FEBRUARY 28, 2025
SACRAMENTO DISTRICT DENTAL SOCIETY

I CAN SEE CLEARLY NOW

Soft Tissue Management in the Oral Environment

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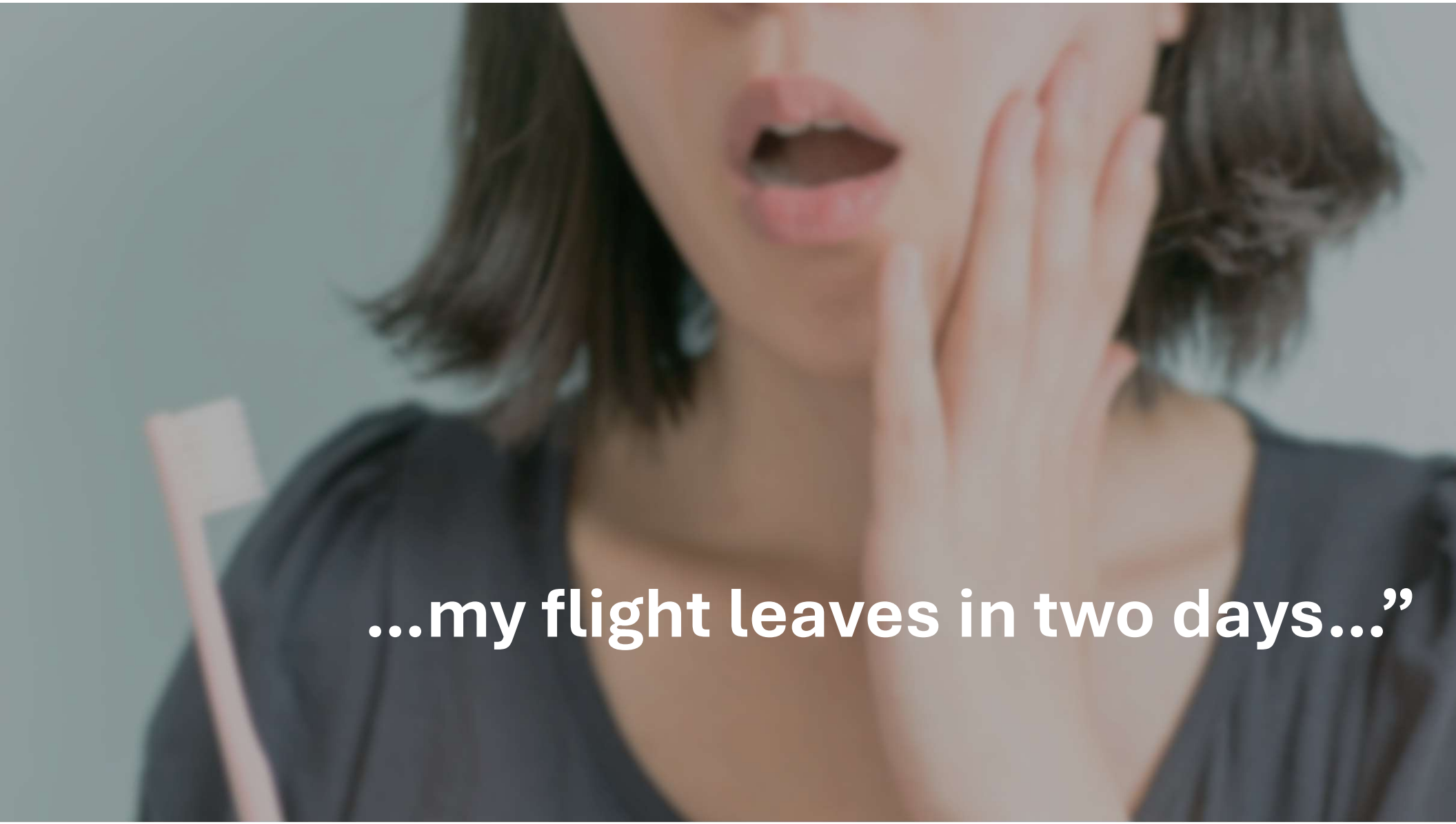
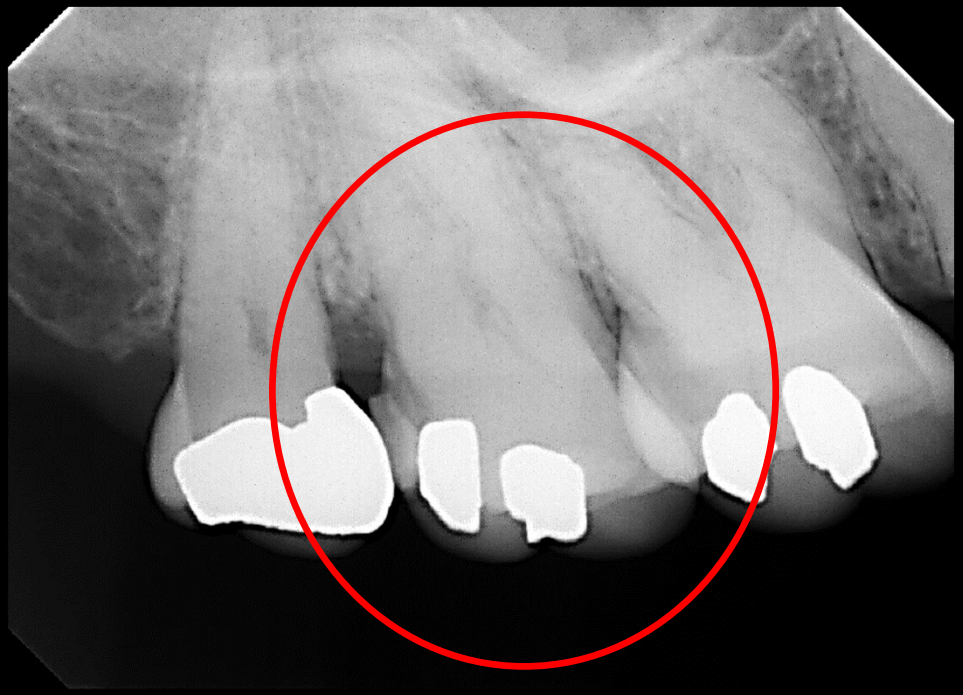
with gratitude


“I missed my daughter’s wedding in 2020 due to Covid…
…the floss gets stuck in the back and it feels weird”
Hi there, Karen!


...my flight leaves in two days...”



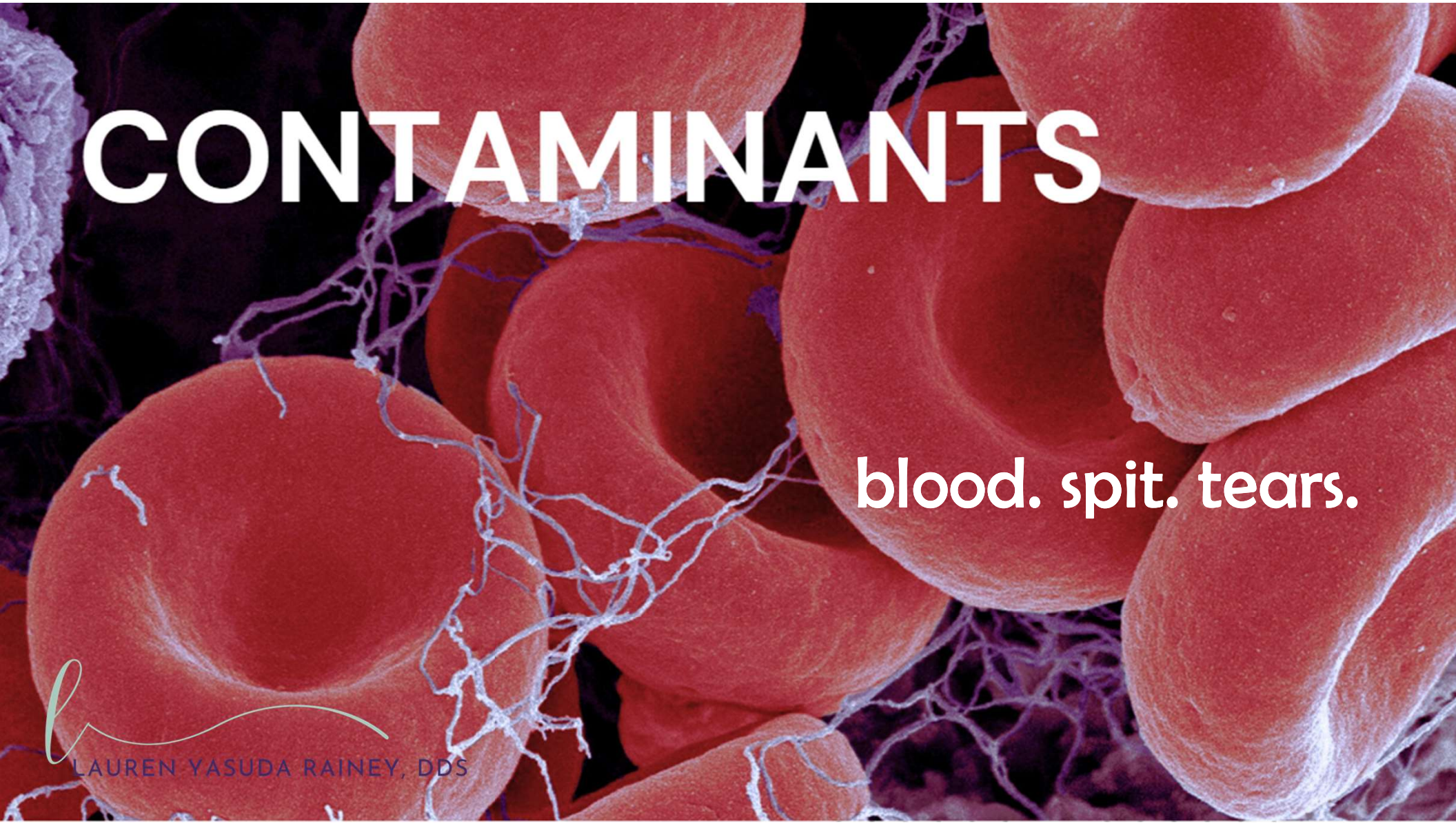
“the floss gets stuck in the back teeth and it feels weird”

01. **CONTAMINATION**
blood, spit & tears

02. **ANATOMIC REVIEW**
the attachment & it's friends

03. **ARMAMENTARIUM**
chemical & mechanical

04. **MIX & MATCH CASES**
the fun stuff


CONTAMINANTS
blood. spit. tears.
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BLOOD

physical barrier
- visualization
- adhesion

high protein content
- fibrinogen
- platelets

SALIVA

99% water, but also includes proteins & salts

Acts as a carrier for buccal cells, bacteria, food debris

Eur J Dent. 2010 Jul; 4(3): 280–286 Influence of Blood Contamination on Bond Strength of a Self-Etching System

ANATOMIC REVIEW: OUR FIELD OF VIEW

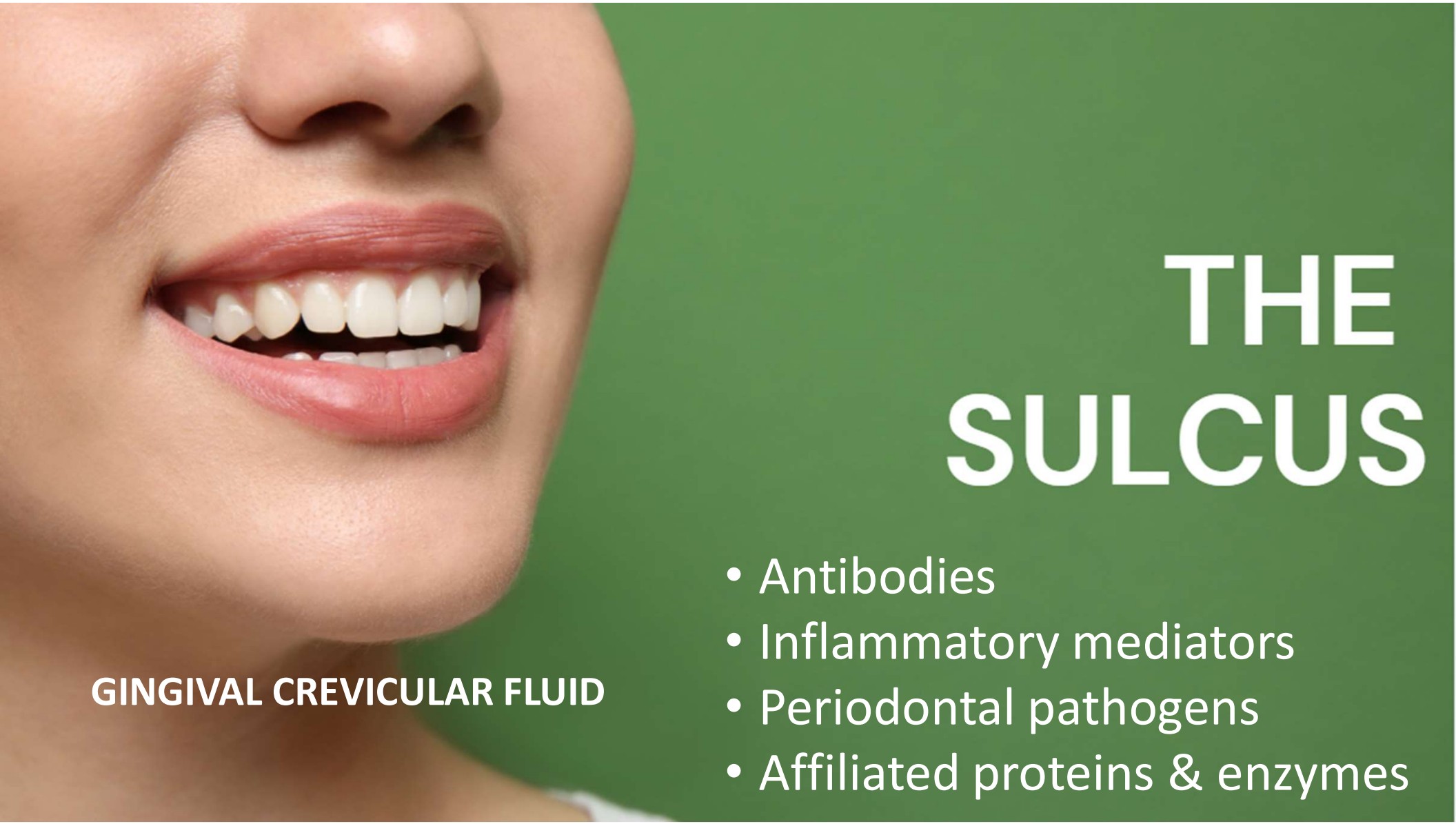
THE CHEEKS

THE LIPS

THE TONGUE

THE GINGIVA

LET'S TALK ABOUT GUMS


THE
SULCUS
• Antibodies
• Inflammatory mediators
• Periodontal pathogens
• Affiliated proteins & enzymes
GINGIVAL CREVICULAR FLUID

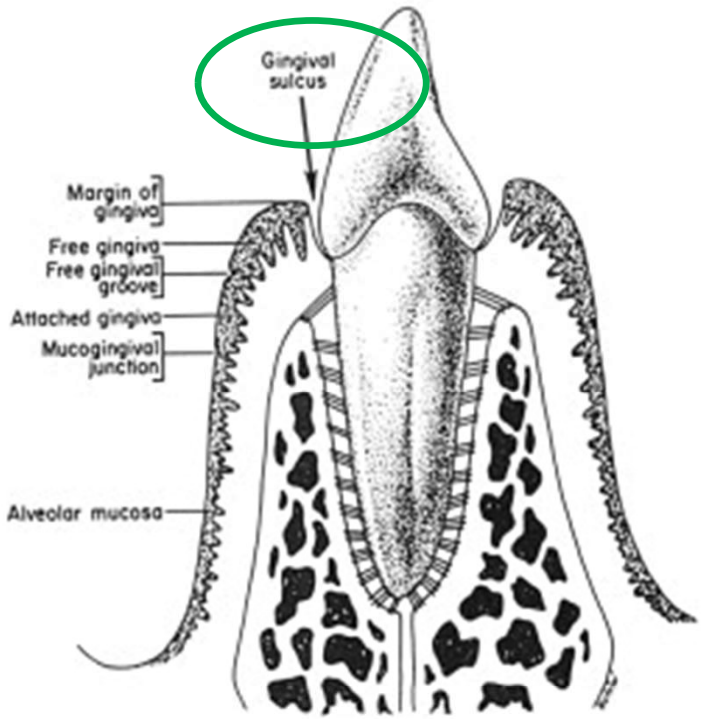


Image: Applied Oral Physiology, Second Edition

- Atraumatic approach
- Provide a dry field for visualization & restoration
- Maintain the attachment


armamentarium
isolation & retraction
resources

ISOLATION


DryShield


ZYRIS
Extra Small Mouthpieces
Large Mouthpieces
ZYRIS
isolite
Medium Anterior

ISOLATION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rubber dam

TOOTH-LEVEL RETRACTION

MECHANICAL

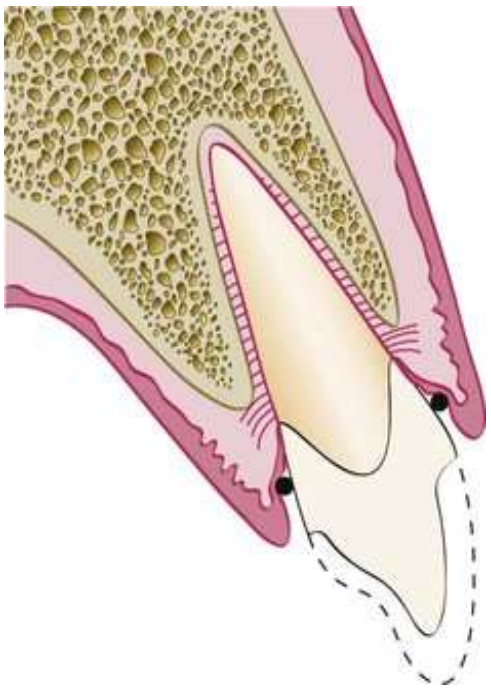
- retraction cord
- instruments
- matrix bands
- laser/surgical removal

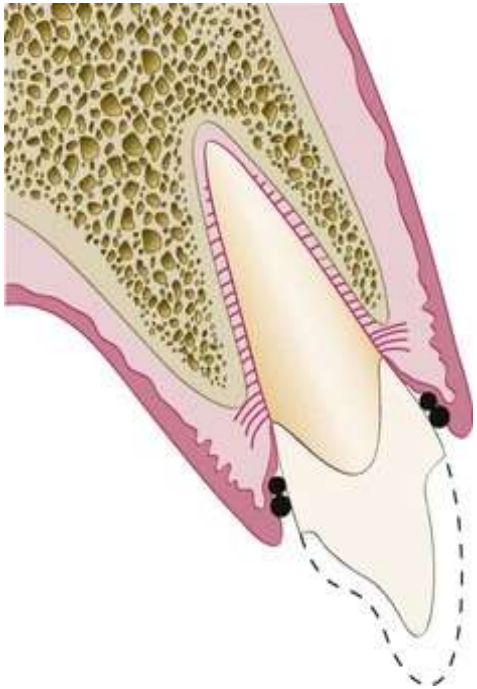
CHEMICAL

- astringents
- hemostatic agents

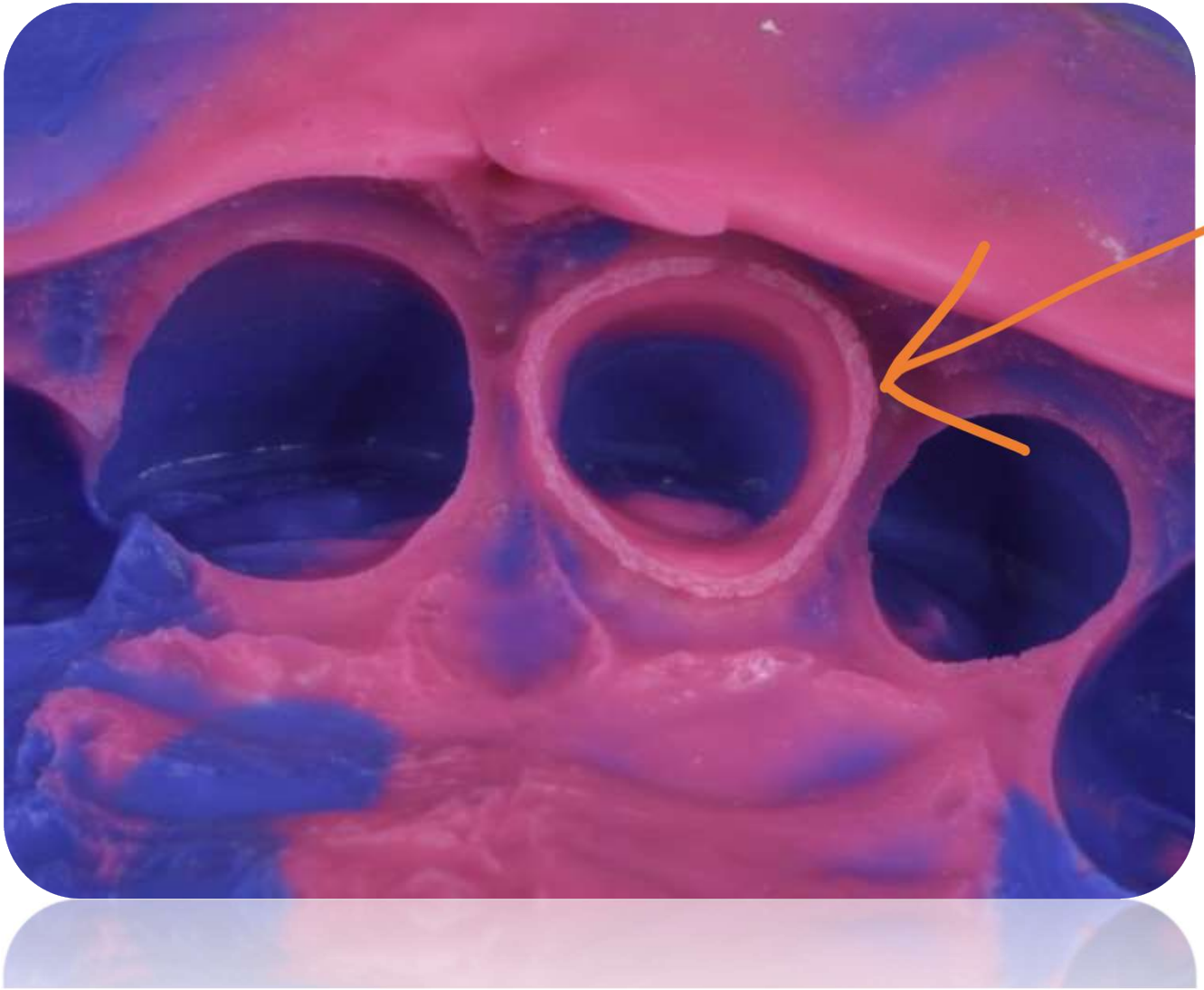
- below the gumline
- into the **gingival sulcus**
- *gently push the soft, gingival tissue away from the hard tooth structure*

SINGLE CORD DOUBLE CORD





Placement of cords cause ***pressure on gingival tissues***



sulcal space


ZenithDental
Zekrya Gingival Protector
Zekrya Protector Alveolar • Ecarteur Gingival Zekrya


PICASSO
AMD LASERS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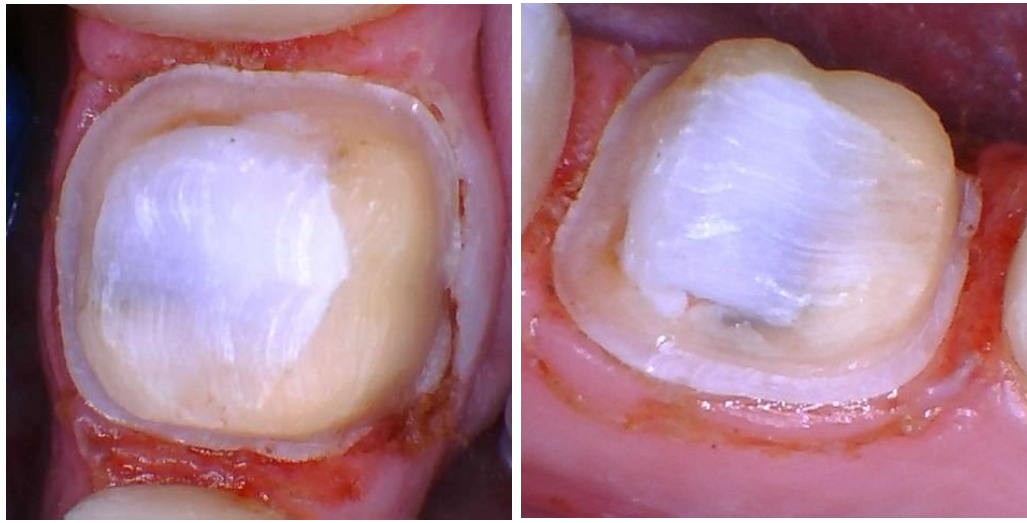
SOFT TISSUE LASER



Courtesy of Dr. Christina Do

Hemostasis *and* Tissue Troughing

CHEMICAL

- ***Hemostatic agents*** *– arrest bleeding from cut capillaries and arterioles via vasoconstriction*

- ***Astringents*** *– Cause proteins to precipitate in tissue causing vascular occlusion, which leads to hemostasis*

Three common chemistries used:

1. *Buffered Aluminum Chloride (25%)*
2. *Ferric Sulfate (15.5%)*
3. *Aluminum Sulfate (25%)*

Table 1

List of common hemostatic agents, their compositions and their mechanisms of action

Brand name	Constituent %	Action	Available as
Gel cord/gel cord clear (Pascal)	25 $Al_2(SO_4)_3$ gel	Biologic fluid-coagulant	Cartridge - 0.32 g Syringe - 0.75 g Jar - 30 g
Stat gel FS (Pascal)	15.5 $Fe_2(SO_4)_3$	Styptics	Syringe
Rastringent (Pascal)	25 $Al_2(SO_4)_3$	Biologic fluid-coagulant	Solution in bottle
Hemostatic gel (Pro-option)	20 $Fe_2(SO_4)_3$	Styptics	Syringe
Hemostatic solution (Pro-option)	15.5 $Fe_2(SO_4)_3$	Styptics	Syringe
Clear hemostatic gel (Pro-option)	25 $AlCl_3$	Biologic fluid-coagulant	Syringe
Traxodent/hemodent (Premier dental products)	15 $AlCl_3$	Biologic fluid-coagulant	Syringe
Hemostasyl gel (Kerr)	15 $AlCl_3$	Biologic fluid-coagulant	Syringe
Expasyl (Kerr)	15 $AlCl_3$, kaolin	Biologic fluid-coagulant	Paste-gun
ViscoStat/ViscoStatWintermint (Ultradent)	20 $Fe_2(SO_4)_3$	Styptics	Syringe
ViscoStat clear (Ultradent)	20 $AlCl_3$	Biologic fluid-coagulant	Syringe
Astringedent (Ultradent)	15.5 $Fe_2(SO_4)_3$ solution	Styptics	Bottle/syringe
Astringedent X (Ultradent)	12.7 iron solution of equivalent $Fe_2(SO_4)_3$ and subsulfate	Styptics	Bottle/syringe
Racegel hemostatic agent (Septodont)	25 $AlCl_3$	Biologic fluid-coagulant	Syringe
Racestyptine (Septodont)	25 $AlCl_3$, oxyquinol, hydroalcoholic	Biologic fluid-coagulant	Solution in bottle
QuickStat FS (Vista)	15.5 $Fe_2(SO_4)_3$ gel	Styptics	Syringe
Orbat sensitive (Lege Artis)	25 $Al_2(SO_4)_3$ solution	Biologic fluid-coagulant	Solution in bottle
Hemostat (Chema)	20 $AlCl_3$gel	Biologic fluid-coagulant	Syringe

$Fe_2(SO_4)_3$: Ferric sulfate; $AlCl_3$: Aluminum chloride; $Al_2(SO_4)_3$: Aluminum sulfate

CONCLUSION: “Based on the existing information in the literature, among the widely used chemical agents for control of hemorrhage in restorative dentistry, the most common hemostatic agents are $AlCl_3$ and $Fe_2(SO_4)_3$ in 15-25% concentrations and 3-10 min application times. In order to achieve better outcomes during taking impression or using bonding agents, common hemostatic agents recommended before or during etching, should be rinsed off properly”

Dent Res J (Isfahan). 2014 Jul-Aug; 11(4): 423–428.
A review on common chemical hemostatic agents in restorative dentistry

PASTES

- *Chemical means for hemostasis in a **paste form** that holds its shape on the tissue*
- *Used in conjunction with comprecaps, gauze, cotton rolls*
- *As a **chemical**, requires thorough rinsing after use*


DECISIONS?

	VOCO Retraction Paste	3M™ - Astringent Retraction Paste	Acteon® Expasyl™	Acteon® Expasyl™ Exact	Centrix® Access® Edge
Intra-oral tip diameter [mm]	1.0 – 1.4	1.0 – 1.2	1.6	1.6 – 1.95	1.6
Form of the intra-oral tip					

- Ease of use?
- Desired outcome?
- Consistent?

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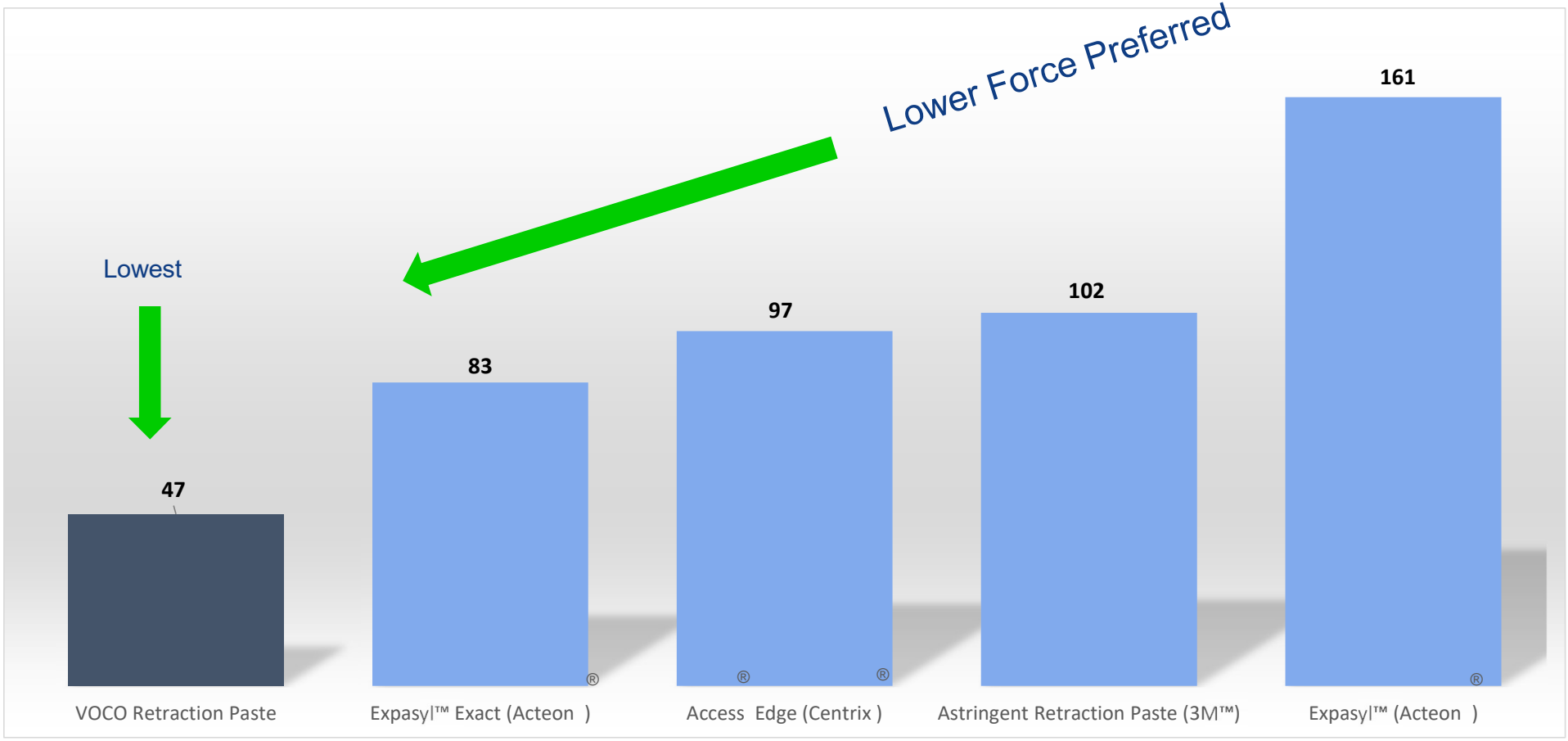
Extrusion Force **[N] - Dispenser**



Voco internal measurement 2020, *product-specific dispenser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Extra Small Mouthpieces
Large Mouthpieces
isolite
ULTRAPAK
#000
#00
#0
Retraction Paste



Courtesy of Dr Jennifer White

And *sometimes*…

we can even use *COMPOSITE* as retraction

- Increases the viscosity of a composite resulting in easier application
- Warms multiple instruments to make it easier to sculpt the composite
- Prepares multiple compules at a constant temperature


810
0.6
980


Viscostat


3M ESPE


EXPASYL™


premier
Hemodent


ULTRAPAK
#000
#00
#0


Retraction
Paste
voco

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