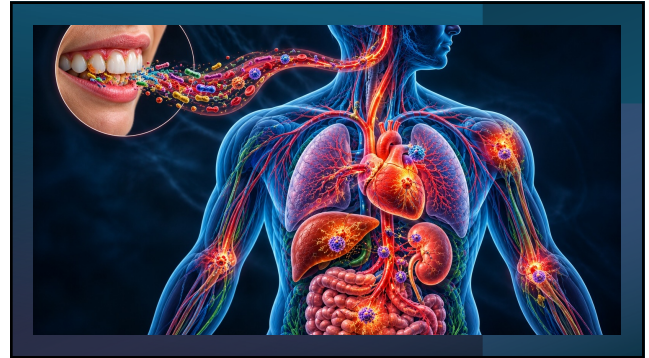


SMALL STEPS TO GENERATE GIANT OUTCOMES

Karen Davis, RDH, BSDH
Karen@karendavis.net

1



4

What area of health and wellness
do you find really challenging?

- Quality Sleep
- Reducing Anxiety and Worry
- Sugar Addiction
- Alcohol Consumption
- Sustainable Exercise
- Daily Oral Hygiene Habits

5

WHO defines a healthy lifestyle as “a way of living that
reduces the risk of being seriously ill or dying early”

*Lack of a healthy lifestyle increases the risk of being
seriously ill or dying early?*

HOW?

World Health Organization, What is a healthy lifestyle? EUR/ICPL/VNG 01 07 02. E66134, WHO
Regional Office for Europe, Copenhagen, 1999.

6



7



My small step HERO...
Heather McGuire

8



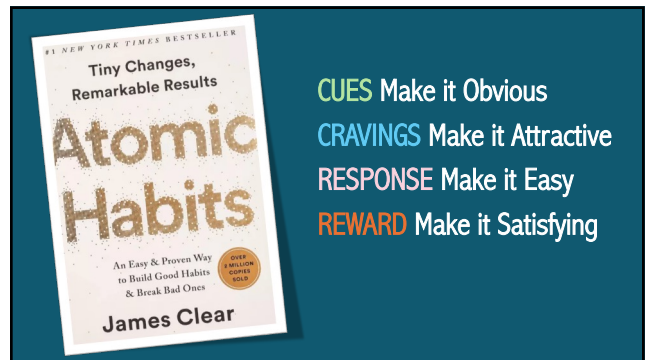
11



12



13



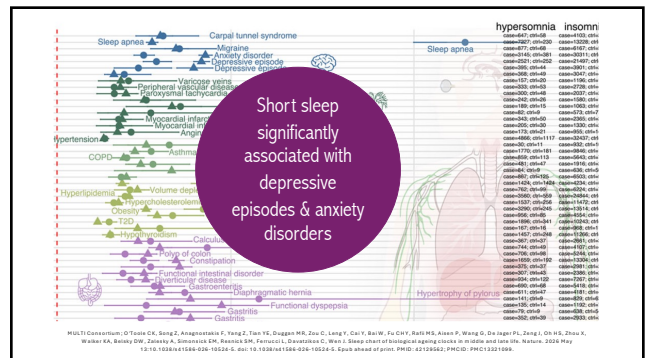
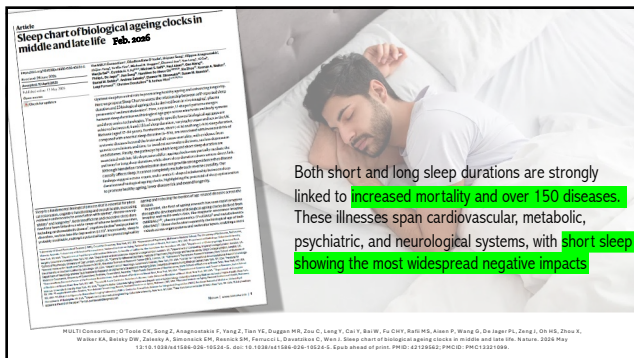
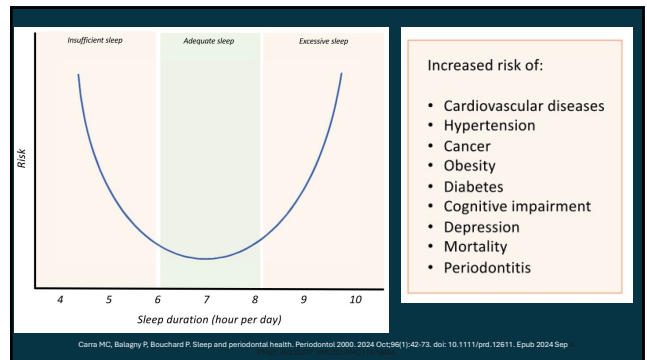
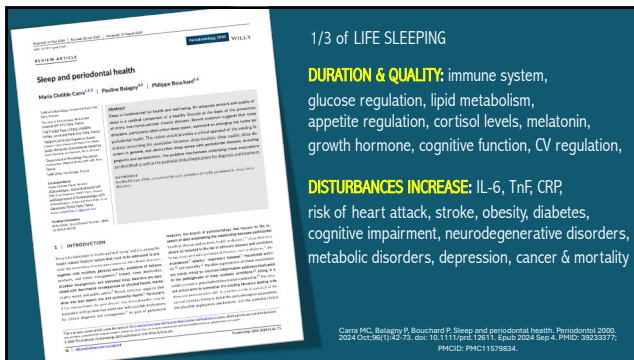
14



15



16



STOP-Bang Sleep Apnea Screening Questionnaire

1. S SNORING? (Loud snoring heard by others)		Loud Snoring!	Yes
2. T TIRED? (Frequently tired, fatigued, or sleepy during the day)		Daytime Fatigue	Yes
3. O BERVED? (Observed stopping breathing during sleep)		Observed Stopped Breathing	Yes
5. P PRESSURE? (High blood pressure/treated for hypertension)		BMI > 35	Yes
6. A GE? (Age > 50 years)		Age > 50	Yes
7. N ECK CIRCUMFERENCE? Large neck circumference: Male > 17"/43cm, Female > 16"/40cm		Neck > 17in / 43cm	Yes
8. G ENDER? (Male)		Yes	Yes

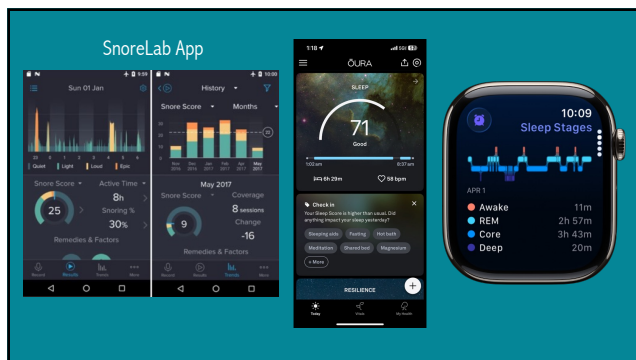
Scoring (Yes to 3 or more items = High Risk)

High Risk of OSA

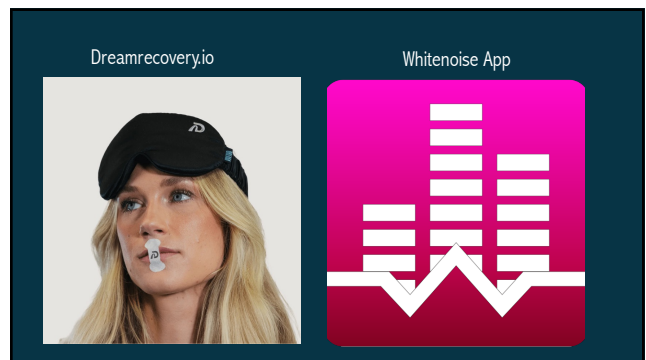
23



24



25



26

Small Steps...

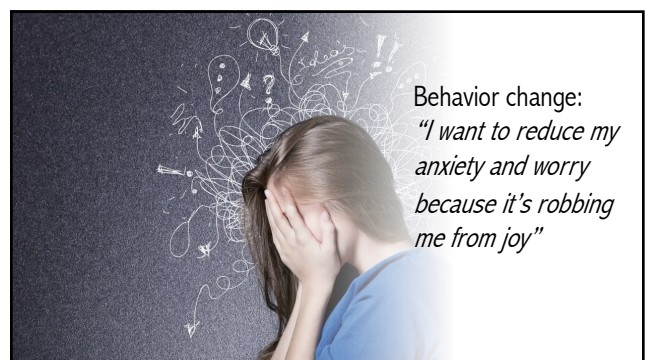
Today I will download the SnoreLabs app and monitor my sleep tonight

Starting today, I will pay attention to end all caffeine intake by 1pm

After I set my alarm at night I will put on a sleep mask (and apply mouth tape)

3 days/wk will be in bed by 11pm to obtain 7 hours rest

27



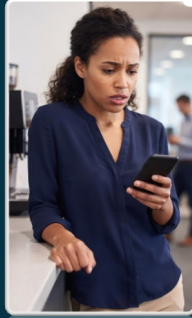
28

>300,000 individuals / cross-sectional study and
>200,000 individuals / prospective cross-sectional study

Depression (13%) and anxiety disorder (27%)
**consistently associated
with periodontal disease**

Wang J, Wang Y, Li H, Wang W, Zhang D. Associations between oral health and depression and anxiety: A cross-sectional and prospective cohort study from the UK Biobank. *J Clin Periodontol*. 2024 Nov;51(11):1466-1477. doi: 10.1111/jcpe.14399. Epub 2024 Jul 1. PMID: 38992070.

29



Acute stress

HPA axis activation
↓
Cortisol
↓
Suppression of pro-inflammatory cytokines

Chronic stress

Prolonged cortisol
↓
Glucocorticoid receptor resistance
↓
Sustained inflammation

Immune balance

IL-1β
IL-6
IL-17
TNF-α
IL-10

Immune imbalance

IL-6
TNF-α
IL-17
IL-10

Nunes SL, Ribeiro SP, Subotic N, Caruso RW, Knezevic NN. Chronic Stress and Autoimmunity: The Role of HPA Axis and Cortisol Dysregulation. *Int J Mol Sci*. 2023 Oct 14;24(20):9994. doi: 10.3390/ijms24209994. PMID: 41103280. PMC5156393.

30

BIOLOGICAL IMPACTS OF WORRY & ANXIETY ON LONGEVITY

1. CORTISOL OVERLOAD: HORMONE IMBALANCE & VASCULAR DAMAGE

CHRONIC STRESS → HIGH CORTISOL → VASCULAR INJURY

CORTISOL

DAMAGED BLOOD VESSEL

2. TELOMERE SHORTENING: CELLULAR AGING

LONG TELOMERES → SHORT TELOMERES / CELLULAR AGING

CORTISOL

CELL DIVISION

YOUNG CELL → SENESCENT / AGED CELL

STRESS → ACCELERATED TELOMERE EROSION → SHORTER LIFESPAN

3. WEAKENED IMMUNITY: INCREASED VULNERABILITY TO DISEASE

CHRONIC ANXIETY

DEPRESSED IMMUNE RESPONSE

INFECTIONS / ILLNESS

ANTIBODY PRODUCTIVITY

LONG-TERM ANXIETY → LOWERED DEFENSES → HIGHER DISEASE RISK

CHRONIC ANXIETY DRIVES ACCELERATED AGING AND DISEASE

31

Can we breathe away our worries?

INEXHALE

<https://med.stanford.edu/news/health/2023/03/cyclic-sighing-can-help-breathe-away-anxiety.html> Accessed July 28, 2025

32

Cell Reports Medicine Report

Brief structured respiration practices enhance mood and reduce physiological arousal

Graphical abstract

Physiological Fighting
Box Breathing
Cyclic Hyperventilation
Mindfulness Meditation (open-source protocol)

Lowered Respiratory Rate
Improved Mood

Authors
Mele Yilmaz Balaban, Eric Neri, Manuela M. Kogon, ..., Jamie M. Zetter, David Sengul, Andrew D. Huberman

Correspondence
diaz@stanford.edu (D.B.), adh1@stanford.edu (A.D.H.)

In brief
In a remotely conducted randomized controlled trial, Yilmaz Balaban et al. study the psychophysiological effects of controlled breathwork compared with mindfulness meditation. Breathwork produces greater improvement in mood and reduction in respiratory rate, while both result in reduction in negative emotion inducing state anxiety.

Breathwork improves mood and physiological arousal more than mindfulness meditation

Cyclic sighing is most effective at improving mood and reducing respiratory rate

Balaban MY, Neri E, Kogon MM, Wood L, Nouriani B, Jo B, Heil G, Zetter JM, Sengul D, Huberman AD. Brief structured respiration practices enhance mood and reduce physiological arousal. *Cell Rep Med*. 2023 Jan 17;4(1):101055. doi: 10.1016/j.crm.2022.101055. Epub 2023 Jan 17. PMID: 36600000. PMC9400000.

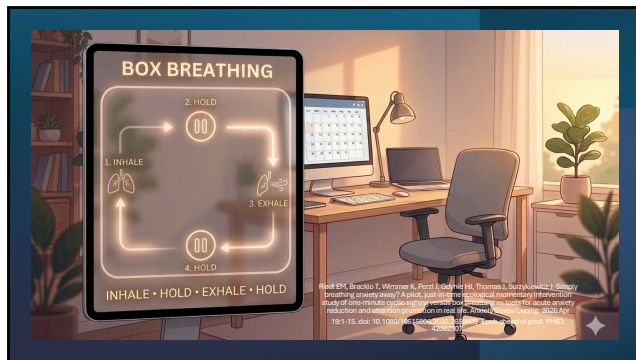
33

CYCLIC SIGHING

1. INHALE
2. DEEP INHALE
3. SLOW EXHALE

Heil G, Brackley T, Wimmer K, Petri S, Grottel S, Thomas J, Sengulowicz J. Simply breathing anxiety away? A pilot, just-in-time, ecological momentary intervention study of the impacts of cyclic sighing versus deep breathing on mood for anxiety reduction and attention restoration in real life. *Front Psychol*. 2023 Apr 18;14:115. doi: 10.3389/fpsyg.2023.1115. Epub 2023 Apr 18. PMID: 37000000. PMC10000000.

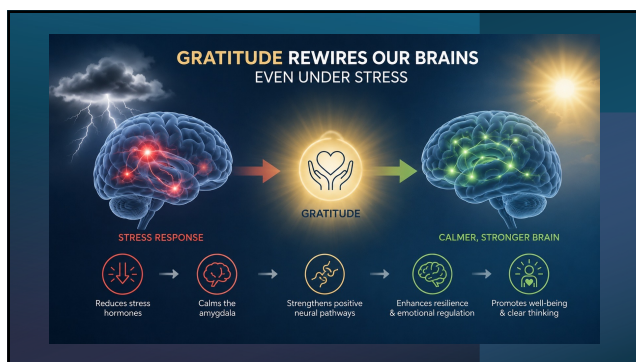
34



35



36



37

The effects of gratitude interventions: a systematic review and meta-analysis

Acts of gratitude can be used as a therapeutic complement for treating anxiety

64 RCT - Gratitude Interventions:

- 4% higher scores of feelings of gratitude
- 6.86% higher scores of greater satisfaction with life
- 5.8% better mental health assessments
- 7.76% lower anxiety scores**
- 6.89% lower depression scores

Durlak G, Korkeis L, Tristão LS, Pelagino R, Bellodi PL, Bernardo VM. The effects of gratitude interventions: a systematic review and meta-analysis. *Einstein (São Paulo)*. 2023 Aug; 11(2):e020271. doi: 10.31744/einsteinjournal.2023e020271. PMID: 37588884

38



39

Small Steps...

When I turn the ignition on in my car, I will practice cyclic breathing for ~2 minutes

Before I seat my patient, I will practice box breathing for for 20 seconds

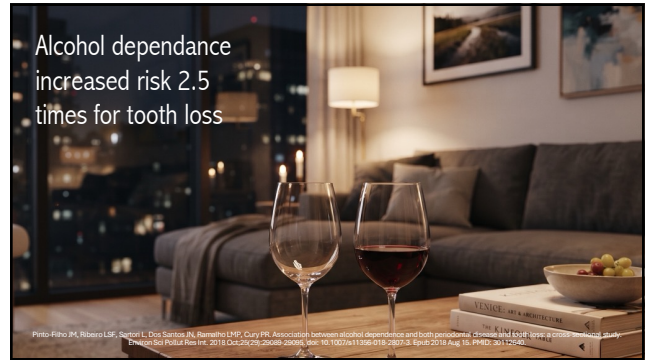
Before I walk in the door from work, I will identify something I am grateful for that took place at work

I will place my gratefulness journal near the coffee pot and record what I am grateful for while brewing coffee

40



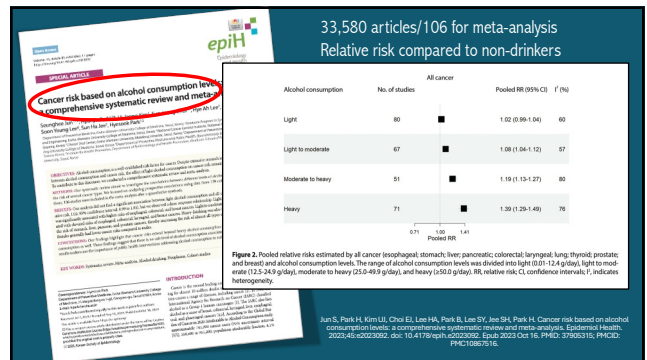
41



42



43



44

Mitigate Risks to Liver

1. Slow drinking pace
2. Reduce frequency
"Liver holiday" 2+ times/wk
3. Wine vs. distilled spirits (limit to 4-5 glasses/wk)
4. Consume alcohol w meals
5. Shorter lifetime duration

45

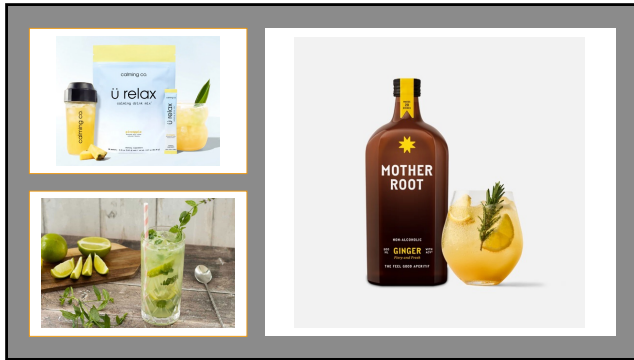
<https://soberliferocks.com>

Sober Life Rocks Podcast Episode 69

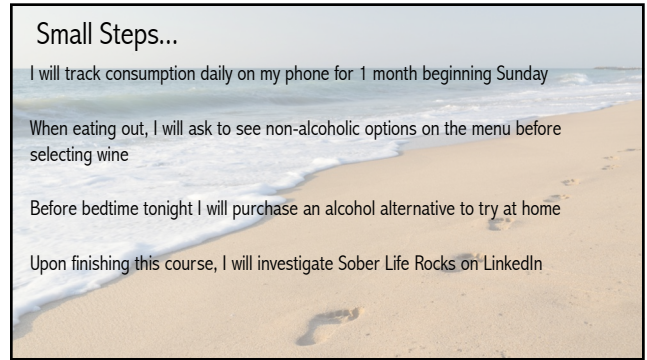
Margy Schaller Heather McGuire

HOW SHOULD WE TALK ABOUT ALCOHOL AT WORK?

46



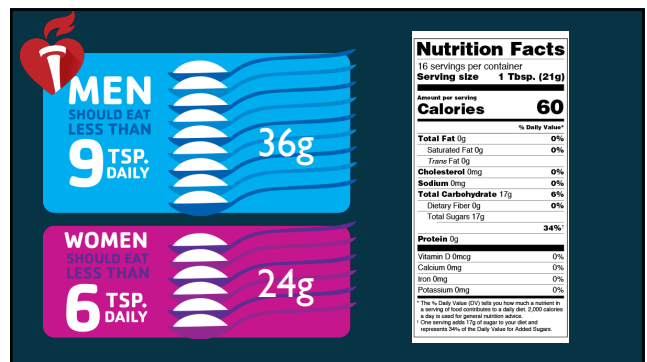
47



48



49



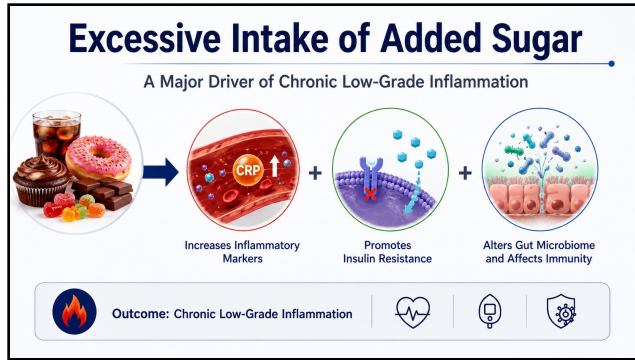
50



51



52



53

Added Sugars and Cardiovascular Disease Risk in Children: A Scientific Statement From the American Heart Association

William B. Vos, Jill L. Kae, Jean A. Welsh, Linda V. Van Horn, Daniel I. Feig, Cheryl A. M. Anderson, Mahesh J. Patel, Jessica Cruz Munoz, Nancy F. Krebs, Shana A. Karimkhani, Rachel K. Johnson, American Heart Association Nutrition Committee of the Council on Lifestyle and Cardiometabolic Health, Council on Clinical Cardiology, Council on Cardiovascular Disease in the Young, Council on Cardiovascular and Stroke Nursing, Council on Epidemiology and Prevention, Council on Functional Genomics and Translational Biology, and Council on Hypertension

PMID: 37550294 PMCID: PMC3583371 DOI: 10.1161/CIR.0000000000000439

Free PMC article

Abstract

Background: Poor lifestyle behaviors are leading causes of preventable diseases globally. Added sugars contribute to a diet that is energy dense but nutrient poor and increase risk of developing obesity, cardiovascular disease, hypertension, obesity-related cancers, and dental caries.

Methods and results: For this American Heart Association scientific statement, the writing group reviewed and graded the current scientific evidence for studies examining the cardiovascular health effects of added sugars on children. The available literature was subdivided into 5 broad subareas: effects on blood pressure, lipids, insulin resistance and diabetes mellitus, nonalcoholic fatty liver disease, and obesity.

Conclusions: Associations between added sugars and increased cardiovascular disease risk factors among US children are present at levels far below current consumption levels. Strong evidence supports the association of added sugars with increased cardiovascular disease risk in children through increased energy intake, increased adiposity, and dyslipidemia. The committee found that it is reasonable to recommend that children consume <25 g (100 cal) or <6 teaspoons of added sugars per day and to avoid added sugars for children <2 years of age. Although added sugars most likely can be safely consumed in low amounts as part of a healthy diet, few children achieve such levels, making this an important public health target.

Vos WB, Kae JL, Welsh JA, et al. Added sugars and cardiovascular disease risk in children: A scientific statement from the American Heart Association. *Circulation*. 2027;139(19):e1017-e1034. Published online 2016 Aug 22. doi: 10.1161/CIRCULATIONAHA.116.024444. Accessed August 3, 2020

“Strong evidence supports the association of added sugars with increased cardiovascular disease risk **in children** through increased energy intake, increased adiposity and dyslipidemia.”

AVOID added sugars < 2 years of age

54



55

Dietary Guidelines For Americans 2025 - 2030

USDA

“No amount of added sugars or non-nutritive sweeteners is recommended or considered part of a healthy or nutritious diet”

“No one meal should contain more than **10 grams** of added sugars”

“Children should **avoid added sugars until age 10**”

56

Systematic Review

Impact of unhealthy food and beverage consumption on children's risk of dental caries: a systematic review

Benjamin Bowyer^{1,2}, Clara Soderstrom³, Rebecca Pothmann⁴, George Slavov⁵

¹University of Birmingham, Birmingham, UK; ²University of Birmingham, Birmingham, UK; ³University of Birmingham, Birmingham, UK; ⁴University of Birmingham, Birmingham, UK; ⁵University of Birmingham, Birmingham, UK

Abstract: The impact of unhealthy food and beverage consumption on children's risk of dental caries is a topic of growing concern. This systematic review aimed to assess the evidence for the association between unhealthy food and beverage consumption and dental caries in children <10 years of age. The review included 11 studies, all of which reported positive associations between unhealthy food and beverage consumption and dental caries. The strongest evidence was for increased frequency of sugary intake and intake at night. The review also found that children who consumed more than 10 grams of added sugars per day had a higher risk of dental caries. The review concluded that reducing the consumption of unhealthy food and beverages is a key strategy for reducing the risk of dental caries in children.

Almost all studies reviewed (n=34) reported positive associations between the consumption of sugar-sweetened beverages or foods high in free sugars and dental caries in children <10 years of age

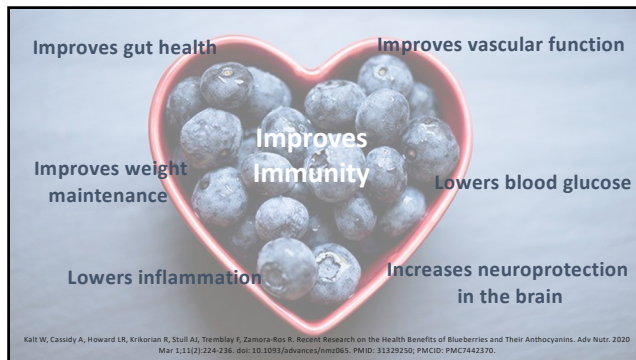
High correlations with increased frequency of sugary intake and intake at night

Large JP, Madigan C, Prochelles R, Markey O, Bowyer B, Rousham EK. Impact of unhealthy food and beverage consumption on children's risk of dental caries: a systematic review. *Nutri Rev*. 2024 Nov 15;82(11):1528-1536. doi: 10.1093/nutrit/nrue047. PMID: 38585176; PMCID: PMC114881326.

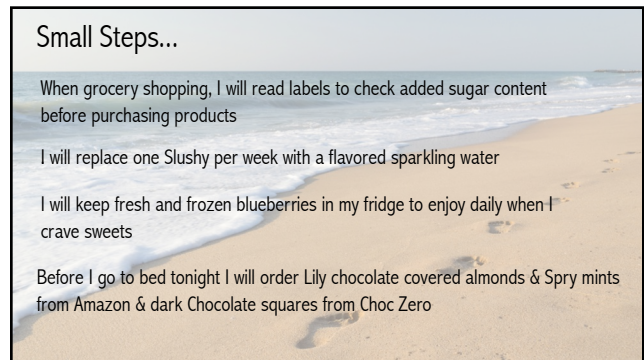
57



58



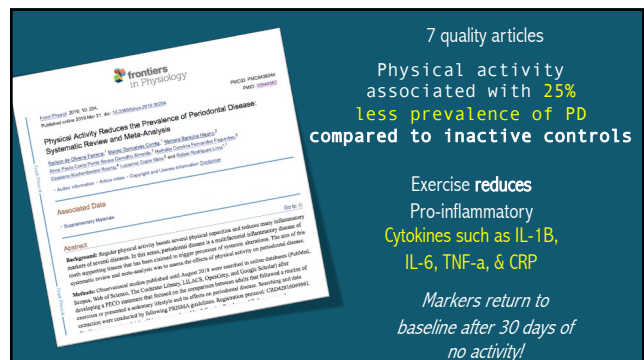
59



60



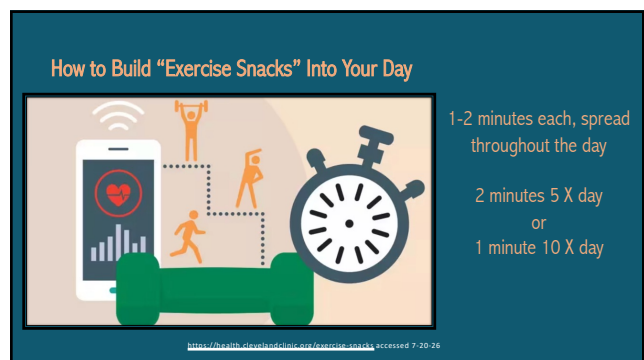
61



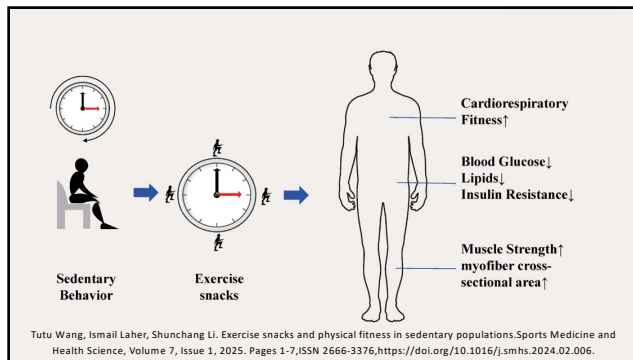
62



63



65



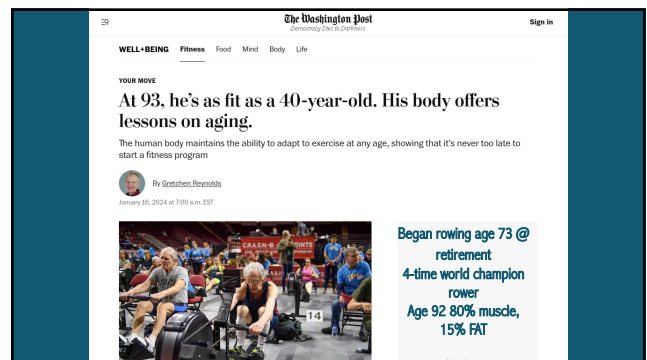
66



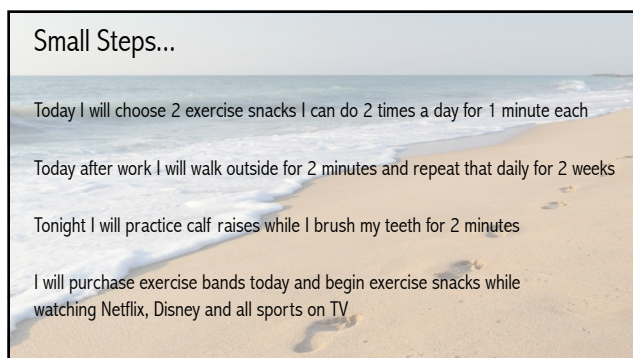
67



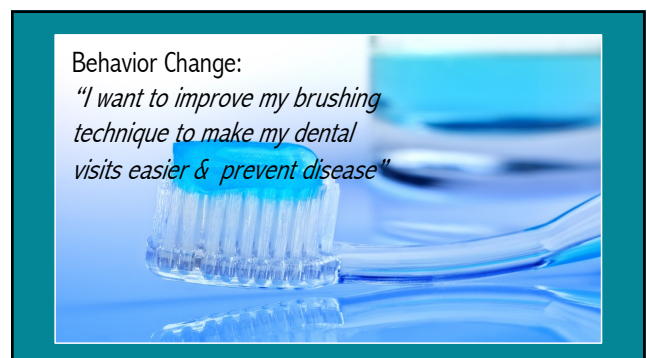
68



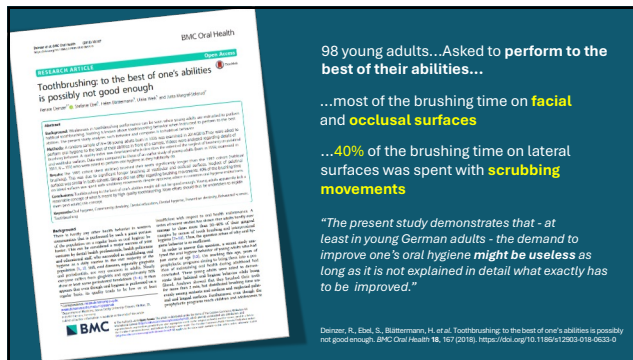
69



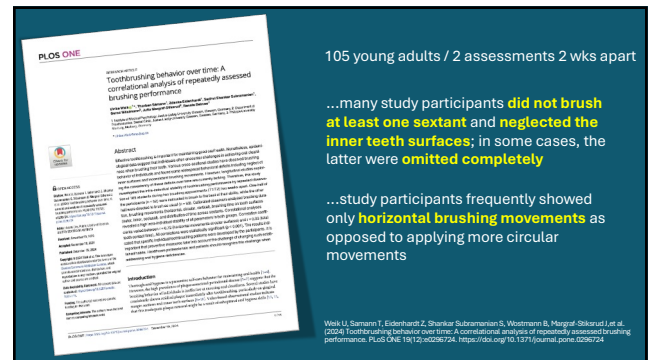
70



71



72



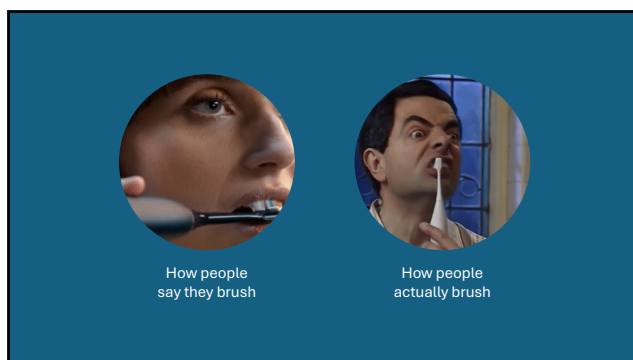
73



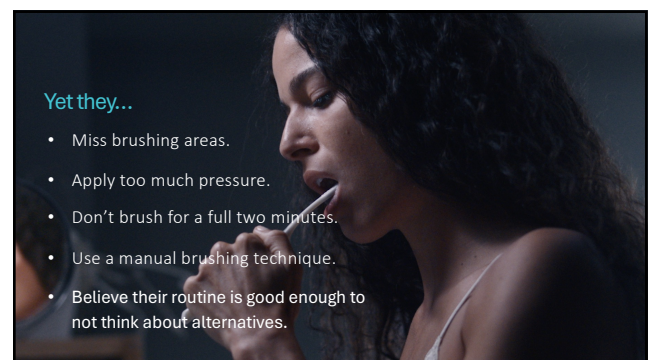
74



75



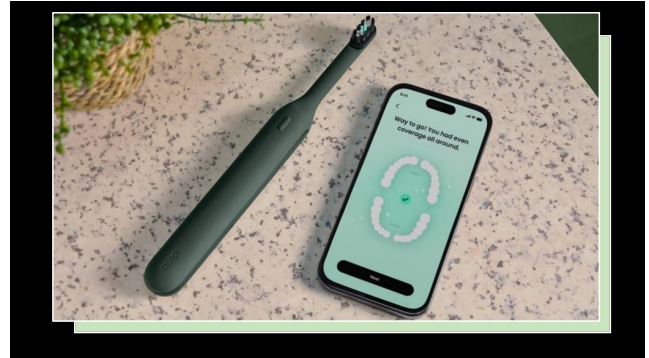
76



77



78



79



80



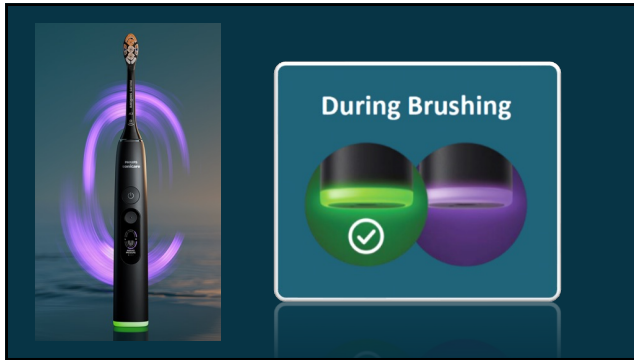
81



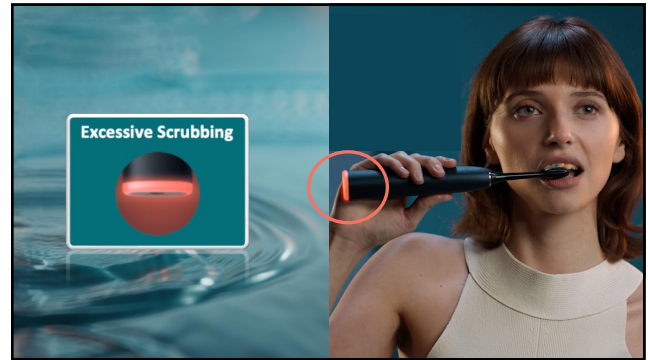
82



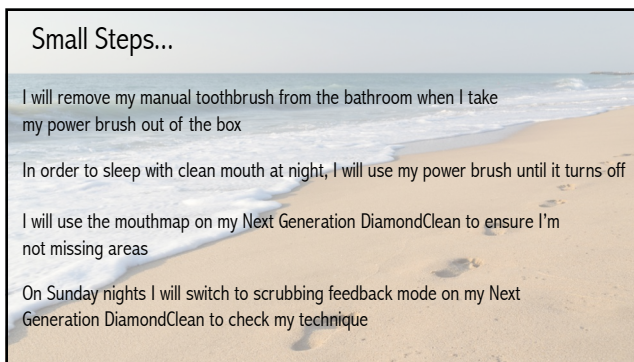
83



84



85



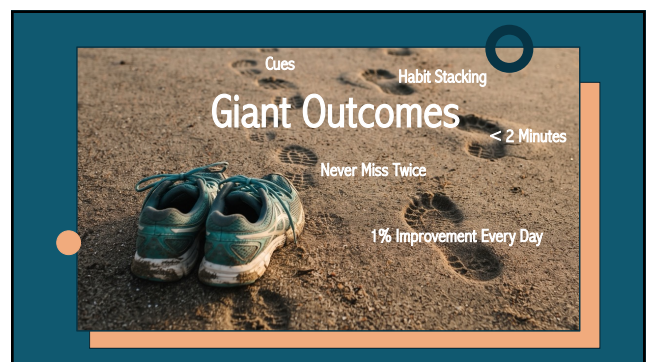
86



87



88



89