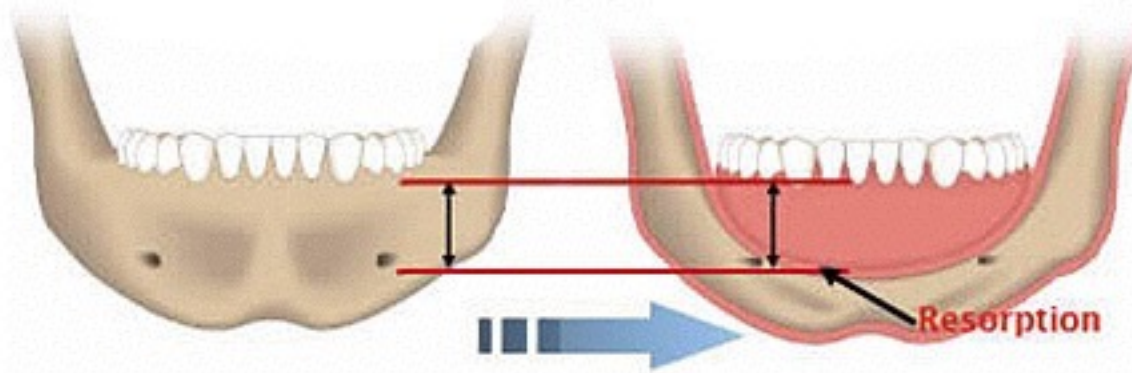




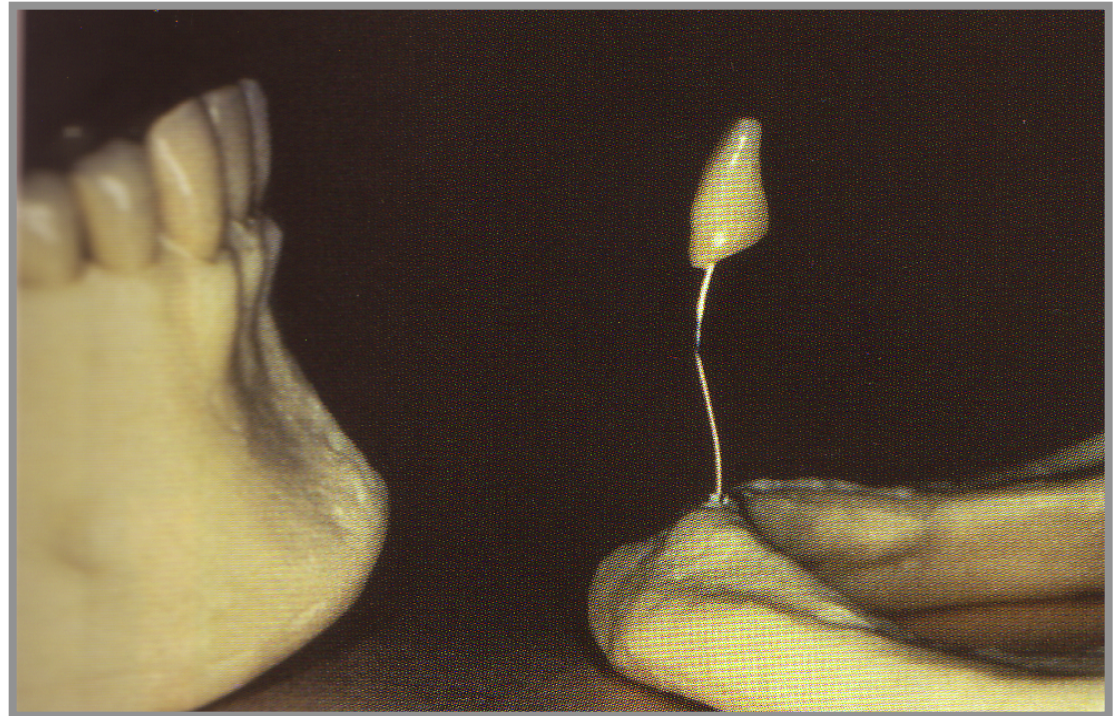


Lower jaw with teeth
showing no bone loss

Lower jaw with denture
showing bone loss



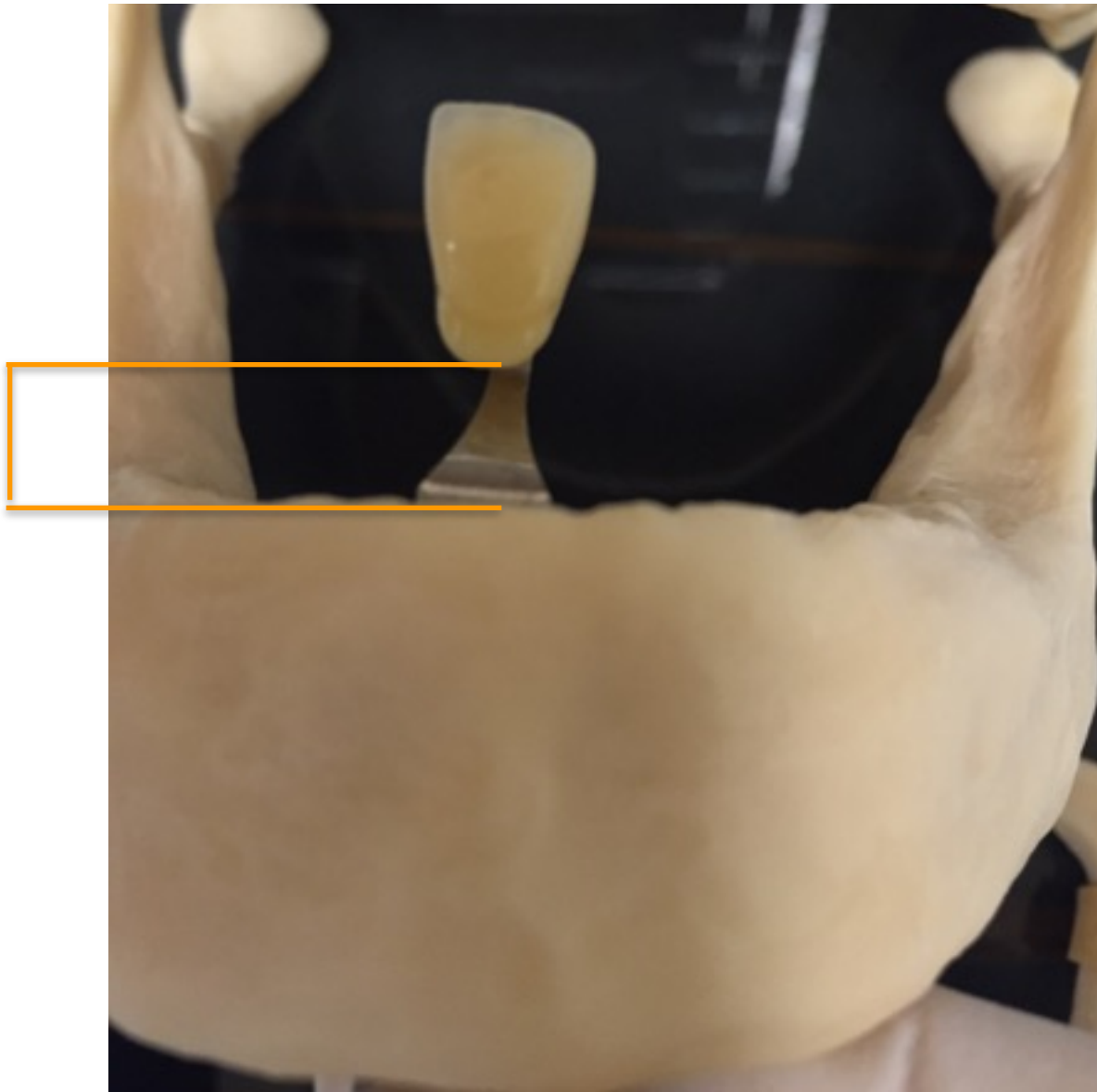
Bone Loss



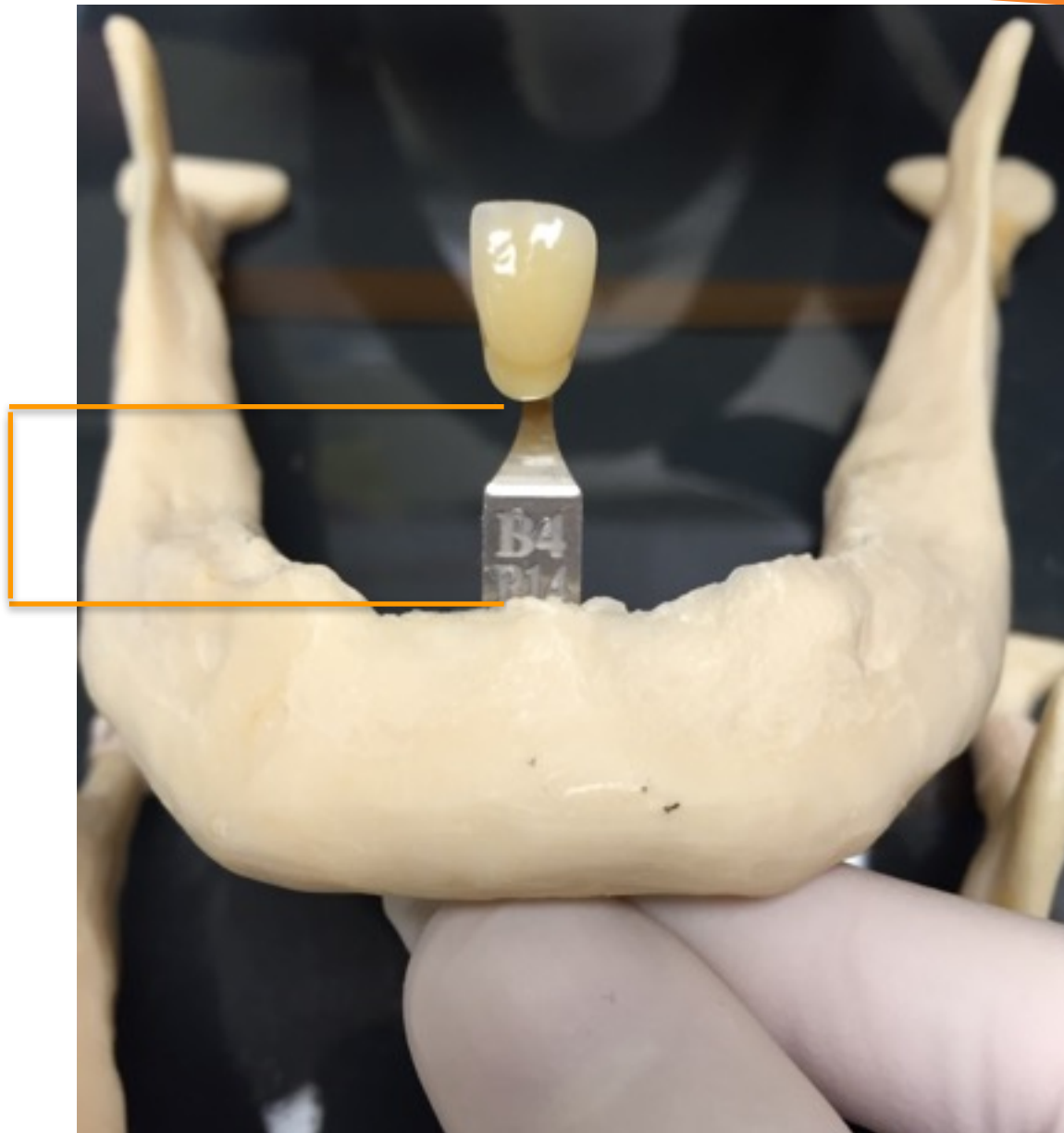
Bone loss



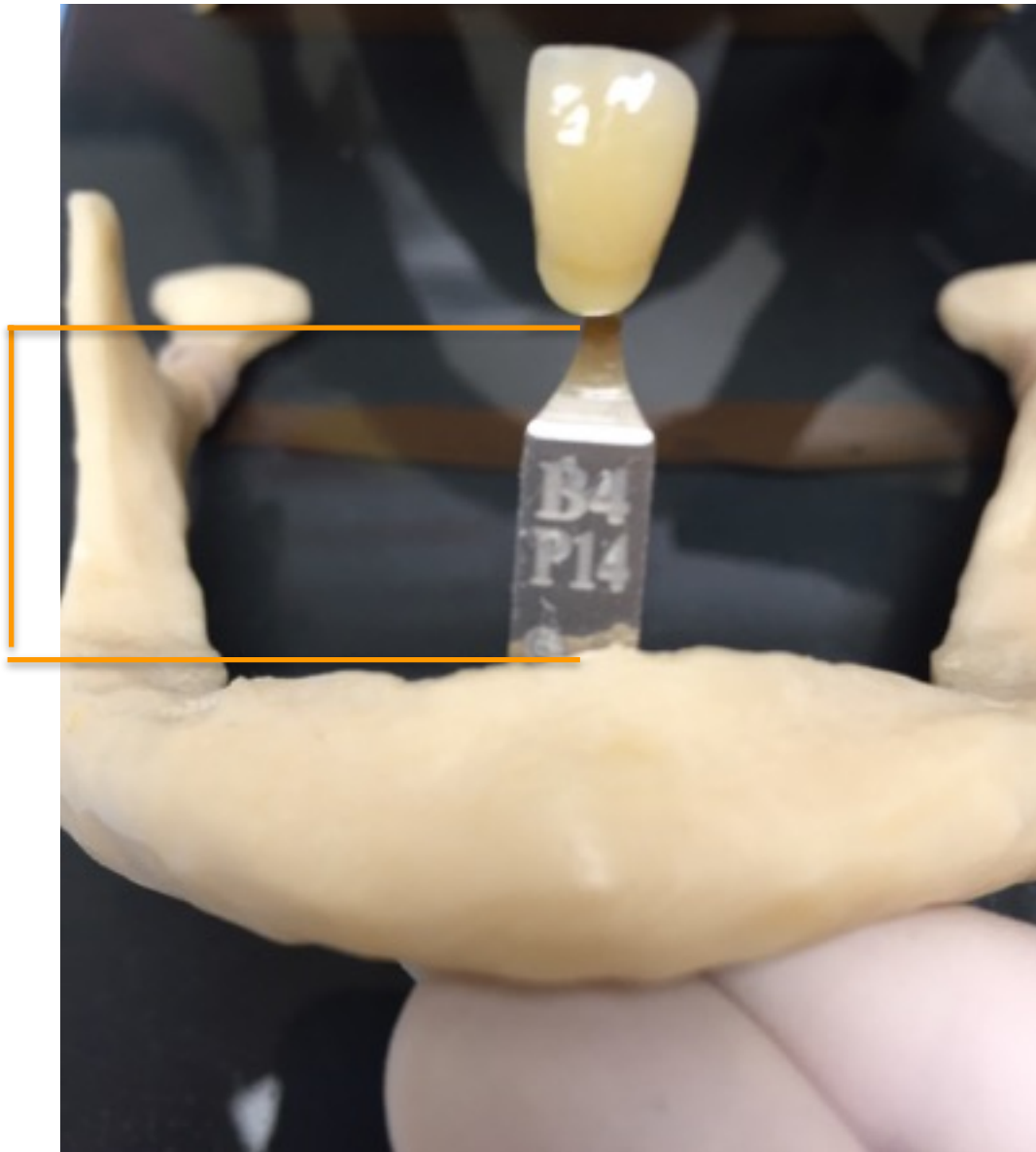
Bone loss



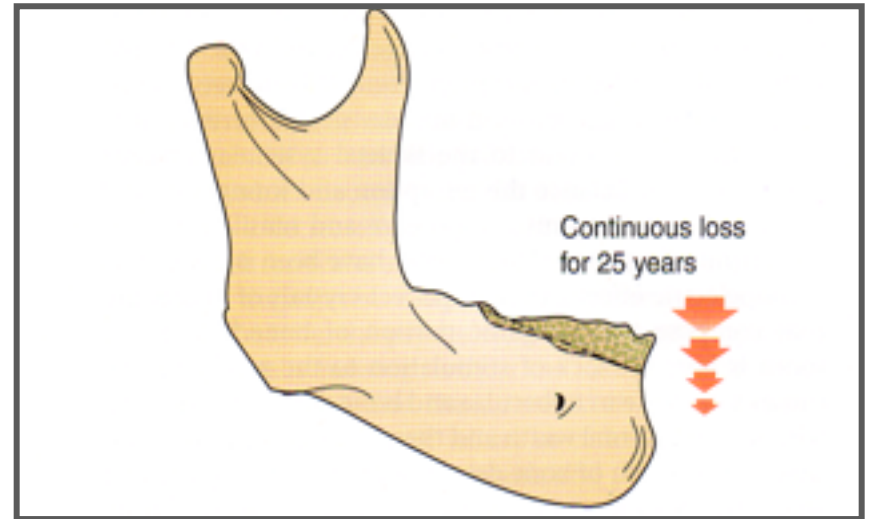
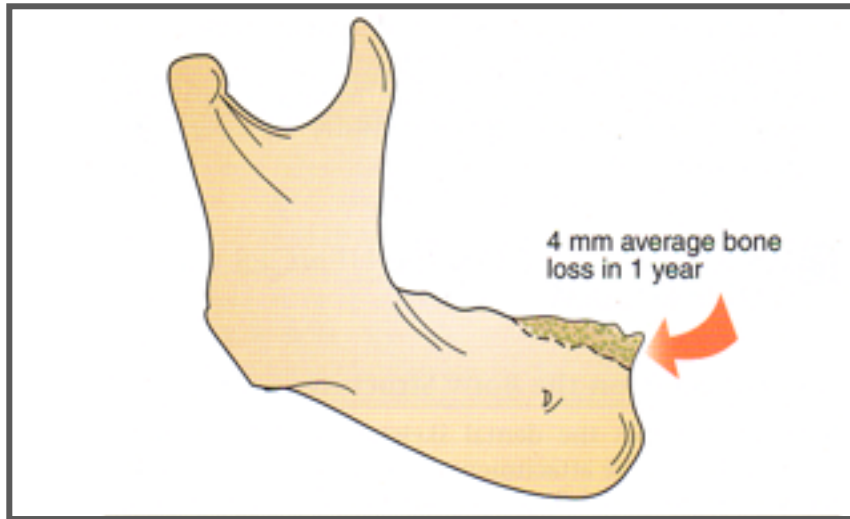
Bone loss



Bone loss

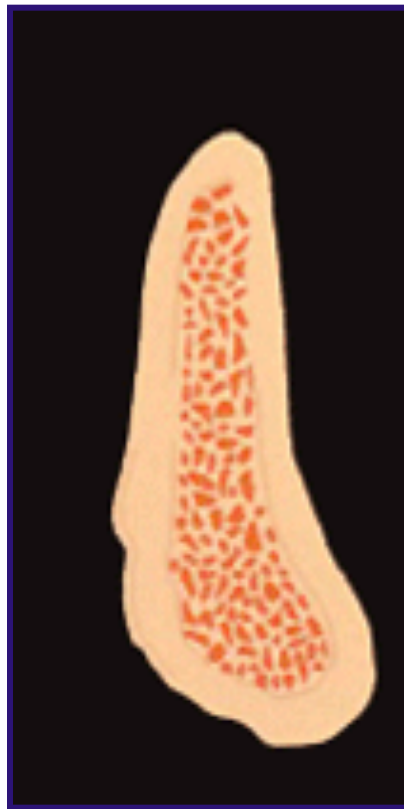


Bone loss



Bone Resorption Pattern

Division A



Bone Resorption Patterns

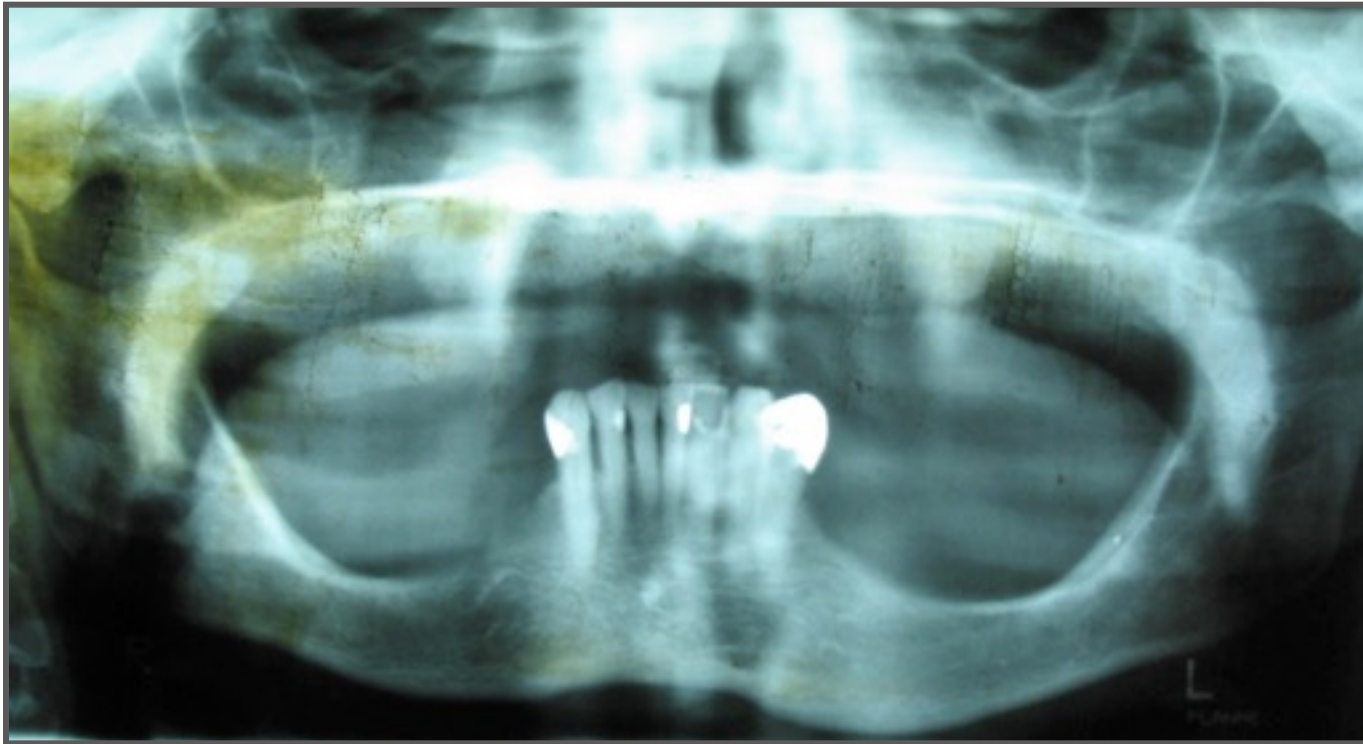
Division B



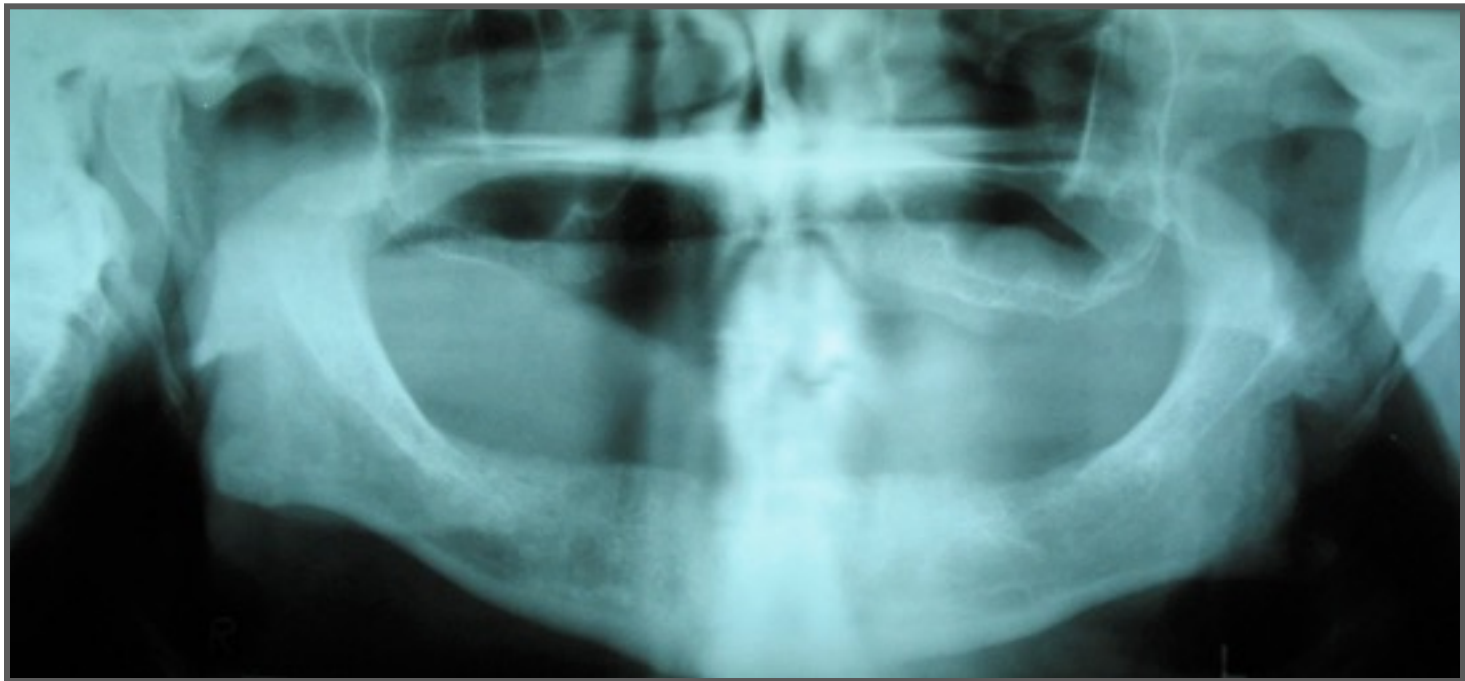




Bone is maintained where the teeth are!

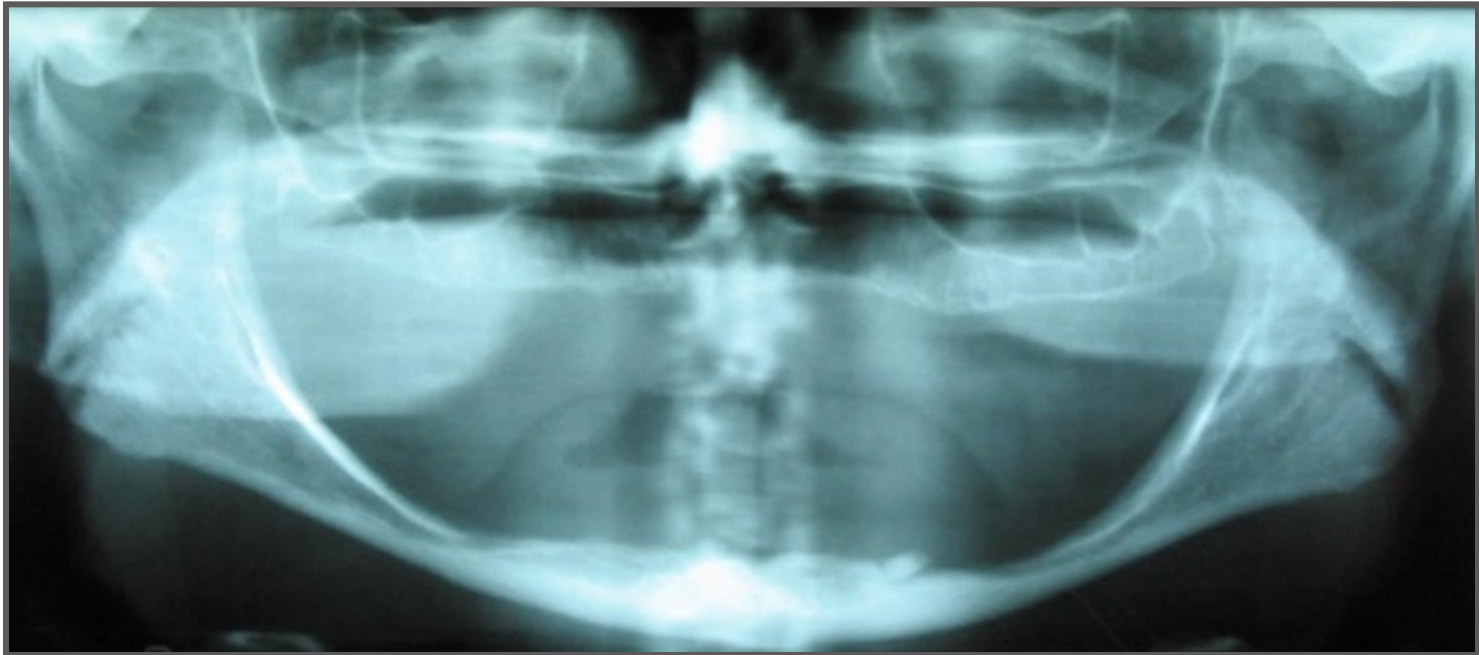


Don't let your patients go from this ...

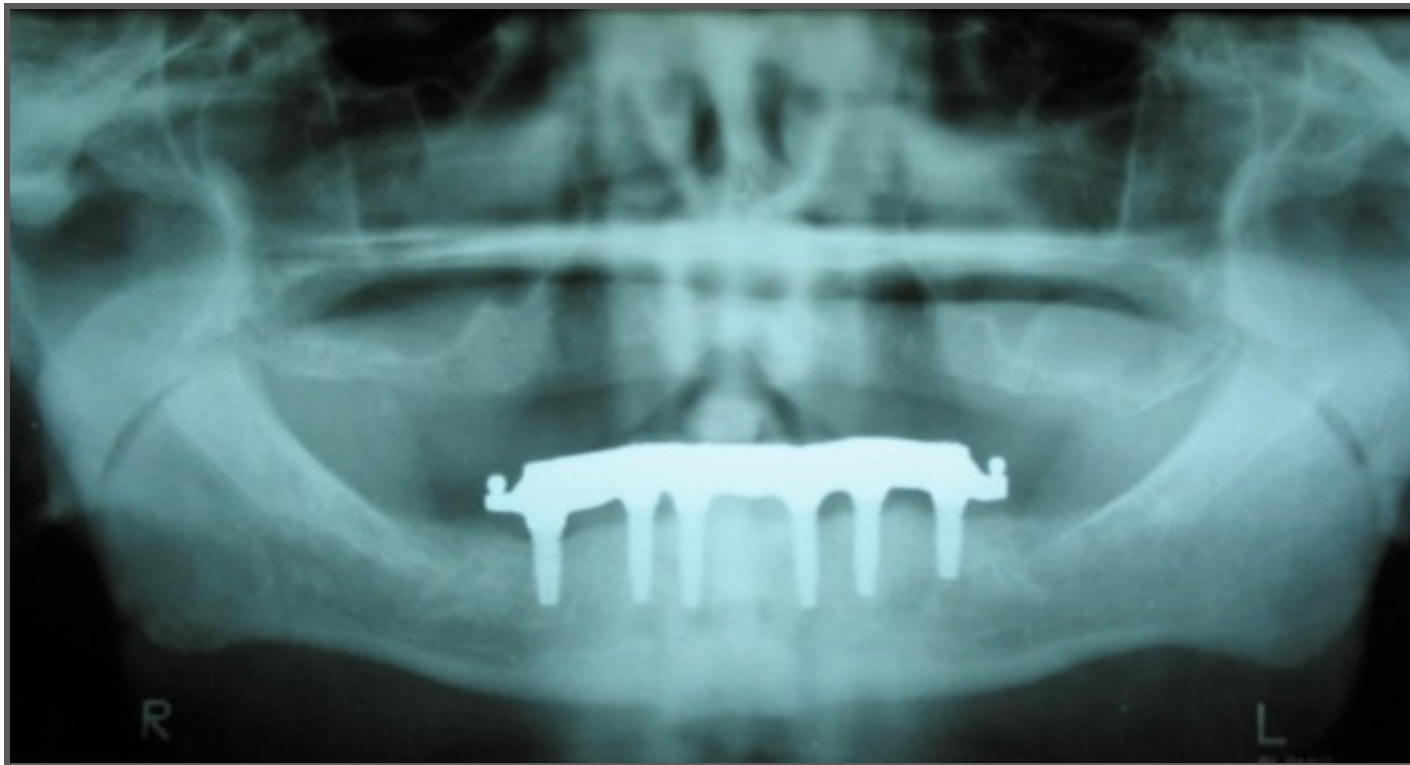


Dr. Natalie Wong

... to this!!!



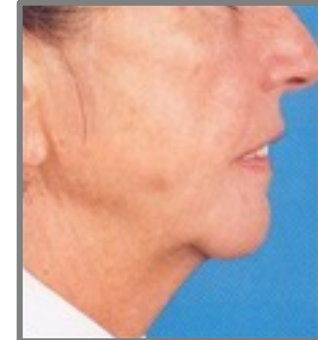
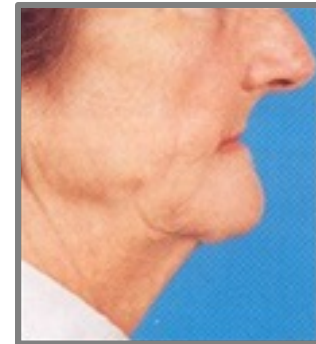
Clearly, the solution is implant dentistry!



Treatment Plans

Pros and Cons : IMPLANTS

<u>PROS</u>	<u>CONS</u>
Esthetic	Surgery (Procedure)
Stop Bone Loss	Cost (teach selling)
Easier for Hygiene	Long before getting teeth (if prepare well)
No Decay	Pain (Medication)
Patient Confidence	
Stable	
Better Nutrition	
Feels like teeth	
No sores	
No adhesive	
Vertical Dimension...	





It's not about me!
It's not about you!
It's about your patient!!!

Tapered PLUS

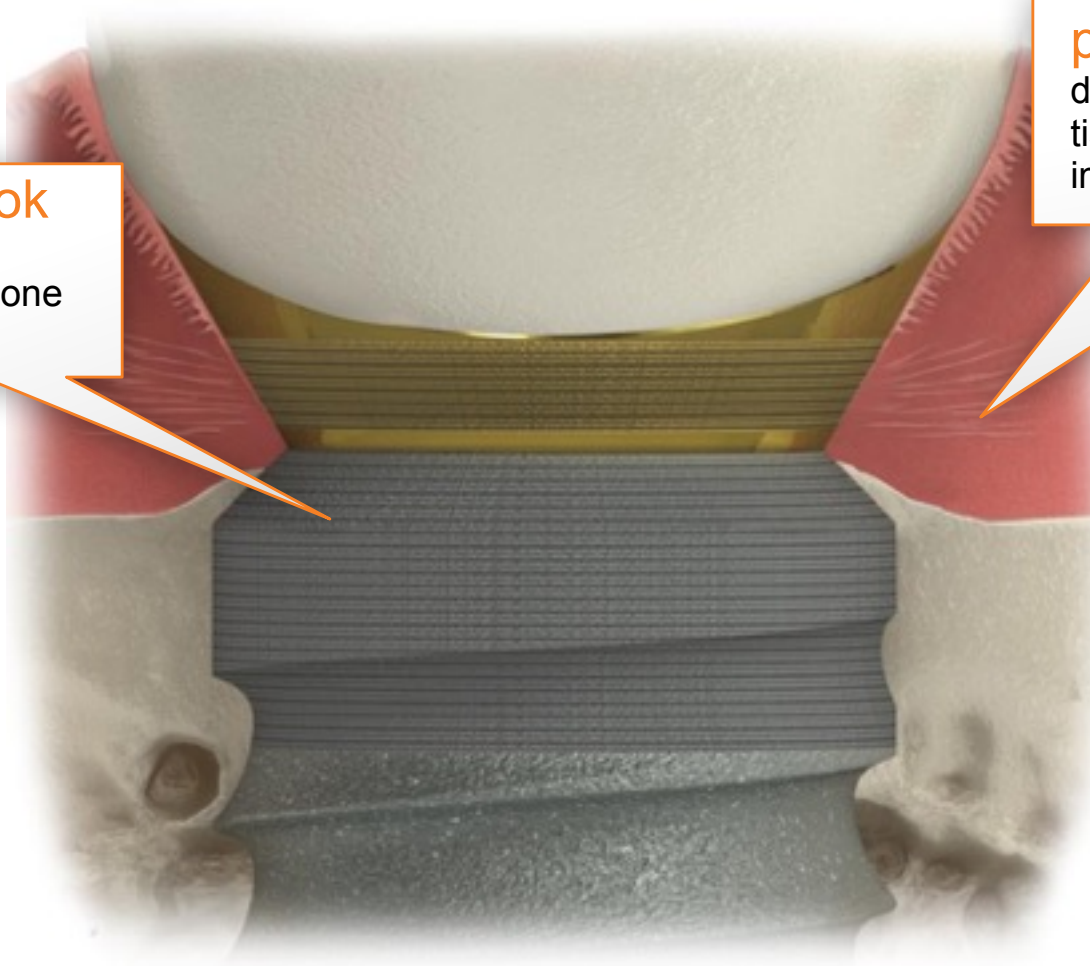
BIOHORIZONS®

Laser-Lok

lased bevel
allows for bone
up growth¹

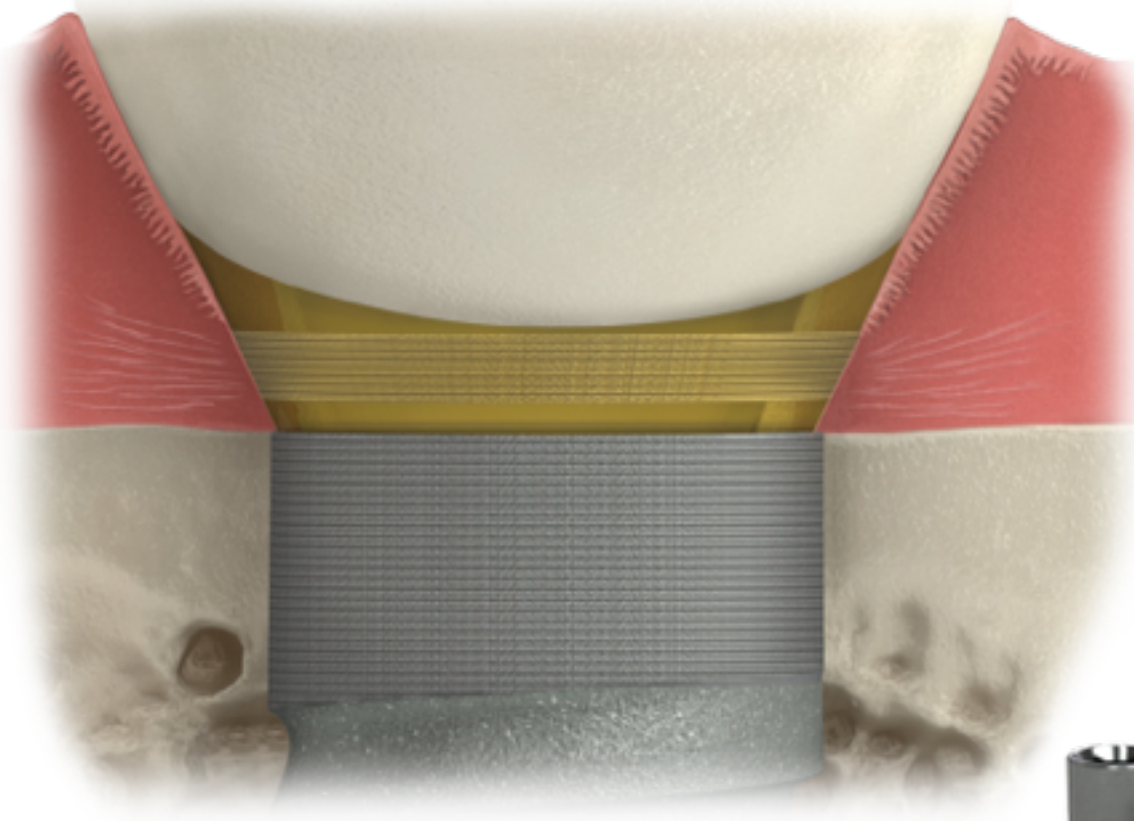
platform switching

designed to increase soft
tissue volume around the
implant connection

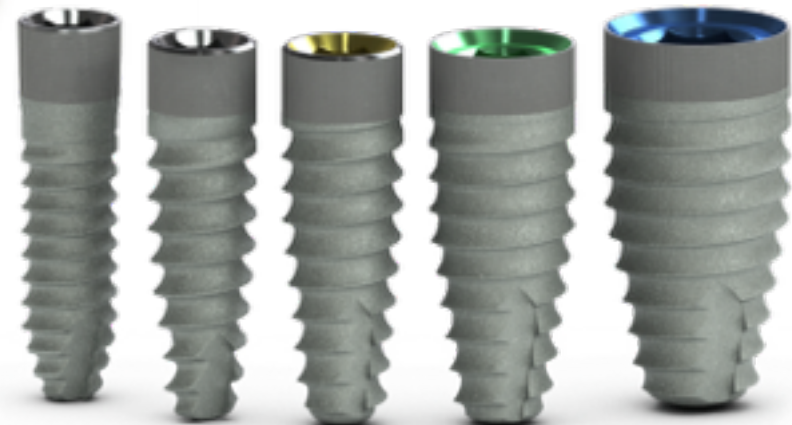


Tapered Internal

BIOHORIZONS®

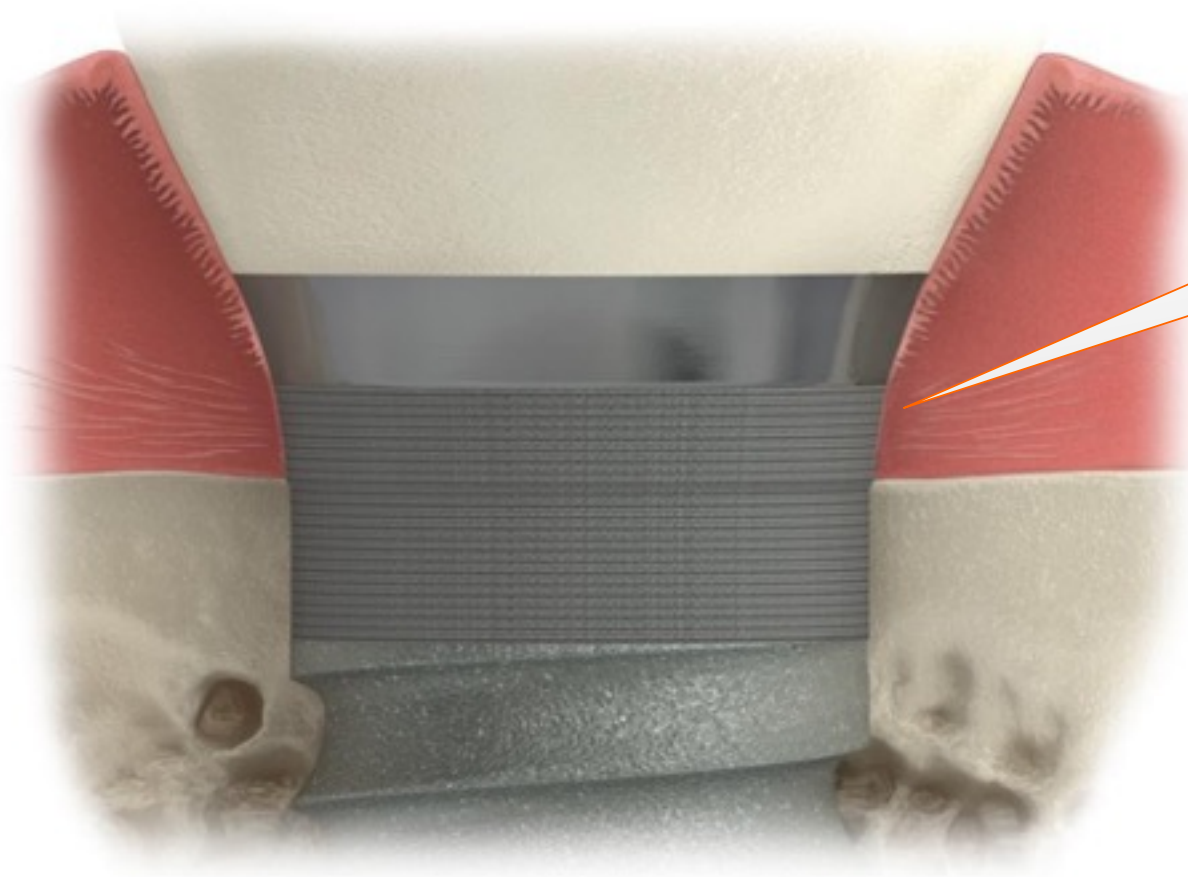


platform matched
available in a wide range of
platform and body diameters



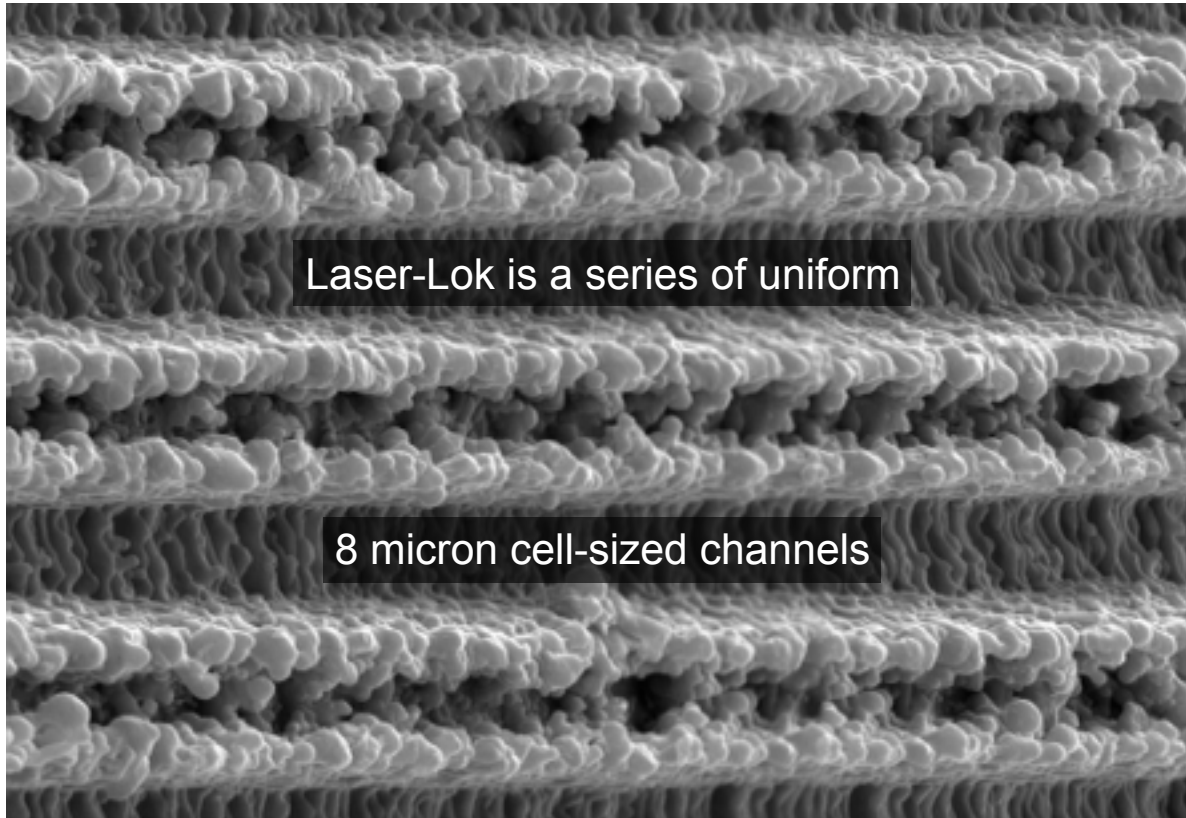
Tapered Tissue Level

BIOHORIZONS®



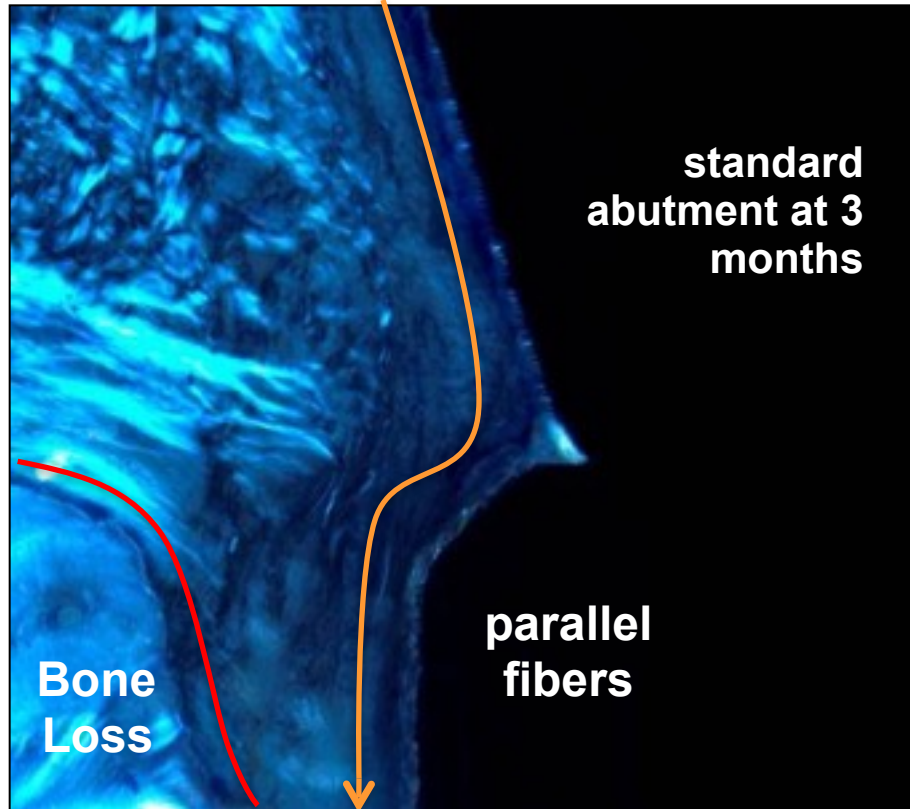
transmucosal collar
designed for one stage
surgery with an extended
Laser-Lok zone.



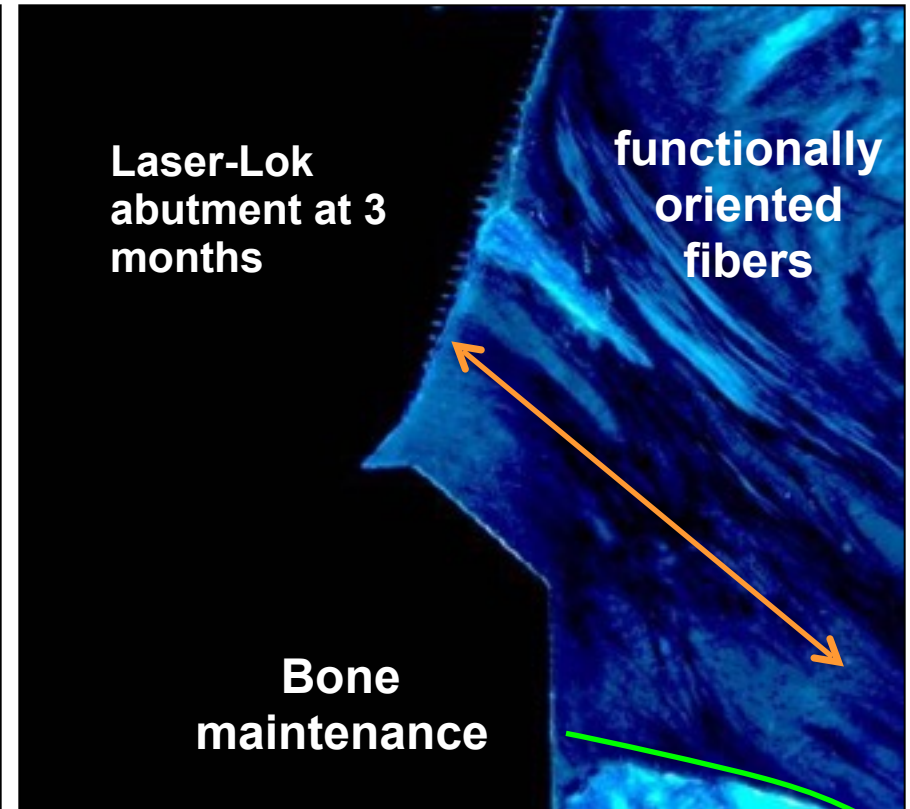


- 25 years of research
- over 50 published manuscripts & articles
- only implant surface designed for both hard and soft tissue integration


standard implant & abutment



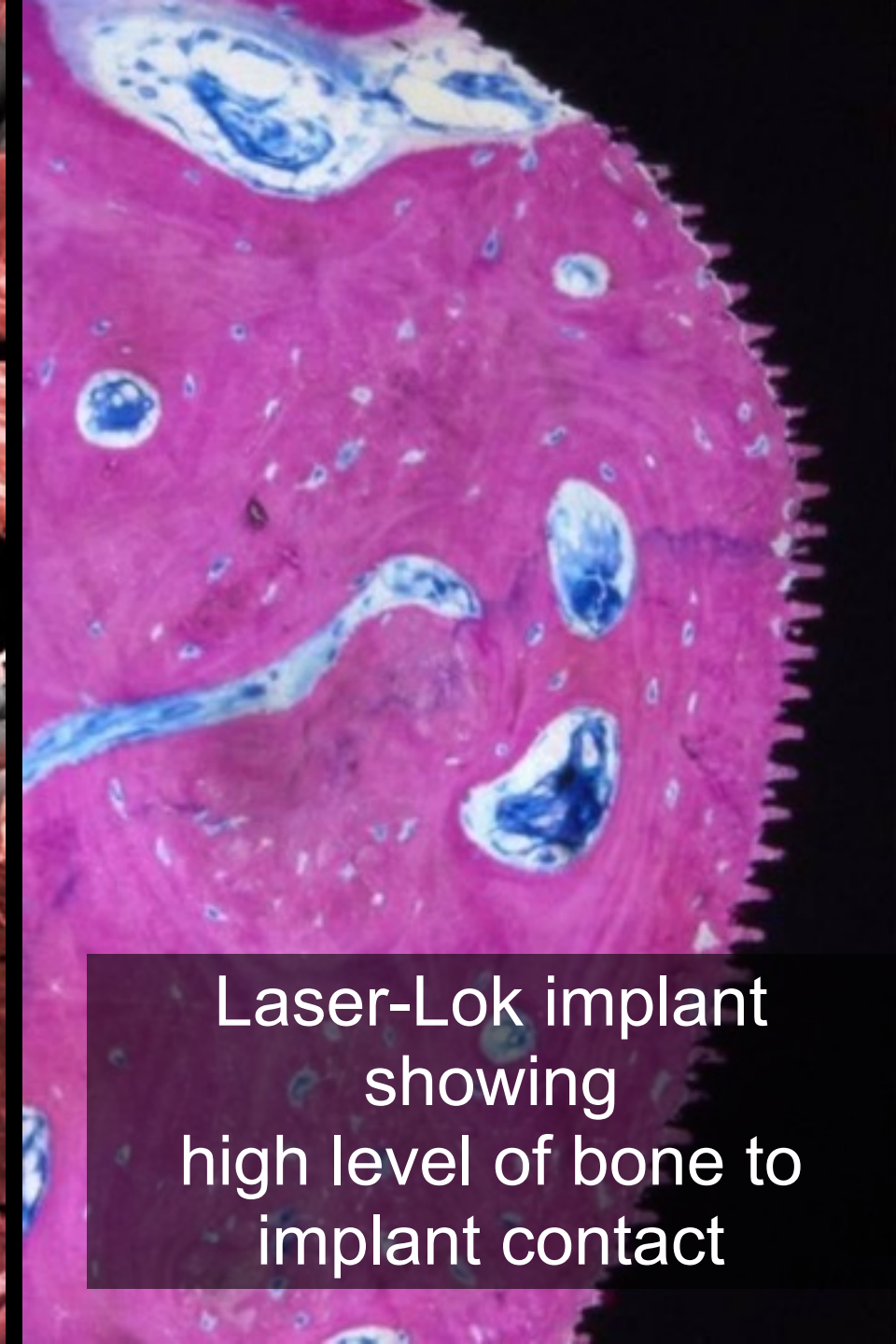
Laser-Lok surface



polarized light microscopy

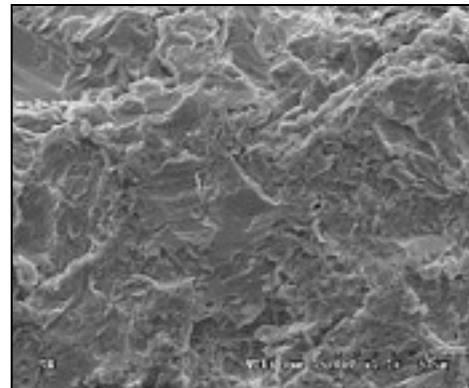


Laser-Lok implant
definitively showing
physical connective
tissue attachment

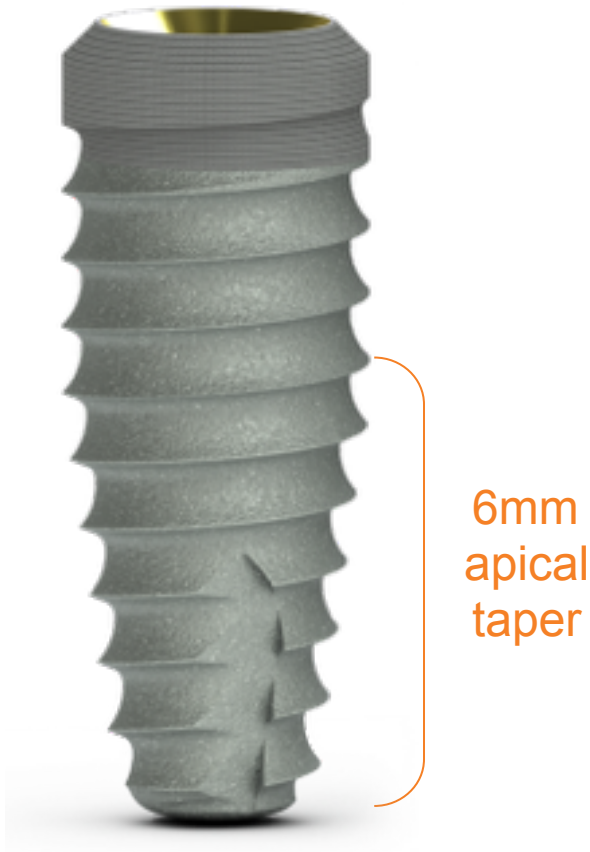


Laser-Lok implant
showing
high level of bone to
implant contact

- highly complex surface
- greater bone-implant contact than machined, HA or TPS surfaces*
- biocompatible resorbable blast media.

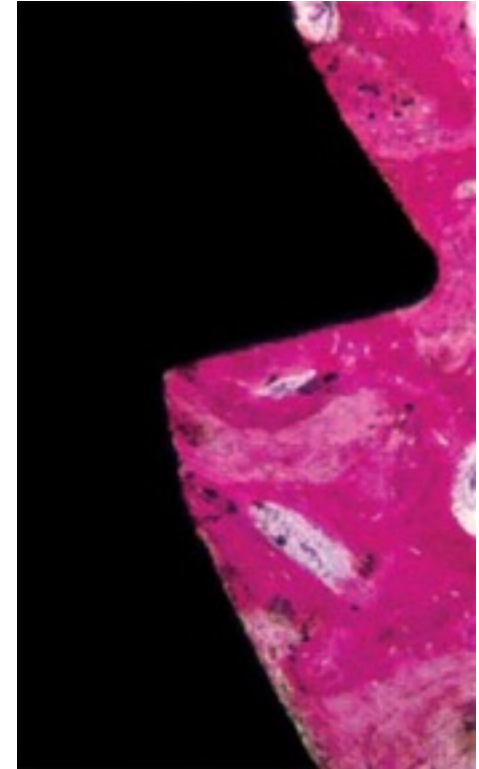


*Histomorphometric Analysis of the Bone-Implant Contact Obtained with 4 Different Implant Surface Treatments Placed Side by Side in the Dog Mandible. Novaes AB Jr, Souza SL, de Oliveria PT, Souza AM. Int J Oral and Maxillofac Implants. 2002 May-Jun; 17(3):377-383.



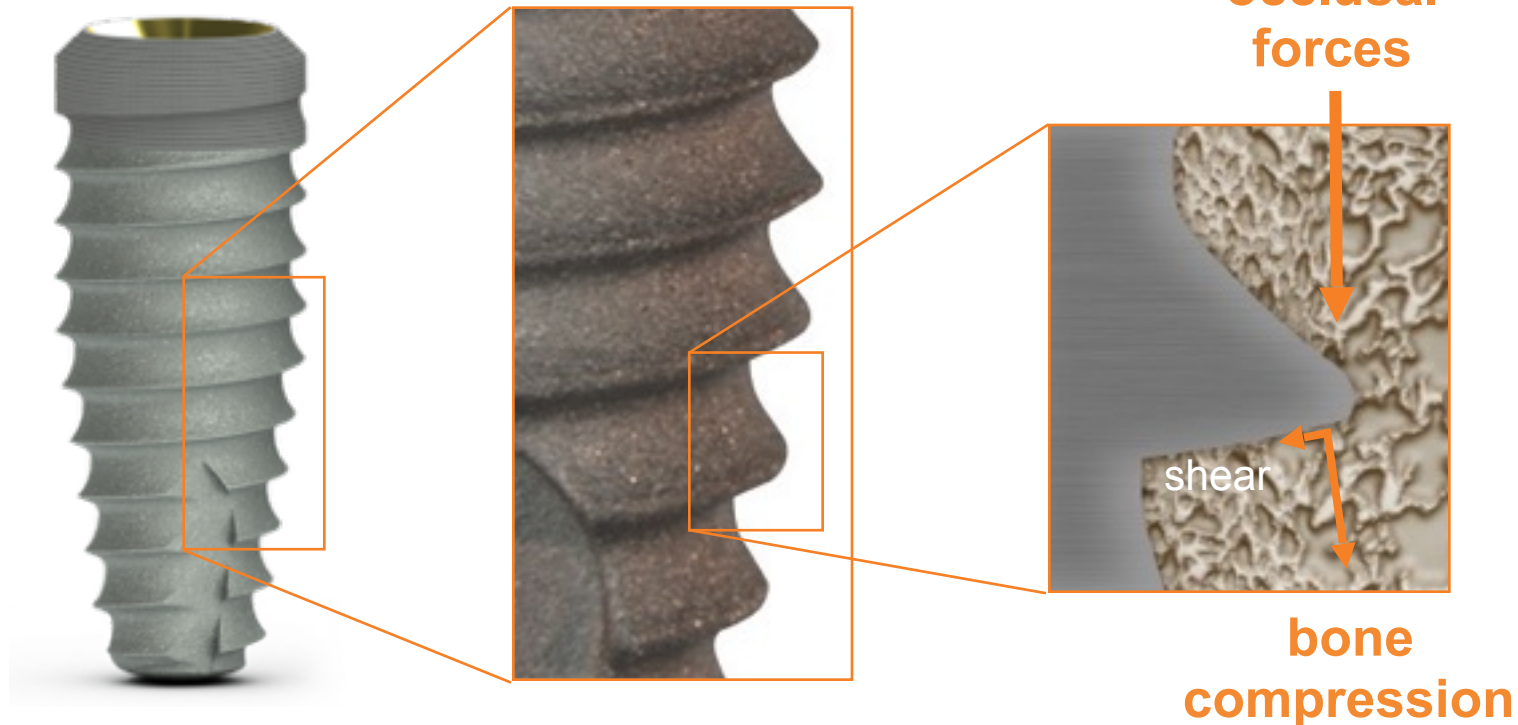
- 1-2mm of taper based on implant diameter
- ideal profile for constrained spaces
- improved **primary stability**

- wide, flat leading edge
- increased surface area
- improved axial load distribution
- improved primary stability

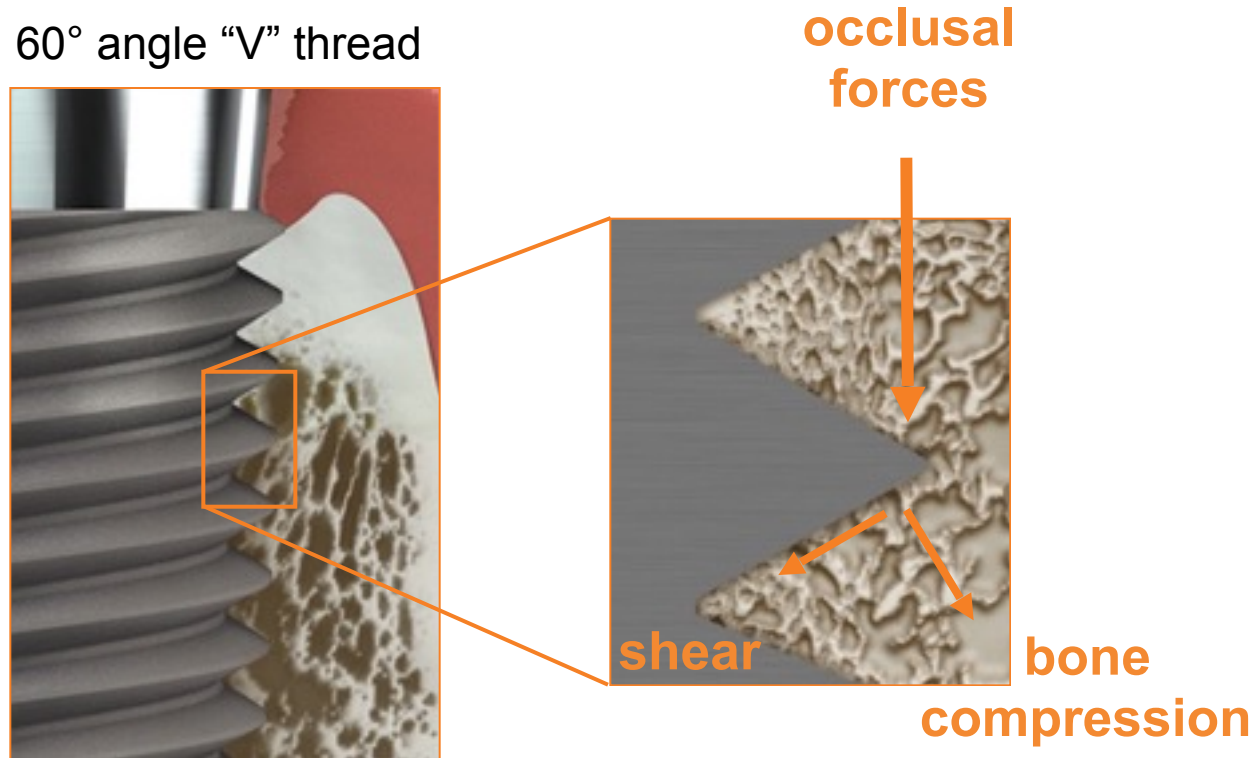


buttress thread design

screw thread designed for bone compression







buttress design has larger, deeper thread, and a lower surface face designed to provide compressive rather than shear force









- in compression, angled interface produces significant shear stress
- this can cause micromotion, instability, and bone loss at interface

Tapered Plus

			
implant diameter	3.8mm	4.6mm	5.8mm
implant lengths	7.5mm	7.5mm	7.5mm
	9.0mm	9.0mm	9.0mm
	10.5mm	10.5mm	10.5mm
	12.0mm	12.0mm	12.0mm
	15.0mm	15.0mm	15.0mm
prosthetic platform	 3.0mm	 3.5mm	 4.5mm

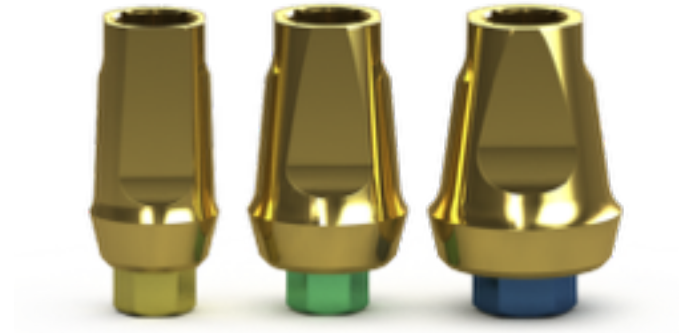
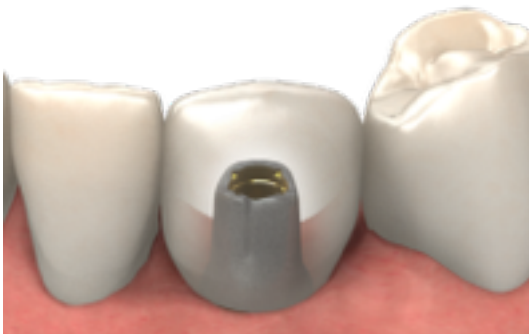
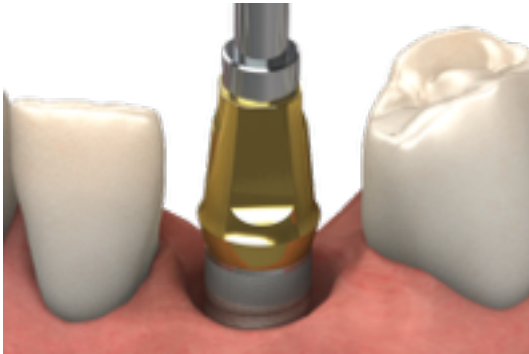
Tapered Internal

					
implant diameter	3.0mm	3.4mm	3.8mm	4.6mm	5.8mm
implant lengths		9.0mm	9.0mm	7.5mm	7.5mm
	10.5mm	10.5mm	10.5mm	10.5mm	10.5mm
	12.0mm	12.0mm	12.0mm	12.0mm	12.0mm
	15.0mm	15.0mm	15.0mm	15.0mm	15.0mm
		18.0mm	18.0mm	18.0mm	
prosthetic platform	 3.0mm	 3.0mm	 3.5mm	 4.5mm	 5.7mm

- comes packaged with
 - implant
 - *3inOne* abutment
 - abutment screw
 - two-stage cover cap






what is a *3inOne* abutment?








- serves as
 1. implant mount
 2. impression coping
 3. gold-hued esthetic final abutment
- comes pre-mounted on a range of bone level implants

Tapered Internal mounted



implant diameter	3.8mm	4.6mm	5.8mm
		7.5mm	7.5mm
implant lengths	9.0mm	9.0mm	9.0mm
	10.5mm	10.5mm	10.5mm
	12.0mm	12.0mm	12.0mm
	15.0mm	15.0mm	15.0mm
prosthetic platform	 3.5mm	 4.5mm	 5.7mm

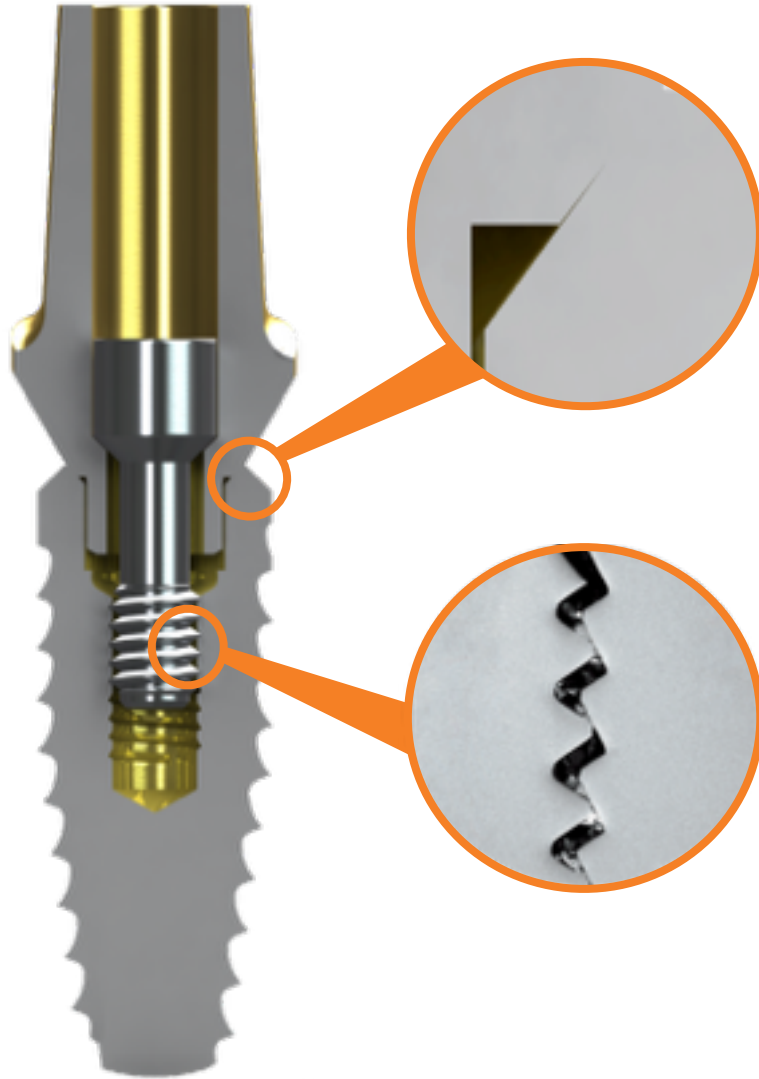
Tapered Tissue Level

				
implant diameter	3.0mm	3.8mm	4.6mm	5.8mm
implant lengths			7.5mm	7.5mm
		9.0mm	9.0mm	9.0mm
	10.5mm	10.5mm	10.5mm	10.5mm
	12.0mm	12.0mm	12.0mm	12.0mm
prosthetic platform	 3.0mm	 3.5mm	 4.5mm	 5.7mm

strongest titanium

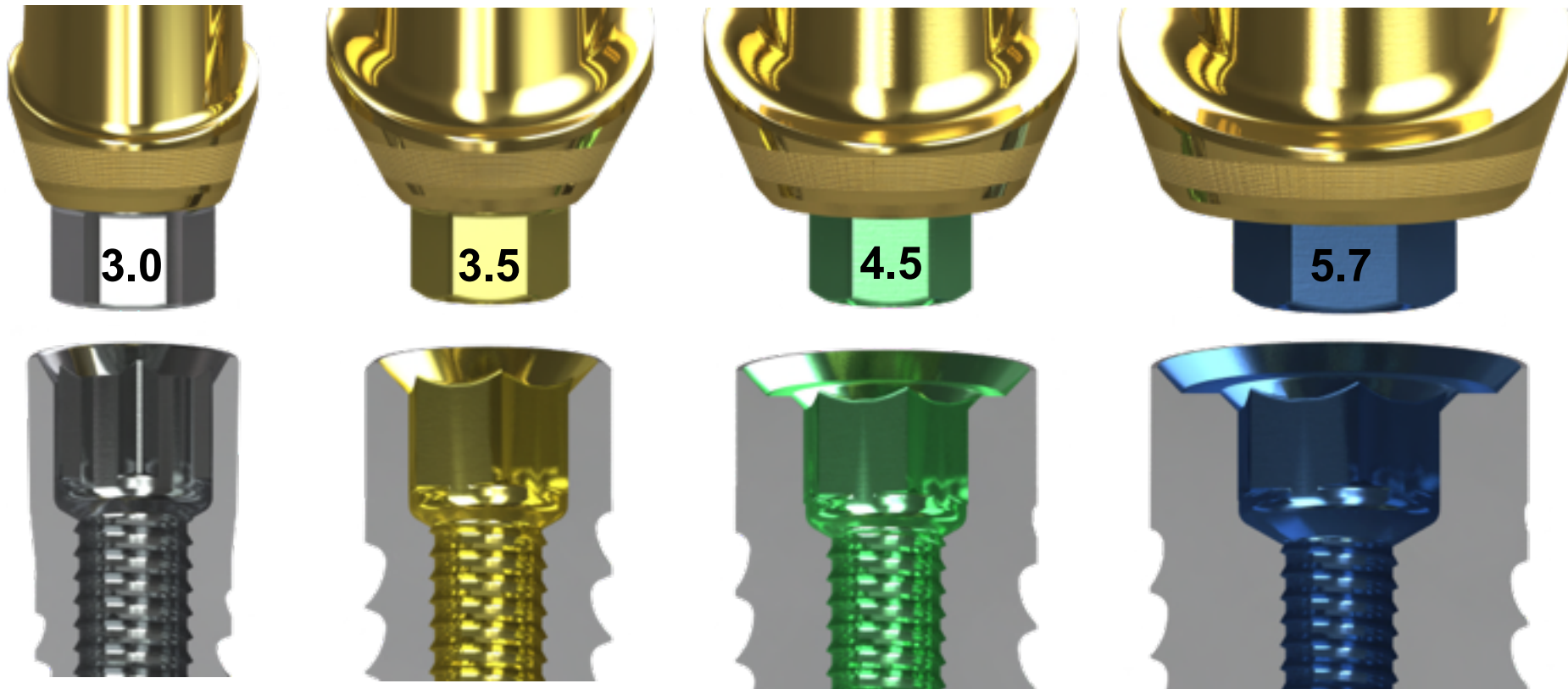
	grade 1 CP titanium	grade 2 CP titanium	grade 3 CP titanium	grade 4 CP titanium	Ti-6Al-4V titanium alloy	Ti-6Al-4V ELI titanium alloy
tensile strength yield (MPa)*	240	340	450	590	860	860
strength comparison ratio	27%	39%	51%	67%	100%	100%
		Dentsply	Keystone (Restore)	Nobel Straumann (some) Astra Biomet 3i	Zimmer	BioHorizons

•source: MatWeb Material Property Data. MPa = megapascals



conical connection
creates a biologic seal

Spirallock® abutment thread
form virtually eliminates
screw loosening



easily identify prosthetic platforms and components

wide range of prosthetics

BIOHORIZONS®



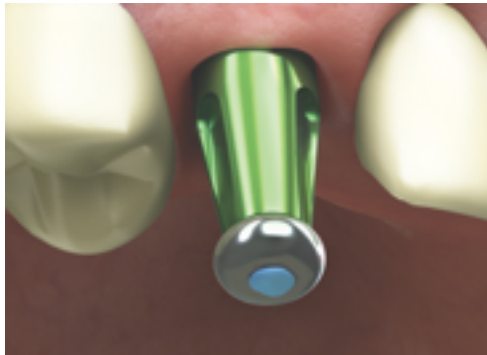
 authentic connection

impression copings

BIOHORIZONS®



Scoop
coping



closed tray
indirect transfer



Snap
coping



closed tray direct pick-up
no instrumentation required



Direct
coping



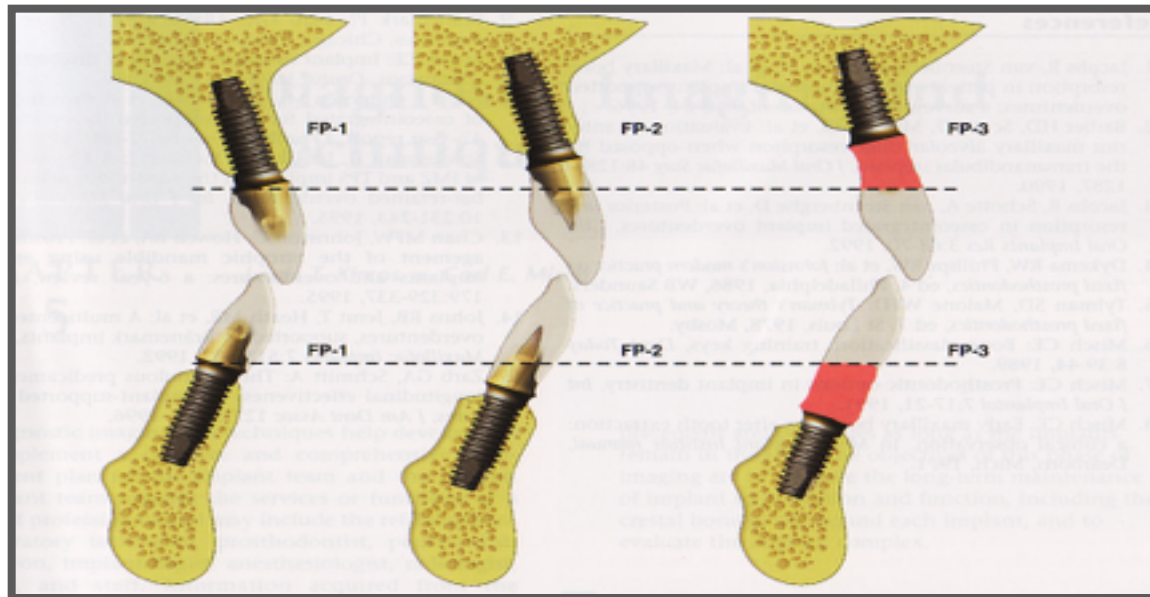
open tray
direct pick-up

- implants and prosthetic components are covered by an unconditional lifetime warranty
- replaced at no cost if they ever require removal for any reason
- simple warranty claim questionnaire



FIXED PROSTHETIC

- FP – 1** Crown only looks like a natural tooth
- FP – 2** Crown and portion of the root
- FP – 3** Crown, portion of tooth and gingiva



FP1 - FP2 - FP3



FP 1

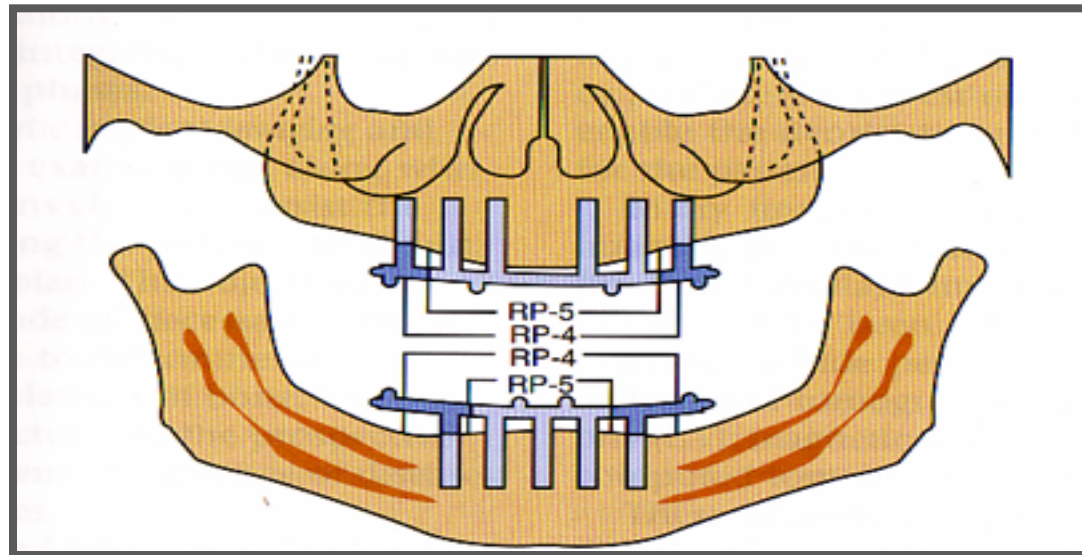


FP 2



FP 3

- RP – 4 Overdenture supported completely by implant
- RP – 5 Overdenture supported by soft tissue and implant





RP 4

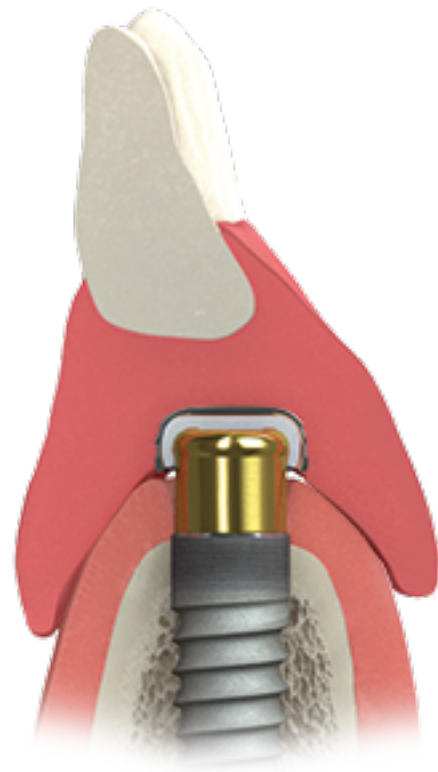




foto: support4, freida bo

A photograph of Simon Sinek, a man with glasses and a microphone, gesturing with his hand. The image is set against a dark background with a large orange curved shape at the top. A white text quote is overlaid on the right side of the image.

**Working hard for
something we don't
care about is called
stress; working hard
for something we love
is called passion. -Simon Sinek**

*THANK
you!*



Vavi Bohbot

vbohbot@biohorizons.com