

Exposed & Vulnerable: Managing Dentin & Root Exposures

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Evidence-Based Decisions: Evidence / Expertise / Patient's Needs & Experience

Preservation & Protection:

The Toothpaste Secret by Trisha O'Hehir www.amazon.com

Low Abrasive: RDA 0-70	RDA Value	Medium Abrasive: RDA 71-100	RDA Value
Pure Baking Soda	7	Biotene	78
Sensodyne True White	13	Close-Up	80
Elmex Sensitive Plus	30	Colgate Sensitive Max. Strength	83
Pronamel Sensodyne	34	Tom's of Maine	84
Arm & Hammer Dental Care	35	Rembrandt Intense Stain	85
Oxyfresh	45	Nature's Gate	87
Tom's of Maine Sensitive	49	Sensodyne Fresh Mint	90
Rembrandt Original	53	Aquafresh Sensitive	91
CloySYS	53	Rembrandt Plus	94
Arm & Hammer Sensitive + Whitening	54	Sensodyne Fresh Impact	94
Parodontax	65	Oxyfresh with Fluoride	95
Colgate Regular	68	Sensodyne Original	100

Highly Abrasive: RDA 101 - 150	RDA Value	Abrasiveness May Be Too High: RDA 151-250	RDA Value
Sensodyne Extra Whitening	104	Crest Sensitive Whitening	152
Arm & Hammer Advance White	106	Crest Pro Health	155
Crest Sensitivity Protection	107	Colgate Total Advance Fresh	160
Crest Regular	110	Crest Pro Health Whitening	162
Prevident 5000 Booster	110	Colgate Tartar Control	165
Aquafresh Whiteing	113	Arm & Hammer Dental Care PM Fresh Mint	168
Arm & Hammer Tartar Control	117	Nature's Gate Paste	176
Crest Sensitivity Whitening + Scope	124	Colgate 2-in-1 Tartar Control/Whitening	200
Colgate Whitening	142	FDA Upper Limit	200
Crest Pro Health Enamel Shield	145	ADA Upper Limit	250
Ultra Brite Advance Whitening	145		
Pepsodent	150		

Note: The following are sample technologies to help protect/preserve tooth structure

Shield Force Plus – light-cured sealer/desensitizer www.tokuyama-us.com

Oral7 – Moisturizing oral products www.oral7.com

Basic Bites – Arginine + calcium carbonate chews to raise pH www.basicbites.com

ReminPro – hydroxyapatite/fluoride/xylitol remineralizing paste www.volco.com

Enamelon – ACP remineralizing/hydrating paste www.enamelon.com

Advantage Arrest – silver diamine fluoride www.elevateoralcare.com

Cervitec Plus – Chlorhexidine/thymol varnish www.ivoclarvivadent.us

Forevermints – Xylitol/peppermint/menthol mints www.4evermints.com

Xylimelts – 100% Xylitol adhesive disks www.oracoat.com

Spry – 100% Xylitol gum, mints, mouth spray www.xlear.com

Periosciences – Anti-inflammatory/antibacterial topical antioxidants
www.periosciences.com

StellaLife – VEGA Botanical rinse/gel/spray www.stellalifehealing.com

LoLoz – botanical anti-caries suckers/lozenges www.loloz.com

AAP Classification – Developmental or Acquired Deformities & Conditions
(Mucogingival)

Developmental:

- Frenum pull
- Eruption patterns
- Tooth position in the arch
- Soft tissue biotype
- Orthodontic treatment
-
- Chronic Inflammation
 - Periodontitis
 - Gingivitis
- Parafunction (bruxism)
- Occlusion
- Other iatrogenic damage

Acquired:

- Trauma from brushing
- Trauma from flossing
- Trauma as a result of tobacco use
- Trauma as a result of mouth jewelry

Miller Classification of Gingival Recession:

Class I – marginal recession that does not extend to the MGJ. No bone loss. 100% root coverage possible.

Class II – marginal recession that extends to or beyond the MGJ. No bone loss in interdental area. 100% root coverage possible.

Class III – marginal recession that extends to or beyond the MGJ with attachment loss in the interdental area or malpositioning of teeth. Partial root coverage possible.

Class IV – marginal recession that extends to or beyond the MGJ with severe bone or soft tissue loss in the interdental area, or severe malpositioning of teeth. Little or no root coverage likely.

www.Merijohn.com to order Perio Access® Gingival Recession Chairside Visual Guide & Perio Access® Periodontal Examination Quick Reference Guide

When in doubt to restore first or graft first – Refer for consultation!

Attrition - Loss of tooth structure due to repeated contact with teeth in opposite arch (Bruxism)

Abfraction - Compressive and tensile forces over time causing tooth flexure and loss of structure at the cervical portion of the tooth (Bruxism)

Erosion - Chemical loss of minerals in the tooth structure due to repeated exposures (Diet, Reflux, Eating Disorders)

Abrasion - Loss of tooth structure due to abrasive materials repeatedly contacting vulnerable tooth surfaces (Toothpastes, Tobacco, Piercings)

“Abfraction Lesions: Etiology, Diagnosis & Treatment Options” by MM Nascimento, et al. *Clinical, Cosmetic and Investigative Dentistry 2016*

Recommendations for Treatment of Abfractions:

1. Active, cavitated carious lesion. CAMBRA essential
2. Cervical defect extends subgingivally and preclude plaque control
3. Extensive tooth structure loss compromising integrity of the tooth, or pulpal exposure present
4. Persistent hypersensitivity when therapeutic options have failed
5. Prosthetic abutment
6. Esthetic demands by patient request

In the absence of strong evidence to treat, risk/benefit analysis should precede treatment!

Drink	Oz.	Calories	Sugar (g)	Caffeine (mg)
Archer Farms Energy	12	80	19	55
AMP	8	110	29	71
Rockstar Energy	8	140	31	80
Sambazon Energy	8	90	21	81
Red Bull	8.4	110	27	83
Starbucks Doubleshot	15	210	26	88
Monster Energy	8	100	27	92
Arizona Energy	8	100	26	129
CliffShot Turbo Gel	1.2	110	12	133
Full Throttle	8	220	58	210
Monster X-presso	6.8	90	12	221
NOS High Performance	16	220	52	224

BASIC EROSIWE WEAR EXAMINATION (BEWE)

- 0 – no erosive wear
- 1 – initial loss of surface texture (enamel)
- 2 – distinct defect. Hard tissue loss <50%
- 3 – distinct defect. Hard tissue loss >50%

Total score based upon worst score in each sextant

Silent Reflux / Reflux > GERD > Barrett’s Esophagus / Esophageal Cancer

Lifestyle alterations to prevent/treat reflux:

- Sleep inclined
- No eating late at night
- Stress management / exercise
- Exercises that don’t involve pounding, running, or lying on back
- Avoid the Seven C’s in diet: Coffee, Chocolate, Colas, Citrus, Cocktails, Curry & spices, Cigarettes

OTC options to manage reflux:

- 3mg Melatonin 2 hours before bedtime for 2-4 weeks
- Chew 1-2 tablets DGI licorice 20 min. before meal
- Dissolve ½ tablespoon in water and drink

Peak Prevalence of Bruxism – Under 40 years of age – Journal of Orofacial Pain 2013

Minimally Invasive Biofilm Management – Re-Think what you are doing!

MOHS Hardness:

- Talc 1
- Glycine 2

Dentin 2.5 – 3.5
Sodium Bicarbonate 2.5-3
Calcium Carbonate 3
Aluminum Trihydroxide 4
Enamel 5
Calcium Sodium Phosphosilicate 6
Most prophy pastes – 5-6

Hu-Friedy/EMS Handy Premium Air Polisher for glycine powder
www.hu-friedy.com/biofilm - Clinical Evidence guide and comparison video
www.hu-friedy.com/powerrequest - request Air Flow in-office demo

Acteon Air-N-Go Easy portable Air Polisher for glycine powder
www.acteongroup.com/us

Proxyl prophy paste (fine) by Ivoclar Vivadent has an RDA of 7

Dental Assessments for Bruxism:

Tooth wear and degree	Masseter muscle hypertrophy
Hyperkeratosis	TMJ dysfunction/pain
Line alba in the cheeks	Family history
Scalloping of the tongue	Sleep disordered
Tooth fracture	breathing/sleep quality

Multidisciplinary Approach to Airway Health

Sleep Physician	Endocrinologist
ENT	Psychologist
Gastroenterologist	Myofunctional Therapist

Frequently Asked Questions & Answers in the Area of Orofacial Myofunctional Therapy www.aomtinfo.org

5-step screening for Mouth-Breathing (Colleen Watson, RDH www.myofirst.com)

- Lips together at rest?
- Nasal breathing – check each nostril
- Tongue posture at rest – Up, Down, Middle?
- Lingual Frenum – adequate or tight?
 - 3 finger measurement - open wide
 - 2 finger measurement – tip of tongue on palate
- Palatal width – adequate or narrow?
 - Width of cotton roll

5-T Assessments for Every Patient (Cathy Starnes, RDH TongueTwisters, LLC)

- Teeth - wear/bruxism
- Tissue – inflammation inconsistent with local factors
- Tongue – size, posture, scalloping
- Tonsils – size
- Throat – airway space, redness

Role of Oral Devices in Managing Sleep-disordered Breathing Patients – Position Statement 2016 American College of Prosthodontists

Practitioners should screen for OSA prior to fabricating a maxillary night guard that increases occlusal vertical dimension (OVD) without mandibular protrusion.

Increasing the OVD has been found to aggravate OSA in some patients (Reduced upper airway size due to restriction of tongue space and the rotation/anterior translation of the condyles.)

GASP by Michael Gelb, DDS and Howard Hindin DDS

Sleep, Interrupted by Steven Park, MD

Apnea – cessation of airflow into the lungs for at least 10 seconds

Obstructive Sleep Apnea (OSA) – 5 or more episodes of complete or partial upper airway obstruction per hour of sleep

Upper Airway Resistance Syndrome (UARS)

May issue of ELLE – “An Awaking Nightmare”

Risk Factors for OSA

- Fat deposition in upper airway
- Adenotonsillar hypertrophy
- Nasal congestion secondary to allergic rhinitis
- Tonsillar hypertrophy
- Posterior deviation of the maxilla or mandible (cross bite)

Epworth Sleepiness Scale www.epworthsleepinessscale.com (license to use questionnaire)

STOP BANG Questions to Screen for OSA
STOP

- Snoring?
- Tiredness?
- Observed you stop breathing at night?
- Blood Pressure elevated?

BANG

- BMI > 35?
- Age >50?
- Neck >15.7 male?
- Gender – Male?

Greater than 3 YES – refer for sleep testing

The Perfect Storm???

- Sleep Disordered Breathing
- Sleep Bruxism
- Reflux
- Reduced Salivary Flow
- Oral Evidence of wear and exposures

What will you do differently to preserve / protect the exposed & vulnerable?

Assess Your Vulnerability To Tooth Wear & Gum Recession

- | | | |
|---|---------------------------------------|------------|
| 1. Are you aware of gum recession in your mouth? | | Score ____ |
| | No | 0 |
| | Yes, 1 – 4 teeth | 1 |
| | Yes, 5+ teeth | 2 |
| 2. How frequently do you eat fresh fruit? | | Score ____ |
| | None – once a week | 0 |
| | Between 2 – 5 times a week | 1 |
| | Once or twice daily | 2 |
| | > 3 times daily | 3 |
| 3. How frequently do you drink fruit or vegetable juice? | | Score ____ |
| | None – once a week | 0 |
| | Between 2 – 5 times a week | 1 |
| | Once or twice daily | 2 |
| | > 3 times daily | 3 |
| 4. How frequently do you drink energy, soft or Kombucha drinks? | | Score ____ |
| | None – once a week | 0 |
| | Between 2 – 5 times a week | 1 |
| | Once or twice daily | 2 |
| | > 3 times daily | 3 |
| 5. How frequently do you drink alcoholic beverages? | | Score ____ |
| | None – once a week | 0 |
| | Between 2 – 5 times a week | 1 |
| | Once or twice daily | 2 |
| | > 3 times daily | 3 |
| 6. Do you generally brush your teeth within 1 hour of eating? | | Score ____ |
| | No | 0 |
| | Yes | 1 |
| 7. Do you brush your teeth with a low-abrasive toothpaste? | | Score ____ |
| | Yes | 0 |
| | No, not sure | 1 |
| 8. How often are you aware of acid indigestion or reflux? | | Score ____ |
| | Not at all | 0 |
| | On occasion | 1 |
| | 2-3 X's per week | 2 |
| | Daily | 3 |
| 9. Do you suck on lozenges or mints regularly? | | Score ____ |
| | Almost never | 0 |
| | Occasionally | 1 |
| | Daily | 2 |
| 10. Are you aware of snoring during your sleep? | | Score ____ |
| | No | 0 |
| | On occasion | 1 |
| | Routinely | 2 |
| 11. Are you aware of diminished saliva, or your mouth feeling too dry? | | Score ____ |
| | No | 0 |
| | Sometimes | 1 |
| | Frequently | 2 |
| | Always | 3 |
| 12. Are you aware of clenching your teeth during the day or night? | | Score ____ |
| | No | 0 |
| | Yes, I wear an appliance/guard | 1 |
| | Yes, I do not wear an appliance/guard | 2 |
| 13. Do you avoid cold drinks due to tooth sensitivity? | | Score ____ |
| | No | 0 |
| | Yes | 1 |
| 14. Do you wake up with headaches? | | Score ____ |
| | Almost never | 0 |
| | Occasionally | 1 |
| | Frequently | 2 |

Total Score ____

Range: 0 -31. The higher the number; the greater the vulnerability to tooth wear and/or gum recession

Strategies to Reduce Vulnerability:

- _____ Consider dietary modifications to reduce or neutralize acidic exposures
- _____ Incorporate remineralizing products to your daily regimen for added protection of tooth surfaces
- _____ Investigate possible sleep disturbance/reflux imbalances that can adversely affect oral and systemic health
- _____ Consultation regarding tissue grafting to protect exposed roots & supporting bone
- _____ Consultation with dentist to consider restorations/appliances to protect vulnerable tooth exposures
- _____ Consultation with a physician for additional diagnostic measures or co-management of conditions