



Timothy M. Bizga, DDS, FAGD

THANK YOU FOR YOUR ATTENDANCE*

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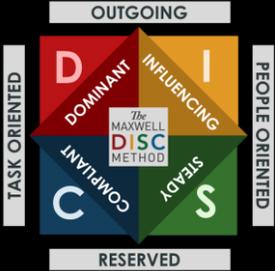
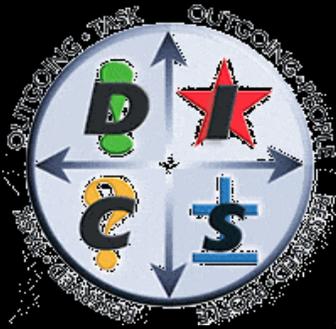


First Name

First Name

www.2thLectures.com

ABOUT ME



THINK

and

GROW
RICH

THE ORIGINAL UNABRIDGED EDITION

by

NAPOLEON HILL

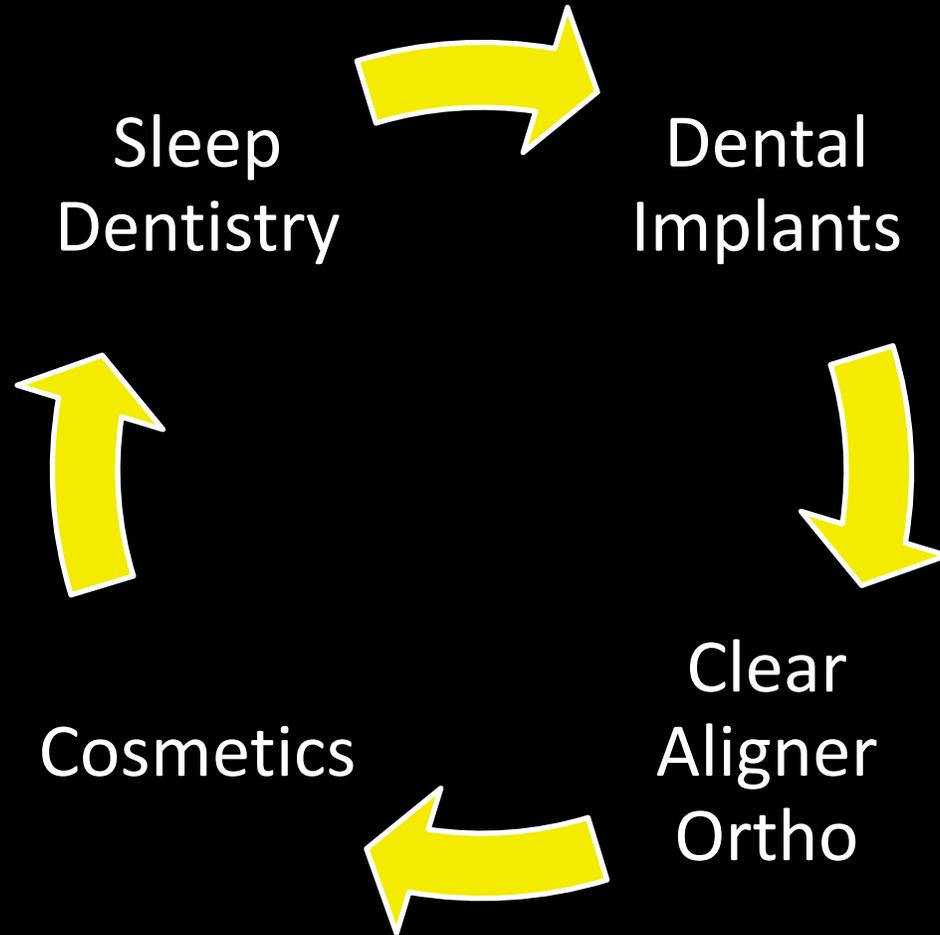


Objectives

- Share my experience and tell stories
- Be authentic
- Have fun



ROI Pursuits



A Fork in the Road

- Treat Children
 - Totally fee for service
 - Guiding growth and development
 - 4-6months of habit correction
 - Custom appliance to facilitate eruption
 - Goal is to prevent long-term adverse effects
- Treat Adults
 - Possibility of Medical Billing
 - Sleep studies are required
 - Manage symptoms
 - Multiple appliance options
 - Studies show some remission and lack of long-term efficacy

- Extended Bottle Feeding and Pacifier Use
- Causes Poor Tongue Position and Abnormal Swallowing
- Sugar/ Processed Foods can have an effect
- Poor Oral Habits (thumb / finger / lip sucking, tongue thrust, etc.)

Mouth Breathing / Snoring

- Restless Sleep / Arousals
- ADD / ADHD
- Bed Wetting
- Chronic Allergies
- Nightmares
- Daytime Drowsiness
- Aggression / Defiance / Anger
- Difficulty in School
- Frequent Infections

Sleep Disordered Breathing

Compromised Airway

- Reduces airway / Restricts Airflow
- Reduces Oxygen / Increases CO2
- Affects Brain Function / Immune & Endocrine Systems
- Swollen Adenoids / Tonsils
- Low Tongue Position / Tongue Thrust
- Underdeveloped Dental Arches
Overjet / Open Bite
- Cross Bite



Outward Symptoms

Neurophysiological:

- ADD/ADHD
- Depression
- Morning headaches

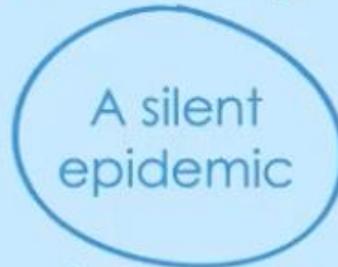


Developmental/ Hormonal:

- Delayed or stunted growth
- Predisposition to obesity, diabetes
- Mouth breathing
- Suboptimal dental esthetics

Immunological:

- Chronic allergies
- Eczema
- Asthma
- Swollen adenoids/ tonsils



Sleep disturbances:

- Restless sleep
- Sleep talking/ walking
- Daytime drowsiness
- Snoring
- Tooth grinding
- Nightmares
- Bedwetting

Behavioral:

- Aggressive behavior Irritability/ anger
- Peer problems/ few friends
- Difficulty in school



SLEEP DEPRIVATION – PERCENTAGE OF INCIDENCE

- Mouth breathing during sleep -1/2 inch opening reduces airway by 6 mm – average airway in 7 year old is 7mm
- Most urgent for diagnosis are in bold type below
- 20 most important symptoms ≤4 – 13+ years

Mouth Breathing Nights	43.0%	Snores 1 Night/Week	24.7%
Snore at All	37.2%	Sweating During Sleep	19.0%
Difficulty Listening	34.7%	Snores 2-4 Nights/Week	18.9%
Often Interrupts	34.7%	Bed Wetting	18.1%
Tooth Grinding	32.0%	Hyperactive	17.5%
Talks in Sleep	31.7%	Attention Deficit	15.7%
Wakes Up at Night	29.0%	Falls Asleep Watching TV	13.4%
Allergies	28.7%	Speech Problems	12.9%
Restless Sleep	26.9%	Difficult, Labored Breathing	12.4%
Fidgets with Hands	26.6%	Snores 5-7 Nights/Week	8.2%
Mouth Breathes Days	25.4%	Throat Infections	6.8%
ADHD	25.2		
Incidence ≥ 1 Symptom	90%	N=501	
Incidence ≥ 4 Symptoms	60%	(from Stevens et al, 2016)	



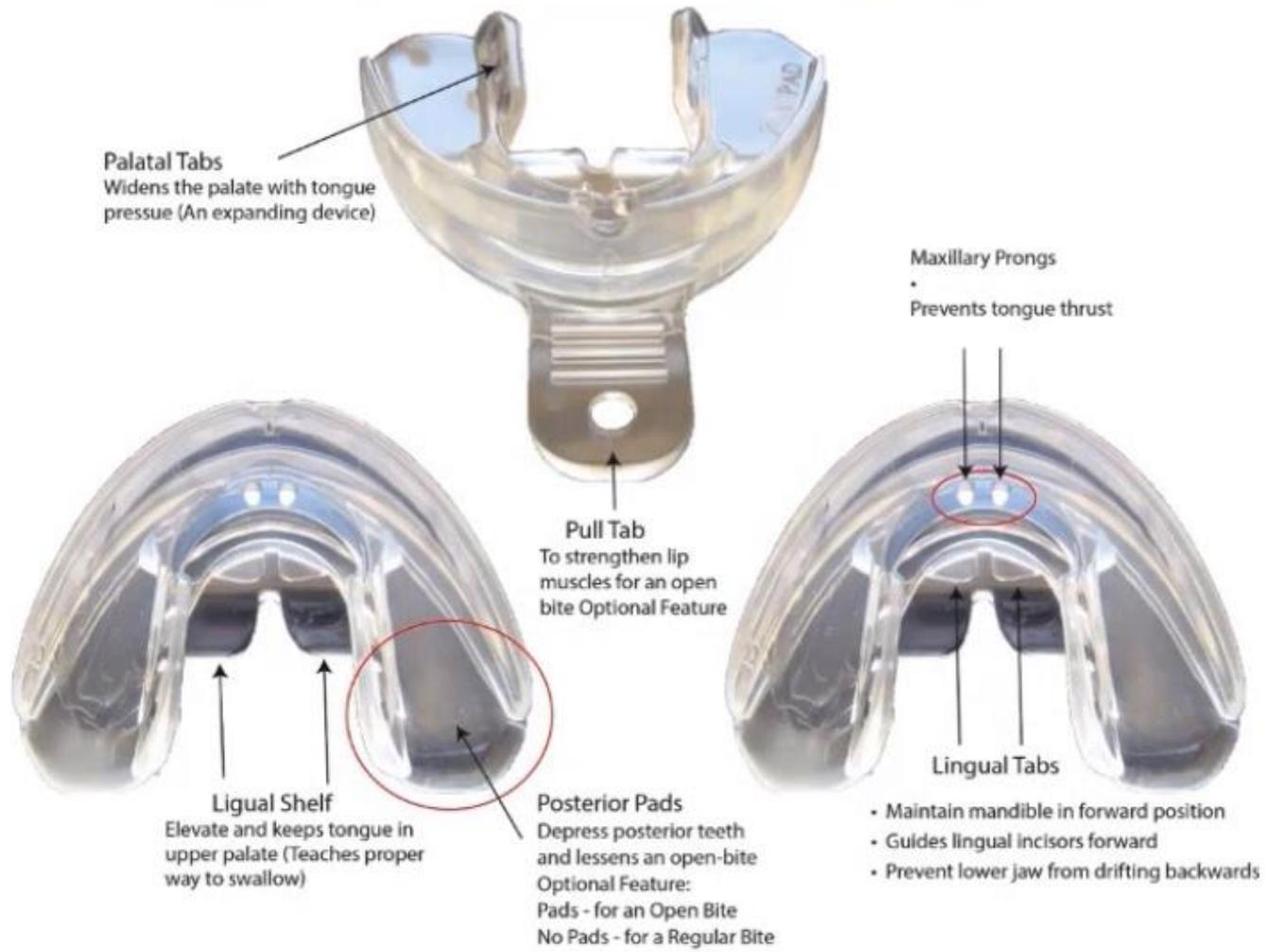
Findings

- Mouth breathing & snoring associated with more SDB symptoms than any of the other symptoms studied
- 90% had ≥ 1 SDB symptom
- 60% had ≥ 4 symptoms
- 20% experience bedwetting
- From 4 to 12 yo, 92.6% of symptoms **did not self correct**; 30% worsened with age

KIDS
AGES 5-7

healthystart™

HEALTHY START HABIT CORRECTOR® KIDS







Boy 1



Boy 2

Adjunctive vs. Support Therapy in Dental Sleep Medicine



Adjunctive Therapy

Therapies that **enhance or supplement** the primary treatment

Not intended to stand alone

Aim to improve **efficacy, comfort, or compliance**

Examples: nasal dilators, positional therapy, weight management, humidification



Support Therapy

Therapies that **enable, facilitate, or maintain** the primary treatment

Focus on patient's ability to **use** the primary therapy successfully

Reduce barriers, side effects, or complications

Examples: TMJ support strategies, bite re-positioning exercises, oral hygiene reinforcement, follow-up and titration protocols

A decorative graphic on the left side of the slide. It consists of a blue rectangular block at the top left. From the bottom right corner of this block, a red line extends downwards and to the right, and a grey line extends downwards and to the left. These two lines meet at a point near the bottom left corner of the slide, where they both turn and extend towards the bottom right corner. The red line is positioned slightly to the right of the grey line.

Snoring Myth

Snoring IS NOT Dangerous.
It's just "disruptive"

Snoring Reality

Study conducted on 273 snoring patients

The prevalence of OSA in snorers presenting with various chief complaints: a pilot study

Bryan Keropian¹, Neal Murphy²

¹Center for Snoring and CPAP Intolerance, University of Southern California School of Dentistry, Los Angeles, CA, USA, ²Department of Orthodontics, Case Western University School of Dental Medicine, Cleveland, OH, USA

Aims: The incidence of obstructive sleep apnea (OSA) in snoring patients is reported in the literature to range from 20% to 70%. The aim of this study was to obtain exact data on the percent of snorers who have OSA, and to classify them as having normal, mild, moderate, or severe sleep apnea.

Methodology: There were 273 patients who came into the senior author's office with sleep disorder breathing problems. They suffered with various sleep problems. All 273 patients also had a snoring problem. None of the 273 patients had ever had a sleep test, or polysomnograph (PSG).

All 273 required a PSG for evaluation of their sleep problem. They were referred to a certified sleep lab local to them. When the results of the PSG came back, the authors were able to classify them as having normal, mild, moderate, or severe sleep apnea.

Results: The results of the 273 PSGs showed the following: 12 patients (4%) had PSGs of apnoea-hypopnoea index (AHI) <5 (normal), 57 patients (21%) had PSGs with AHIs 5–<15 (mild), 79 patients (29%) had PSGs with AHIs 15–<30 (moderate), 119 patients (44%) had PSGs 30 or >30 (severe), and 6 patients (2%) had PSGs >100 (severe).

Conclusions: Based on this study, of 273 patients who snored, the incidence of OSA is high. Ninety-six percent of the patients suffered with mild to severe sleep apnea. This malady, which can be very serious and degenerating, could be much more prevalent than previously believed. Additional research is needed to verify these figures.

Snoring Reality

Study conducted on 273 snoring patients

- 4% tested normal for obstructive sleep apnea (OSA)
- 21% had mild OSA (bad and likely to get worse)
- 29% had moderate OSA (really bad – lots of comorbidities)
- 44% had severe OSA (seriously bad – likely to die early)
- 2% had AHI scores > 100 (really really bad – as in call 911 now)

96% of people in this study who snored also had OSA

Snoring Reality

Snoring and Carotid Artery Disease: A New Risk Factor Emerges

Robert Deeb, MD ; Matthew R. Smeds, MD; Jonathan Bath, MD; Edward Peterson, PhD; Matthew Roberts, MD; Nanette Beckman, RVT; Judith C. Lin, MD, RVT, RPVI; Kathleen Yaremchuk, MD

Objectives/Hypothesis: Previous studies have identified a relationship between snoring, carotid intima media thickening, and the presence of atherosclerosis. This study examines the correlation between snoring and carotid artery disease through use of duplex ultrasound identifying greater than 50% internal carotid artery stenosis.

Study Design: Prospective cohort study.

Methods: Patients presenting to three academic vascular laboratories for carotid duplex examination completed the following surveys: demographic information, assessment of risk factors for carotid stenosis, assessment of history of obstructive sleep apnea, or continuous positive airway pressure use and Snoring Outcomes Survey. Patients were categorized into 2 groups based on the presence or absence of carotid disease. Data were analyzed by univariate contingency tables and logistic regression analysis.

Results: Five hundred one patients completed the survey, of whom 243/501 (49%) had evidence of carotid occlusive disease. On univariate analysis, smoking, hypertension, heart disease, hypercholesterolemia, diabetes, and stroke all correlated with greater than 50% carotid stenosis. Multivariate analysis indicated that snorers were significantly more likely to have carotid disease. Three hundred twenty-seven participants were thought to have primary snoring. On univariate analysis, snorers were found to be significantly more likely to have carotid disease. After adjustment for covariates, snoring was not significant for carotid disease. However, multivariate analysis showed snorers to be significantly more likely to have bilateral carotid disease.

Conclusions: This study shows a potential relationship between snoring and bilateral carotid artery stenosis greater than 50%; snorers have risk of carotid stenosis twice that of nonsnorers. Further investigation is warranted to better elucidate this relationship.

Key Words: Snoring, carotid artery disease, carotid duplex study, obstructive sleep apnea.

Level of Evidence: 2b

Snoring Reality

To be clear, other published studies show snoring to OSA correlation of up to 70%, but still...

If you or your loved ones snore, and if you'd like to keep them around, then please encourage them to be tested for OSA. Because untreated OSA makes life worse in so many ways. It can even kill them.

Home sleep tests are widely available, easy to do right at home, and extremely accurate. As your medical doctor or some specially trained dentists for further information.

Sleep well.

Non-Surgical Approaches

- Weight Loss
- *Hormone Therapy
- Avoid Alcohol / Afternoon Caffeine
- Decongestants
- Positional Sleep
- Oral Appliances
- CPAP
- Lasers



Walter Stumpf

"Vitamin D3 sites of action in the brain: An autoradiographic study"

Surgical Approaches

- Nasal Surgery
- Uvuloplasty
- PPP/UPPP (UvuloPalatoPharyngoPlasty)
- Pillar Procedure (Palatal Implant)
- Expansion Sphincter Pharyngoplasty
- Lateral Pharyngoplasty
- Uvulopalatal Flap
- Z-Palatoplasty
- MMA (MaxilloMandibular Advancement)

Tissue Resurfacing

- Ablative (Er:YAG / CO₂)
- Non-Ablative / IPL (Nd:YAG / 500μ-1200μ)
- Fractional Ablative (Er:YAG / CO₂)
- Fractional Non-Ablative (rare) - (CO₂)



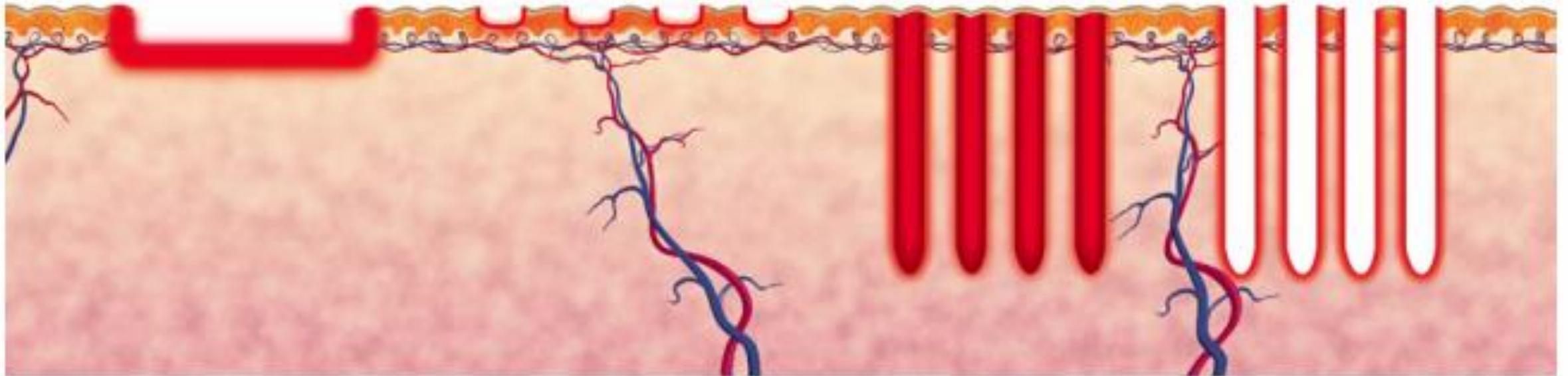
Ablative vs Non-Ablative

**Ablative
Resurfacing**

**Superficial Fractional
Ablative Resurfacing**

**Non-Ablative
Fractional Resurfacing**

**Ablative Fractional
Resurfacing**



Ablative Resurfacing

The "Gold Standard"

Benefits

- Single treatment
- Dramatic / long term results

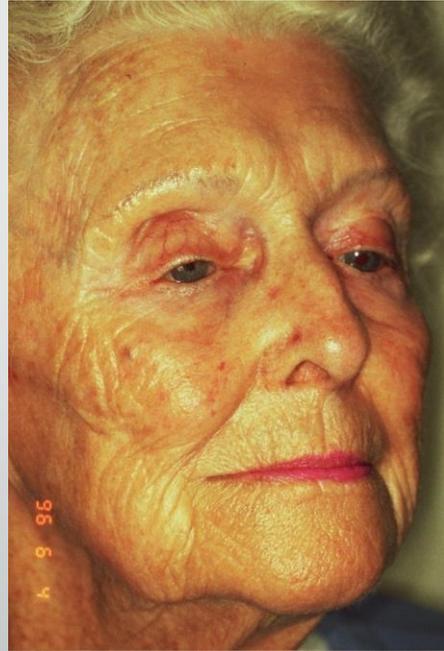
Side Effects

- Significant downtime
- Risk of infection

Ablative Resurfacing



Ablative Resurfacing



Non-Ablative Resurfacing

Benefits

- No real downtime
- No real side effects

Side Effects

- Series of treatments
- Short term results (12-18 months)

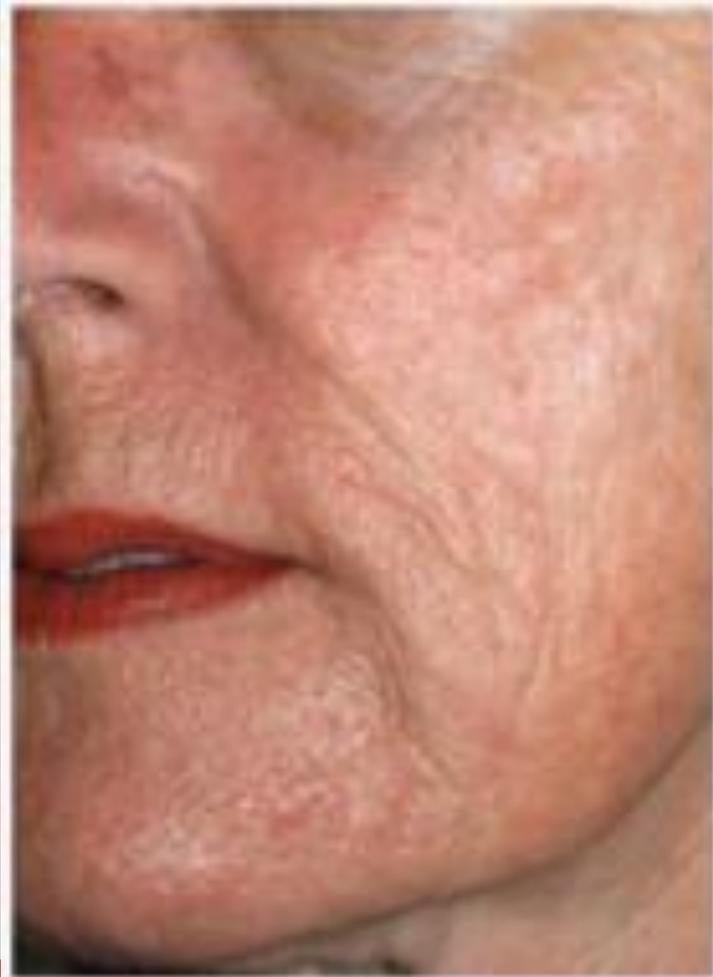
Affect of Temperature on Tissue

<60°C (140F)	Tissue warmed only
60-65° (140-150)	Protein denatured (gummy tissue) Collagen paste
65-100° (150-211)	Water ready to boil-cuts tissue Heat generation
>100° (>212)	Coagulation + ideal cutting Less heat buildup (water vapor carries away heat)
200-400°(400-750)	Carbonization Dehydrated protein not boiled away (dehydrated) Heat build up No cutting High Coagulation with Lateral Thermal Damage More post op pain

Note: Hottest coffee recommended is 70-85°C (160-185°F) = protein denaturing

Non-Ablative Resurfacing

Before



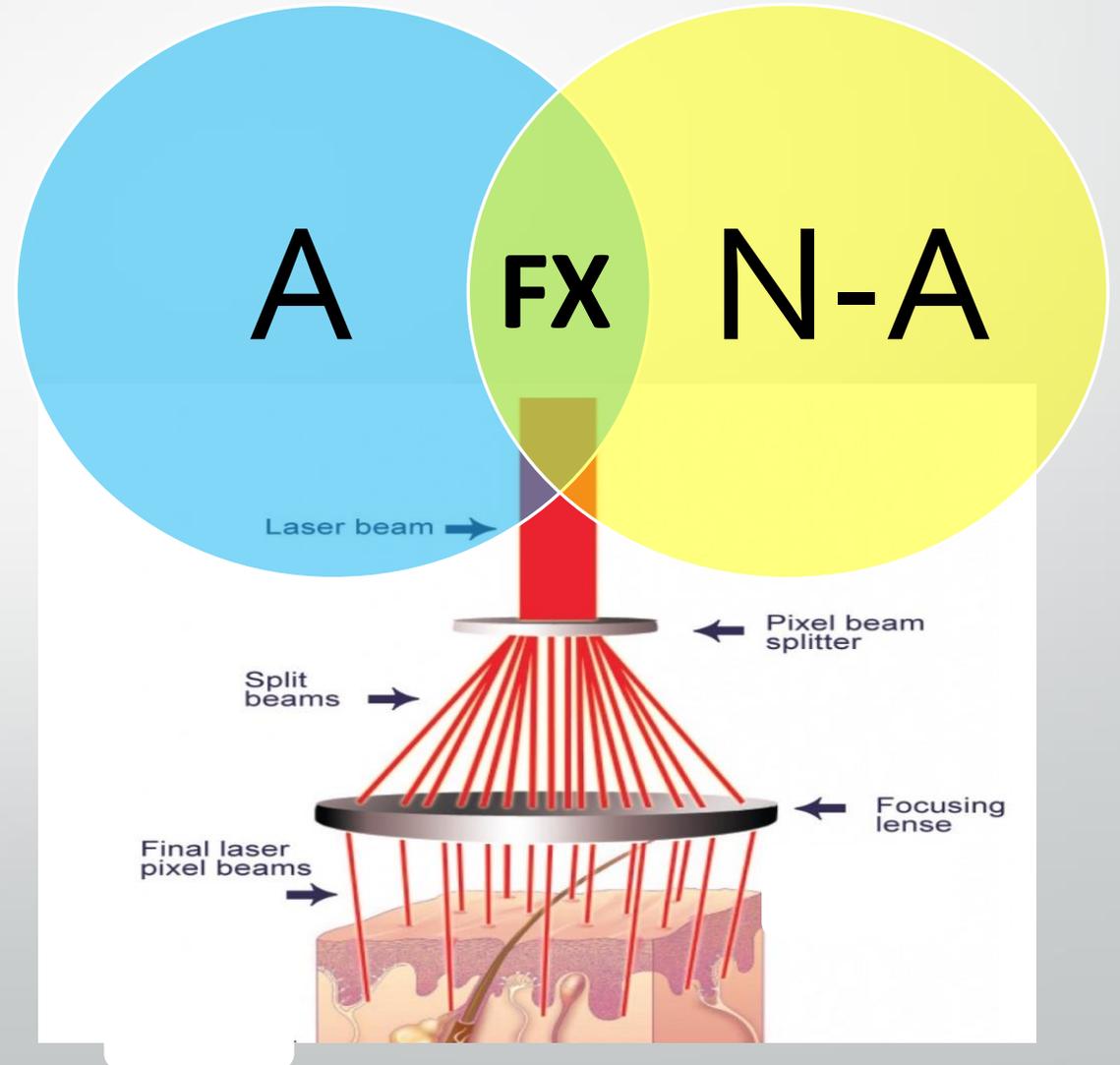
After



Ablative vs. Non-Ablative

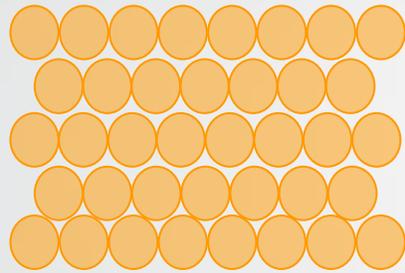
Fractional Ablation (FX)

- The “best of both worlds”
- Balances results with downtime
- Bridges the 2 technologies
- The “Holy Grail” of tissue rejuvenation
- The Goldie Locks concept

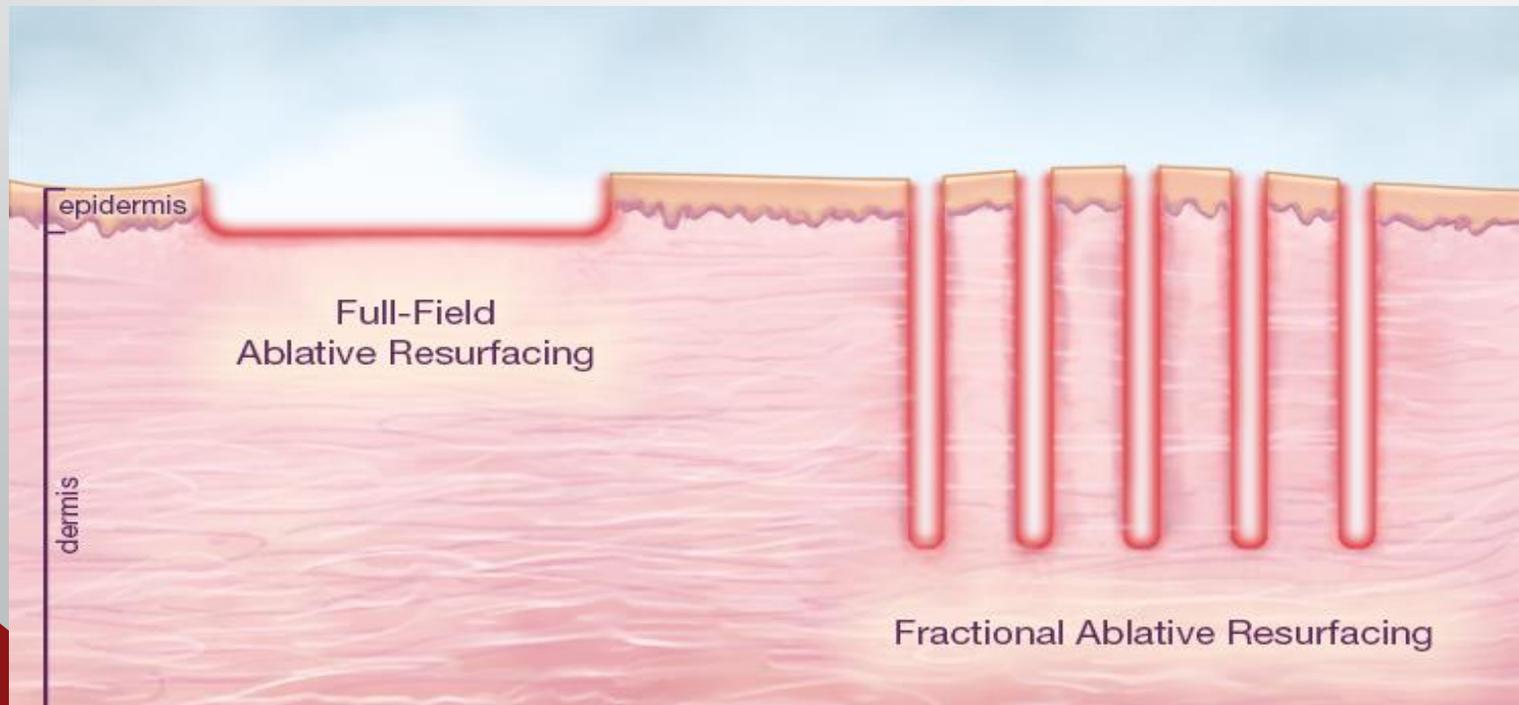
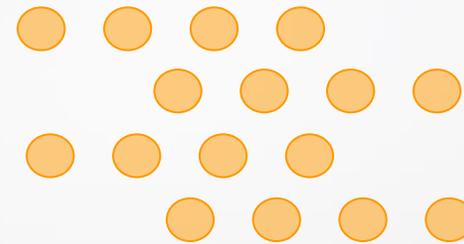


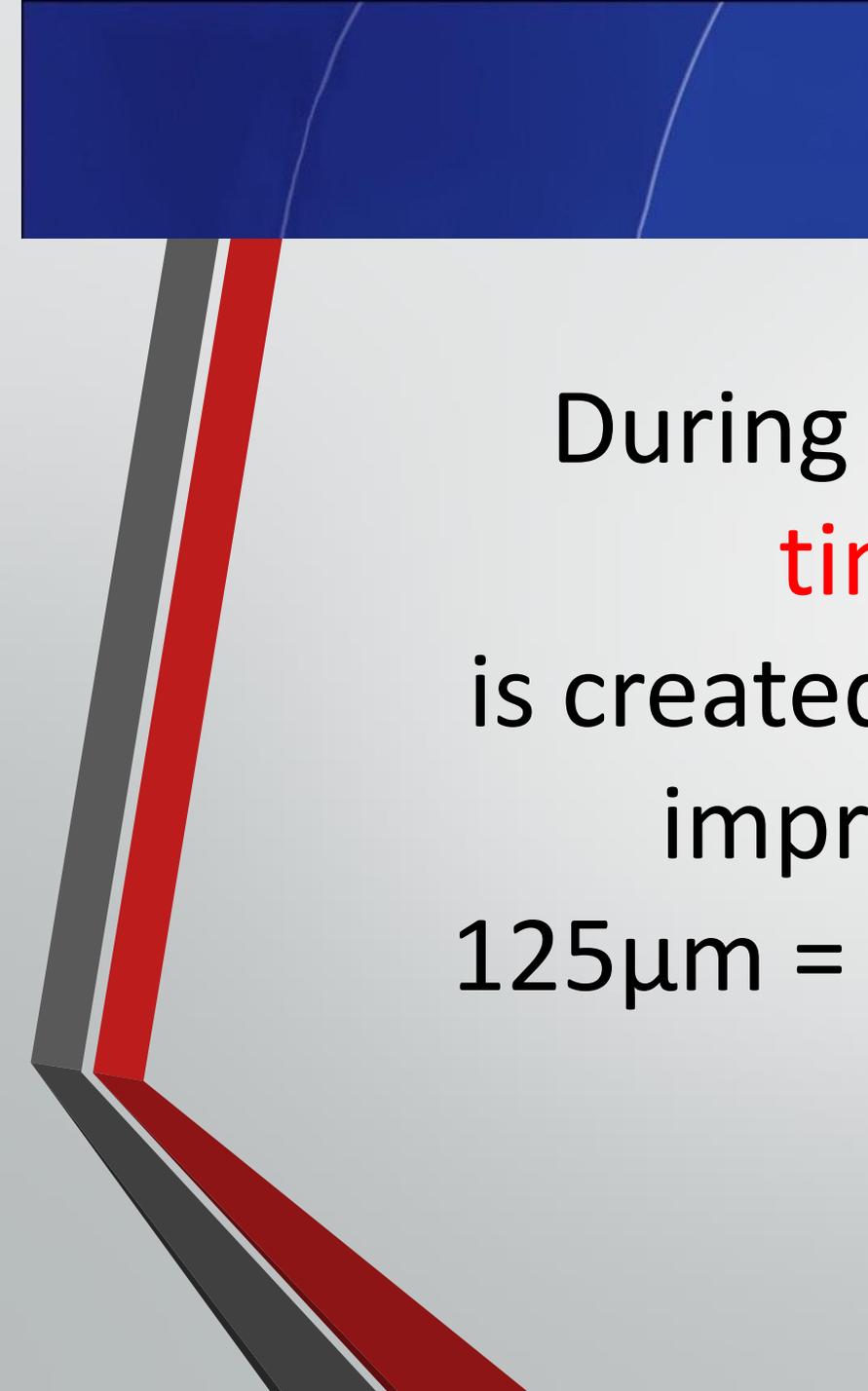
Fractional Resurfacing vs Full Ablative

“Horizontal delivery of energy”
Traditional scanning mode



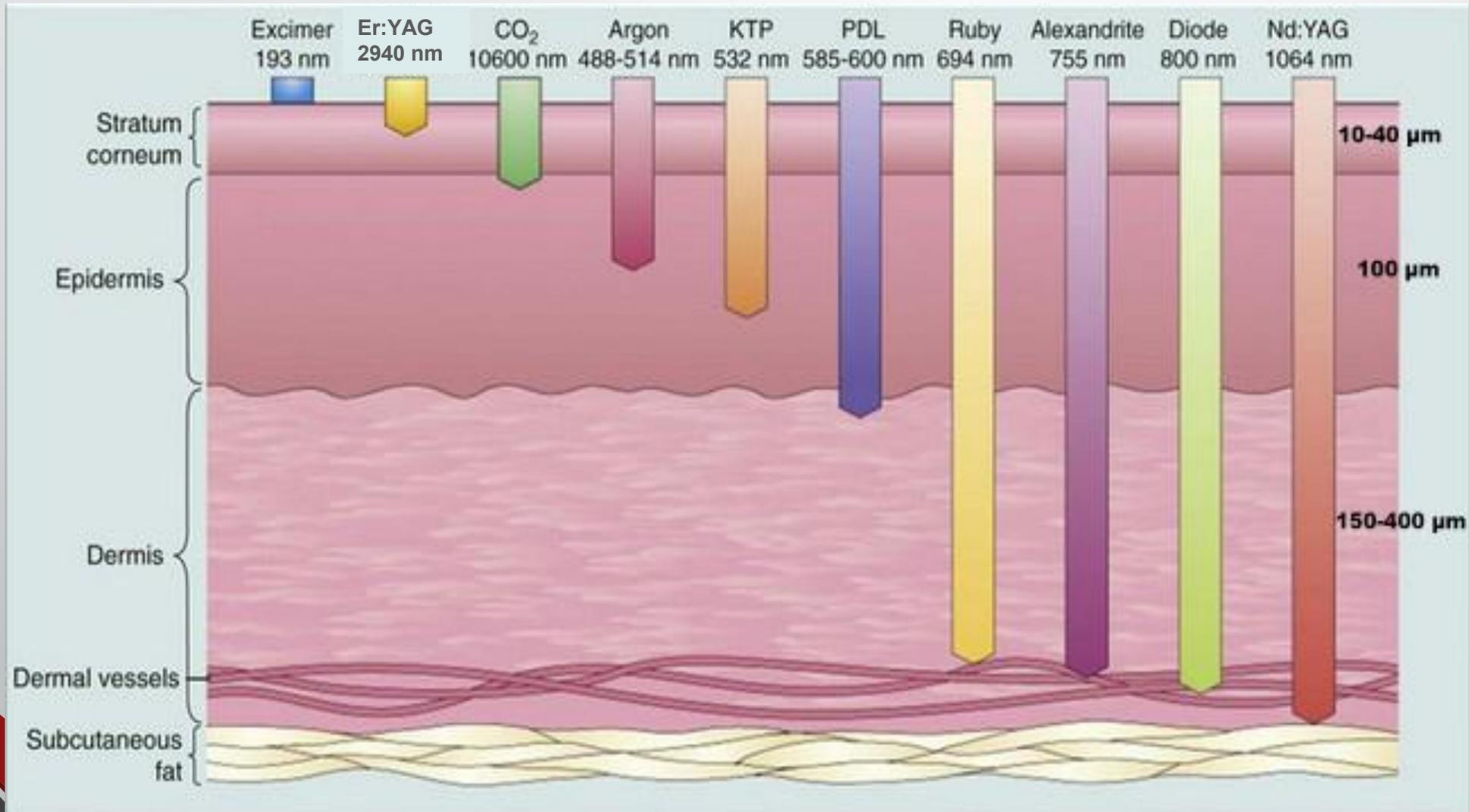
“Vertical delivery of energy”
Fractional scanning mode



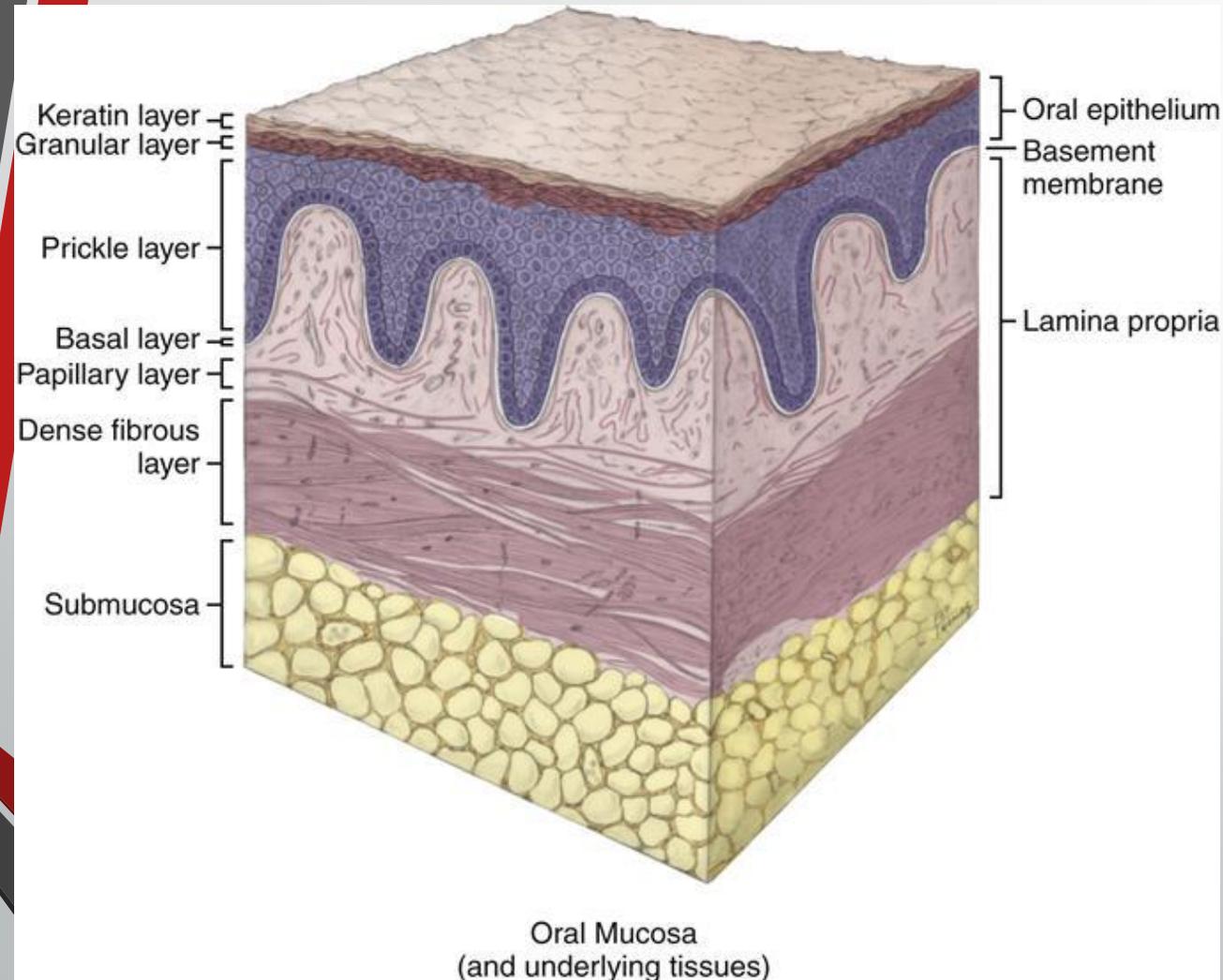


During treatment, a pattern of
tiny thermal wounds
is created stimulating collagen and
improving surface tension.
125 μ m = primary intention healing
= no scar tissue

Depth of Penetration



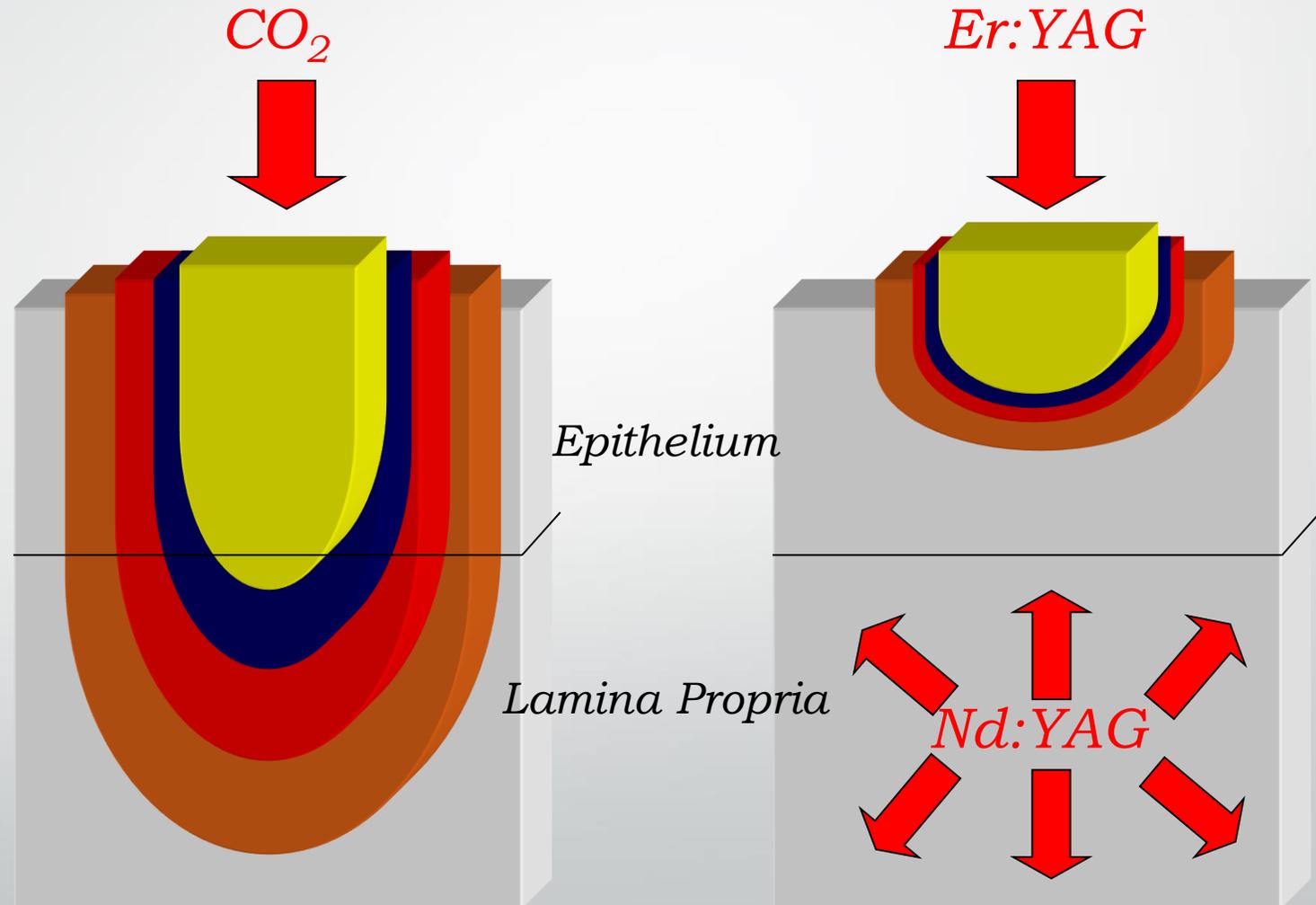
Mucosal Tissue



The lamina propria consists of an **abundant network of type I collagen fibers** and the deeper layers contain collagen type III fibers and elastic fibers in variable amounts depending upon the site.

Lamina Propria Stimulation

- Ablation (Vap.)
- Necrosis
- Coagulation
- Thermal impact



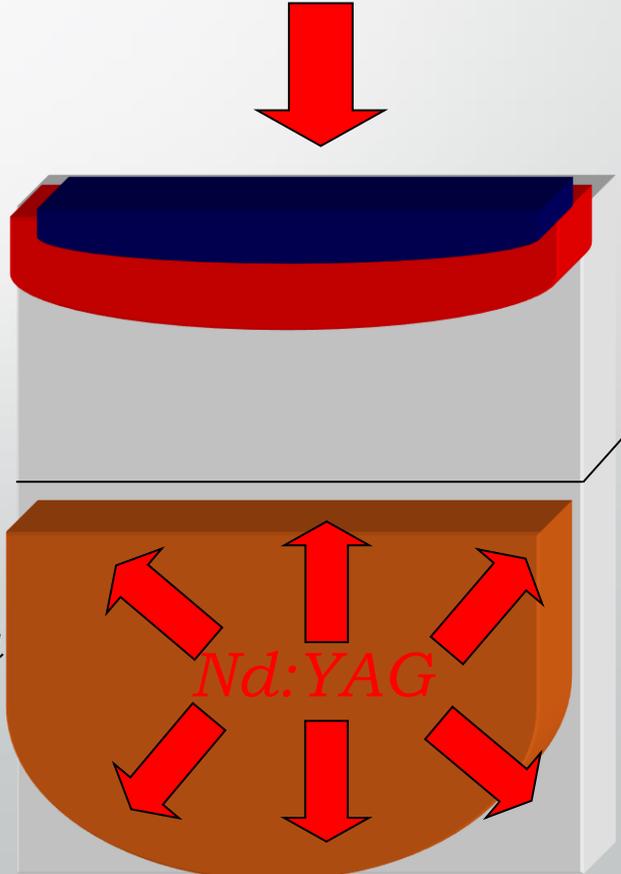
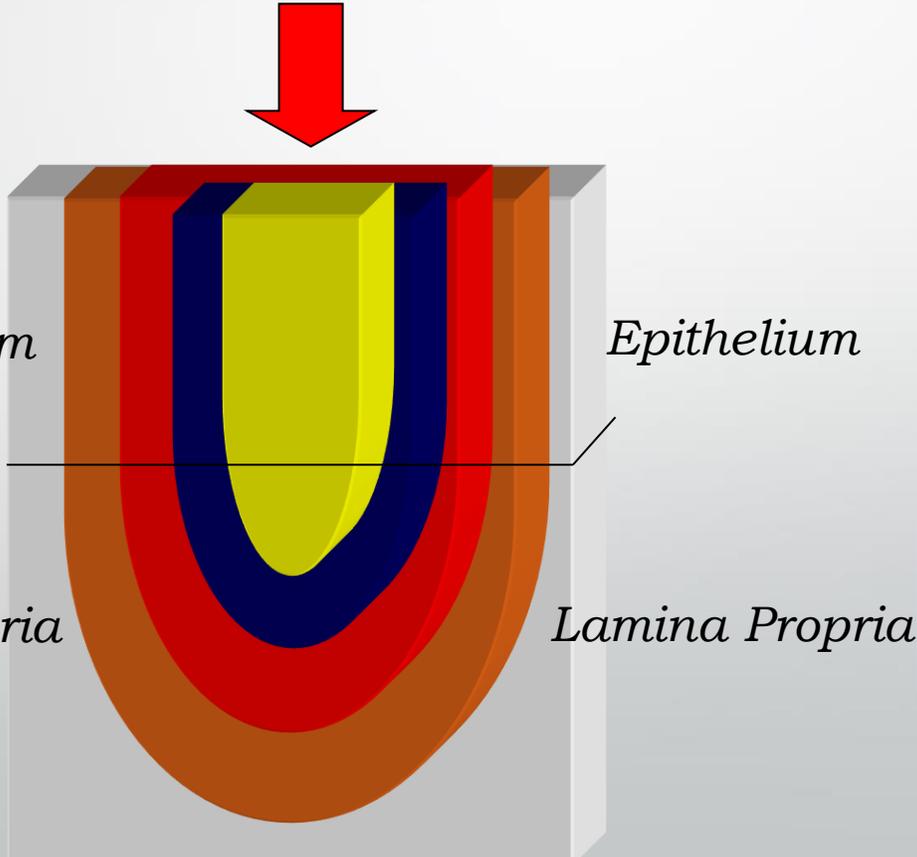
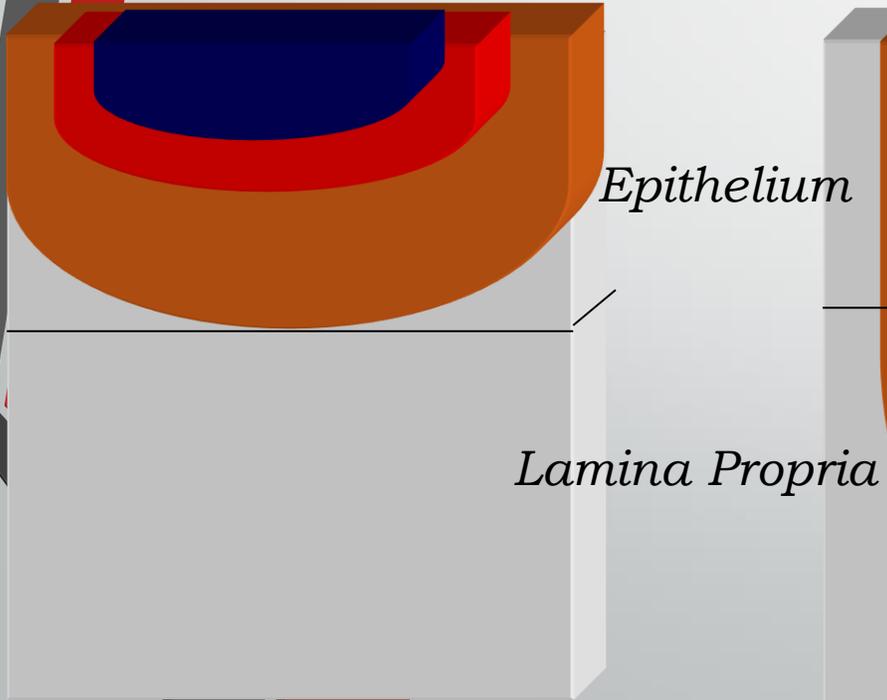
Lamina Propria Stimulation

 Ablation (Vap.)  Necrosis  Coagulation  Thermal impact

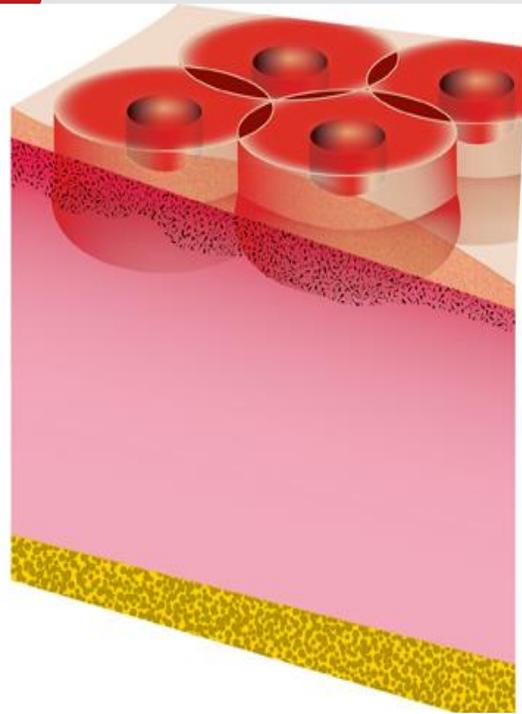
Non ablative CO₂

Fractional ablative CO₂

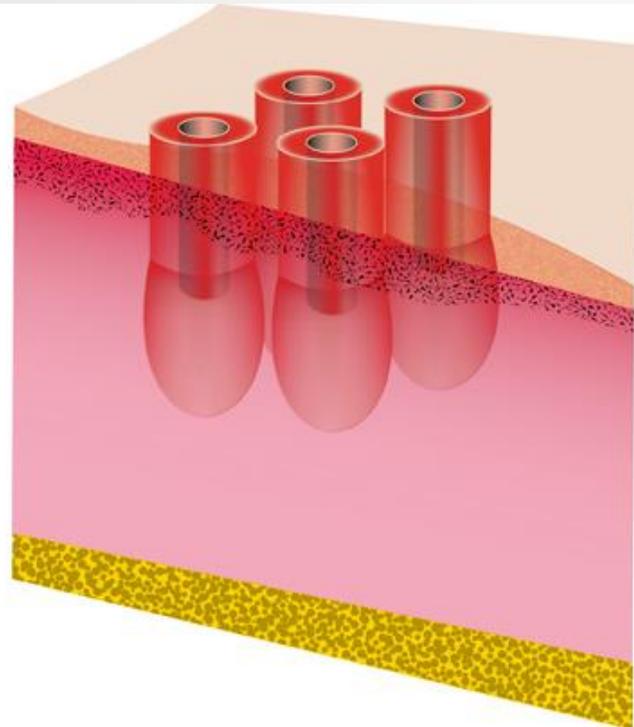
Er:YAG



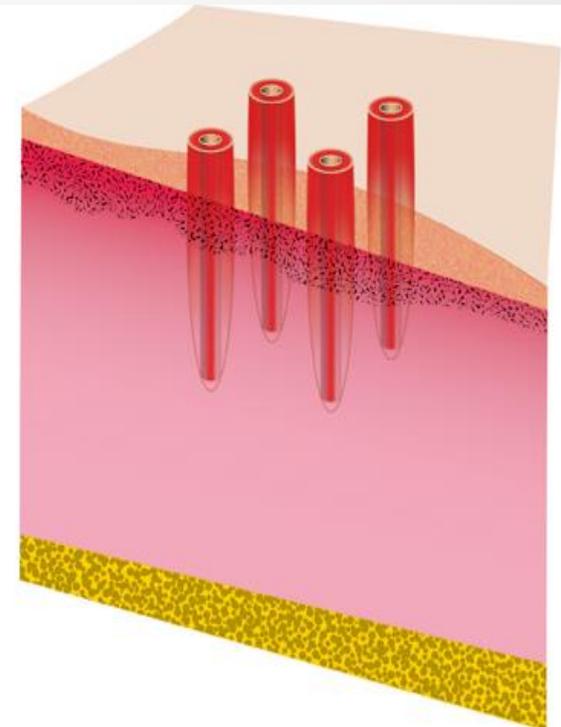
Thermal Damage is Essential to Stimulate Repair (New Collagen)



Large diameter beam, e.g., 1.25 mm, causes wide epidermal foot-print and a shallow zone of residual thermal damage: Considerable epidermal ablation with minimal reduction of rhytides

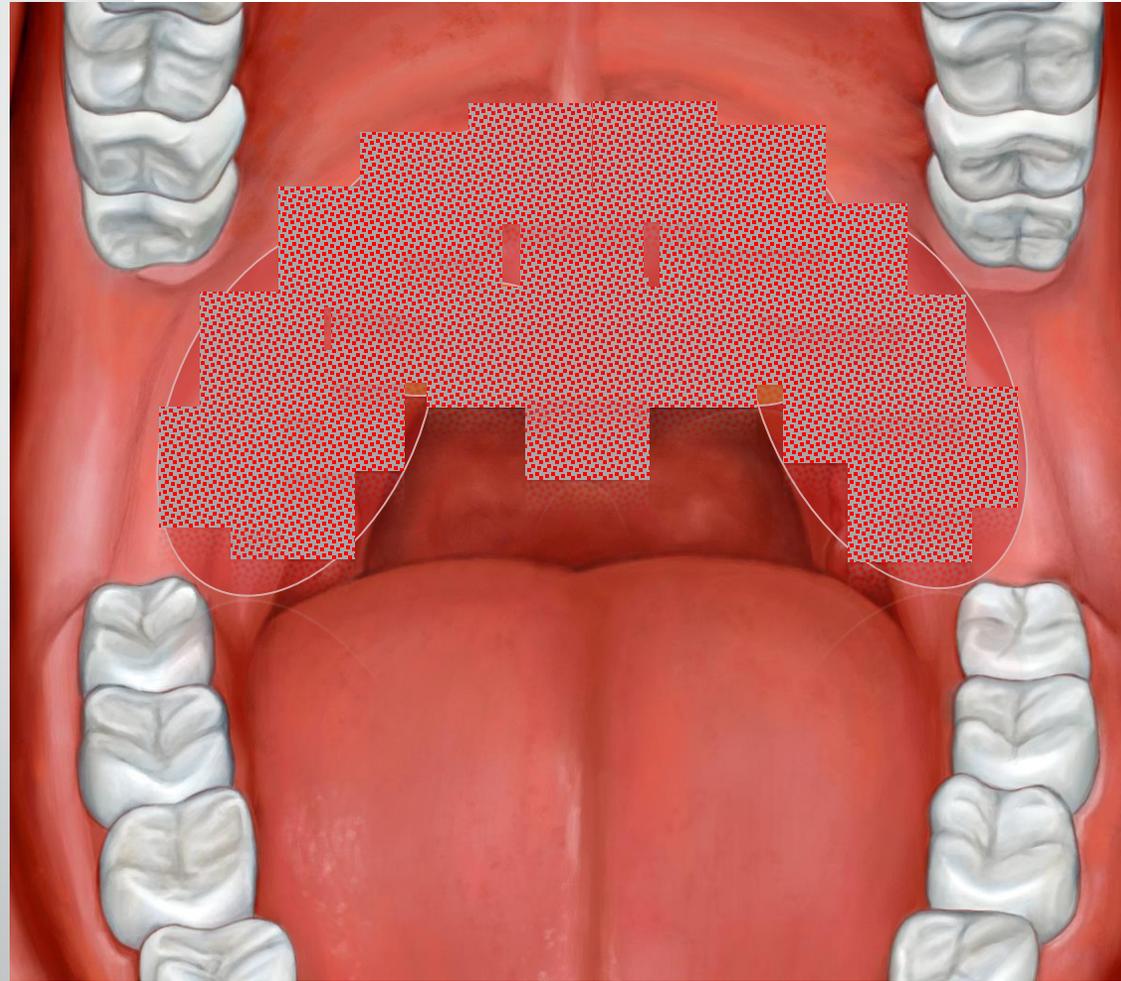


SmartXide DOT yields a bowl-shaped zone of residual thermal damage that seems to be the best for neocollagenesis and the treatment of rhytides.



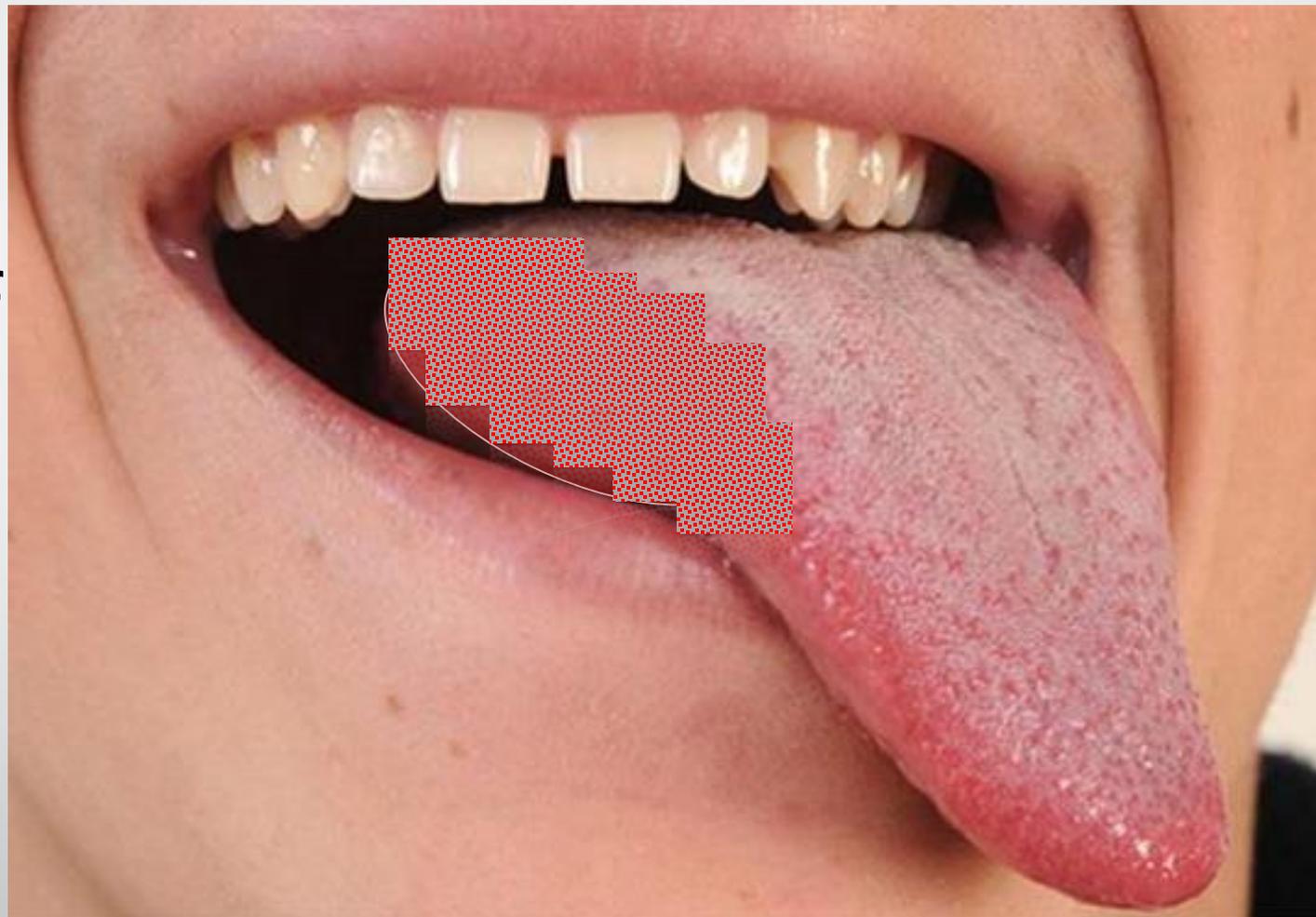
Small diameter beam, e.g., $< 200 \mu$, results in deep, narrow ablation, but a minimal zone of residual thermal damage: less optimal Tx of rhytides

Target Areas



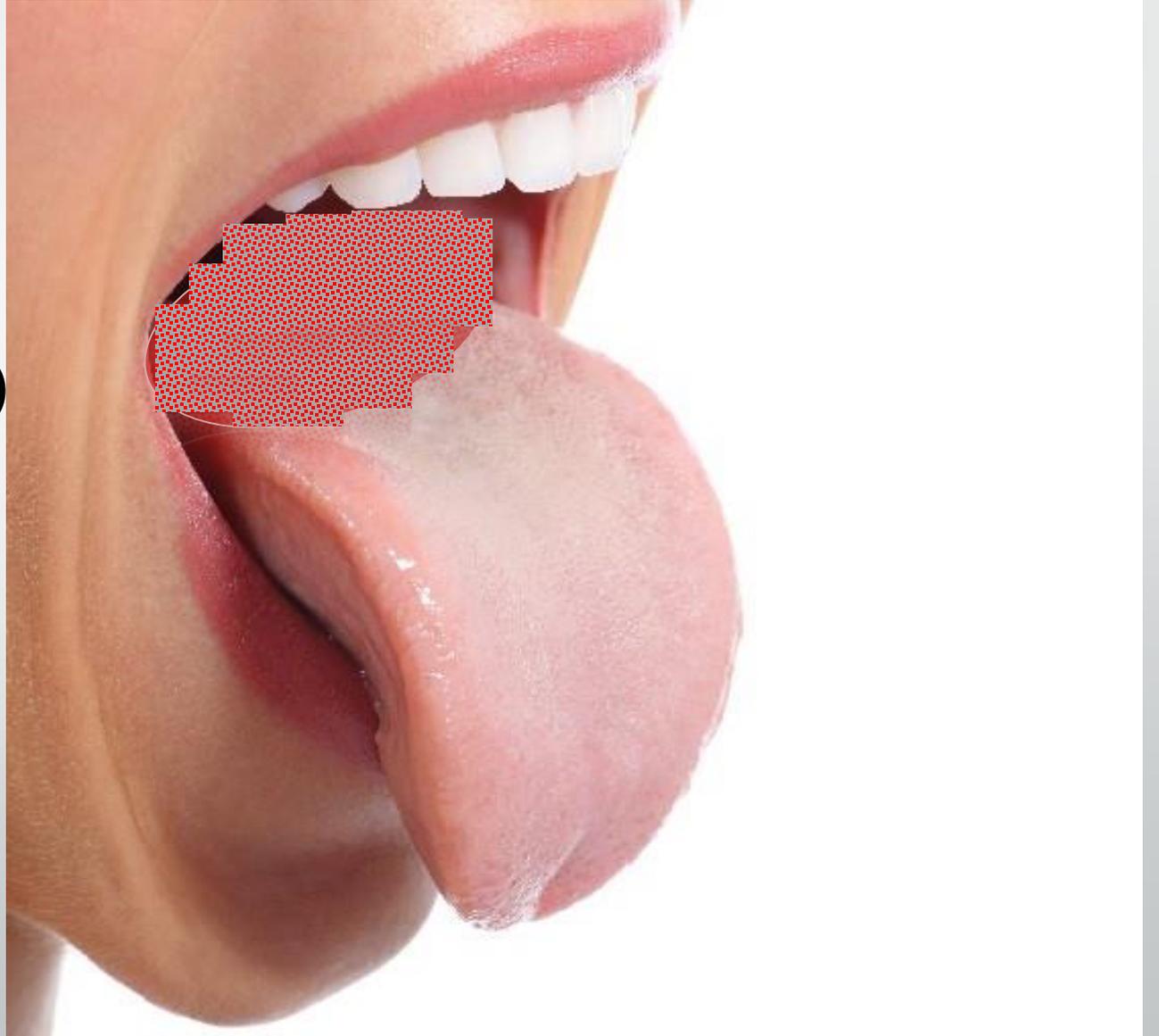
Target Areas

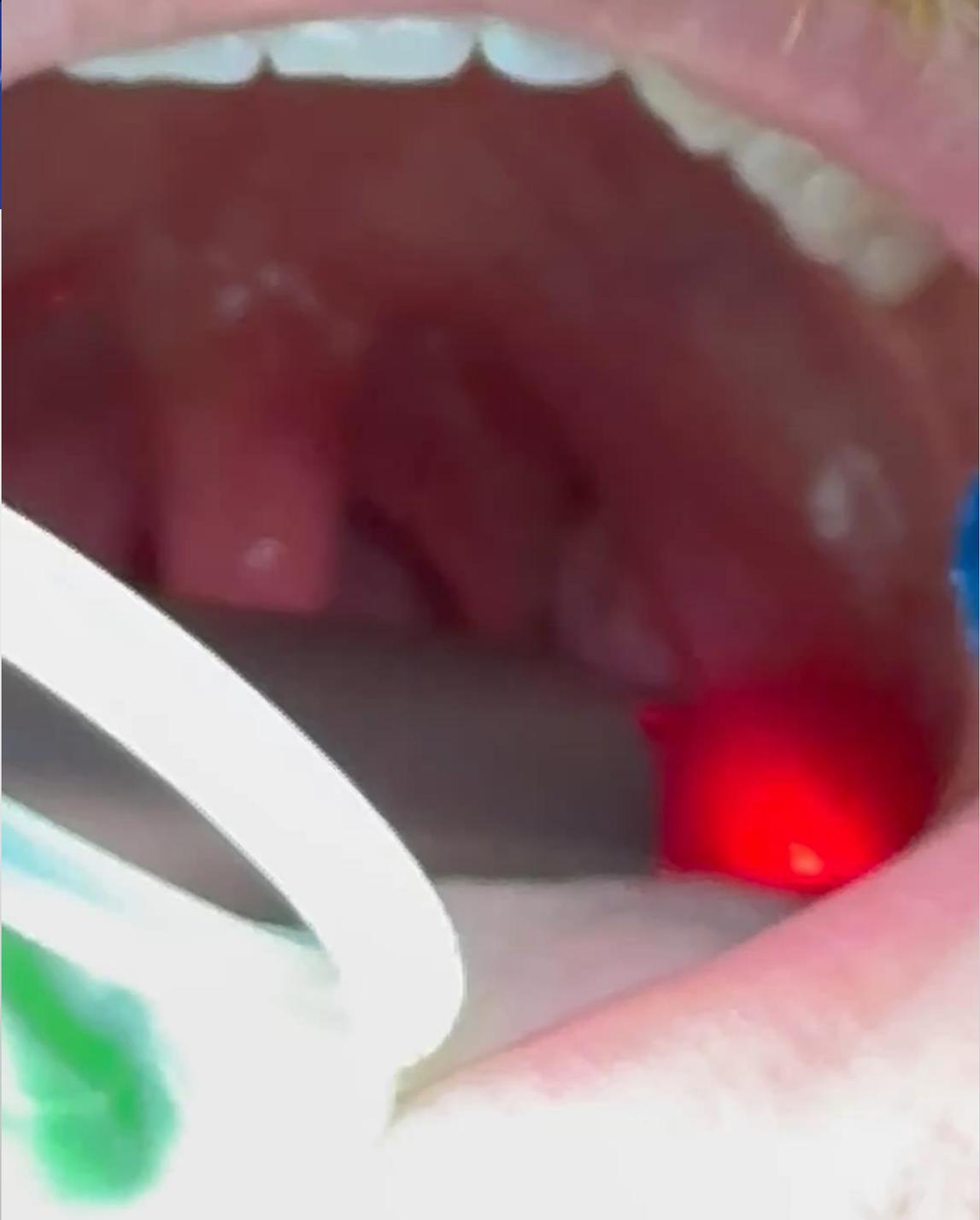
Lateral border of
Tongue





Posterior Dorsum of
Tongue (lingual tonsils)





In Operation



Tonsillar Decontamination Results

Before



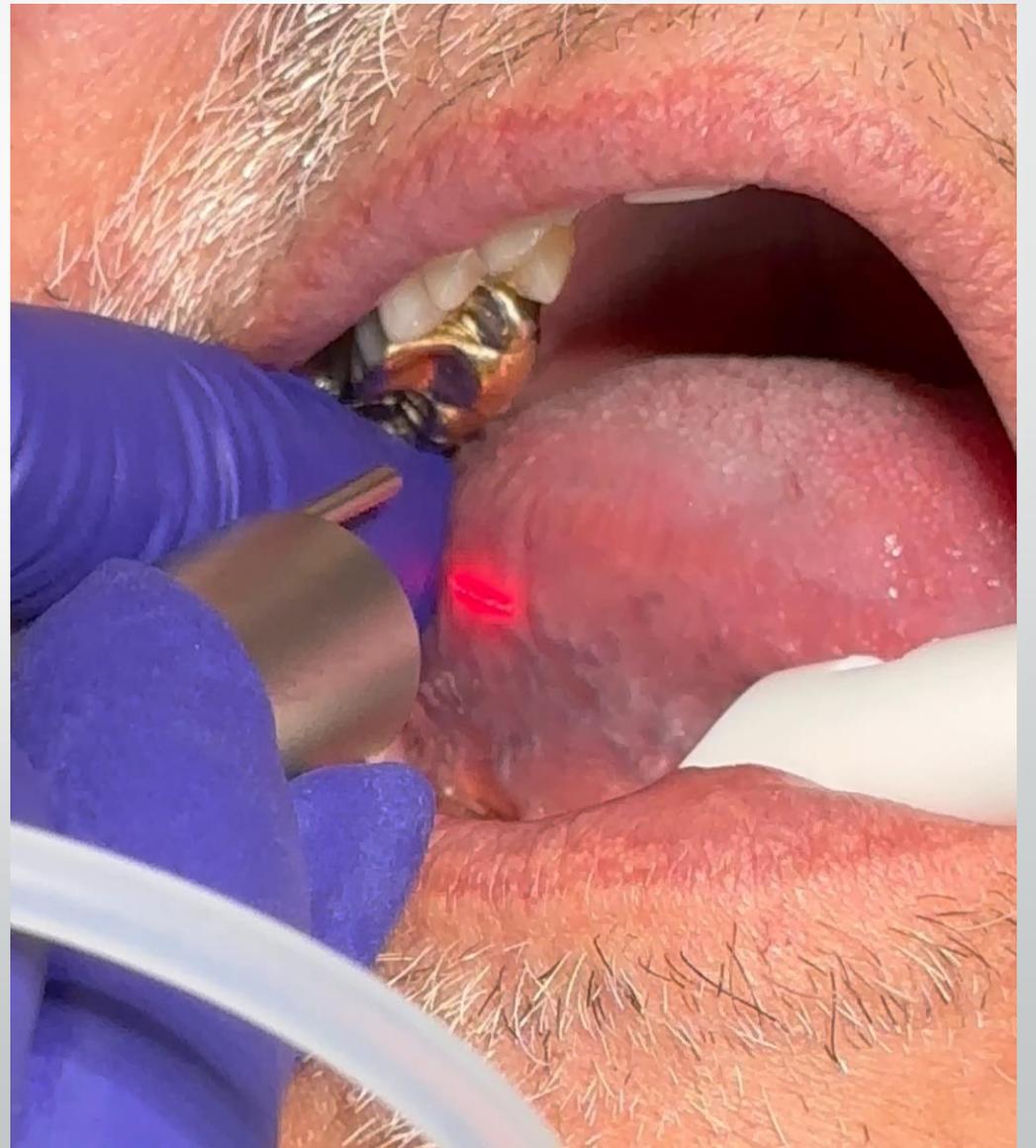
Before Treatment

After



1 Day After Treatment

In Operation



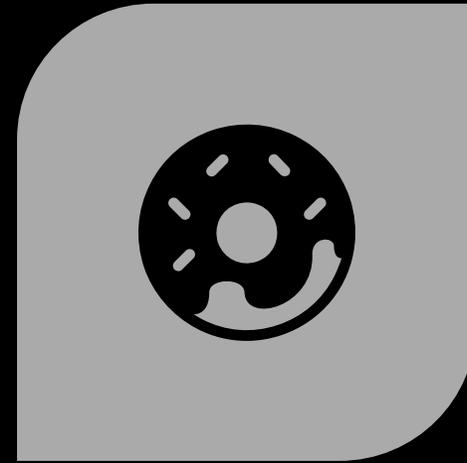
Immediate Post-Operative View



Two Ways to Profit



TREAT AIRWAY



TREAT ATHLETES

The Power of “YET” in Case Presentation

- A non-threatening keyword that shifts focus from now to inevitability
- Reduces defensiveness across DISC profiles
- Use phrases like:
 - “Is that bothering you YET?”
 - “Is that sensitive to you YET?”
- Encourages proactive, preventive decision-making





SUMMARY

“There is no difference between the feeling of helping a patient or standing to the applause of a Broadway audience—it is all about JOY, and that feeling is the [exact] same in both venues. People only think that there is a difference, but they are wrong. Choose to be happy with what you find yourself doing at the present moment. Find your joy.” ~Rory O’Malley





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