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"All disease begins in the gut"
- Hippocrates 300 BC

*"If I had known I was going to live this long,
I would have taken better care of myself."*
~Eubie Blake

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*"To keep the body in good health is a duty, otherwise
we shall not be able to keep our mind strong and
clear." ~Buddha*

**WHAT ARE SOME OF MY REASONS FOR INTEGRATING
HEALTH and WELLNESS into my life and/or dental practice
2023:**

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NUTRITIONAL BALANCE EVALUATION

Assessment of Current Nutritional Choices and Health

Nutritional balance can best be described as the ability to make intelligent and beneficial dietary choices. Listed below are statements that refer to nutritional balance. Using the scale, respond to each question by circling the number that best describes your current lifestyle. When you are finished, add your scores for a total out of 80.

Description	Great	Good	Fair	Needs Attention
Amount of energy every day	4	3	2	1
I enjoy eating a diet with lots of variety	4	3	2	1
I eat at least 3 to 5 servings of vegetables daily	4	3	2	1
I eat a variety of vegetables (many different colors)	4	3	2	1
I eat at least 3 to 5 servings of fruit each day	4	3	2	1
I eat a variety of fruits	4	3	2	1
I attempt to eat whole grain products and avoid refined (white flour) grain products	4	3	2	1
I eat fermented foods (kefir, apple cider vinegar)	4	3	2	1
I consume a variety of cheeses	4	3	2	1
I buy grass fed – free range – antibiotic free meat	4	3	2	1
I eat beans and legumes	4	3	2	1
I eat seafood / fish at least once a week	4	3	2	1
I choose healthy snacks and avoid snacks that have low nutritional value	4	3	2	1
I drink at least six glasses of water daily	4	3	2	1
I take a probiotic daily	4	3	2	1
I read labels	4	3	2	1
I stay away from artificial sweeteners	4	3	2	1
I can hold my stomach flat comfortably (don't feel bloated)	4	3	2	1
I avoid eating fast food	4	3	2	1
I am pleased with my energy	4	3	2	1

TOTAL:

70 – 80 – Outstanding!

60 – 69 – Great!

45 – 59 – Just okay

20 – 44 – Needs immediate attention

NEW PATIENT EXAM LIFESTYLE QUESTIONS:

- Rx meds:
 -
 -
- Water intake
 -
 -
- Supplements /probiotics

- Eat healthy
 -
 -
- Sleep/snoring/dry mouth
 -
- Exercise / 3 components
 -

- Stress levels/family work/financial
-
- MD/physical/bloodwork
-
- Allied health visits

Gut Healthy Chairside Conversations

By Uche Odiatu DMD @fitspeakers & Mahsa Bakhshandeh RDH @tooth_boss

Uche Odiatu DMD is a Toronto area dentist and a professional member of the American College of Sports Medicine and lectures throughout North America on total patient health. **Follow him on Instagram @Fitspeakers**

Mahsa Bakhshandeh RDH graduated from Durham College and has been in private practice for 12 years. She enjoys travelling and exploring the world, its many cultures & their variety of wonderful cuisines. Mahsa is a licenced Zumba Instructor. **Follow her on Instagram @tooth_boss**

Want to add some variety to your chairside conversations? Want to share cutting edge scientific findings with your patients? Would you like to be seen as a person of influence with a broad knowledge of nutrition and healthy living strategies? “Some patients still see us (Mahsa Bakhshandeh reports) hygienists as teeth cleaners and aren’t aware of the scope of our education which includes an intense nutrition component.”

Caution this article contains foundational

strategies to support oral health & TOTAL patient health.

***“All disease begins in the gut”
– Hippocrates 300BC***

How did the first physician who the Hippocratic oath is named after have such insight into what has only been recently scientifically uncovered? He didn't have a microscope or access to the National Institute of Health's ground-breaking initial Human Microbiome Project findings, but he proclaimed “Let food be your medicine and medicine be your food”

KEY GUT PLAYERS

Mind your guts. Not the outer abdominals but the gut flora on the inside of your belly. You see we live in harmony with over 100 trillion single celled bacteria. 80% of them live in your digestive tract (1) and a recent groundbreaking article in Scientific American reported their influence on our health is shaking the very foundation of medicine and nutrition (2). The bacteria in your gut play an important role in immune system modulation. Three quarters of the cellular constituents of your whole immune system are located in this area (3). If you want to build the strongest foundation for your immune system you need to do these things to keep your gut flora in good shape: a) eat 25 to 30 grams of fiber each day. (The average North American

consumes half that amount). Fiber is the gut bacteria's number one choice of nutrition on which all other interactions depend reported Justin Sonnenburg PhD assistant professor in the department of microbiology and immunology at the Stanford University School of Medicine

“The human microbiome is only recently thought to influence health as powerful as your genes,”` -SK Mazmanian PhD professor of microbiology California Institute of Technology.

What is the number one influence on the human microbiome? What we eat proclaims gastroenterologist Robyne Chutkan MD. “The food we eat dictates what bacteria grow in our body. And our Human Microbiome is predominantly (99%) made up beneficial bacteria.”

(4)

What does this have to do with dental patients? Why should we talk food and gut health in its relationship to oral health and overall health? Because the gut flora, our microbiome our gut garden play a major role in our immune system health, nutrient absorption, energy levels, emotional well-being.

*“Our gut microbiome guides our immune system, metabolism & even our mood and behaviour”
~ J. Sonnenburg PhD microbiologist Stanford University School of Medicine (5)*

Now you know why food is so important. Our single celled passengers have an intimate relationship with them. Their very survival depends on a regular supply of healthy food. And which health care industry professionals are in charge of the eating apparatus? Is it the chiropractor? Is it the optometrist? The cardiologist? The physiotherapist? No. It is the dental professional - the dental hygienist, the dentist and the dental assistant. We are the care givers of the teeth, the jaw, the muscles of mastication. If people want to be able to break down food and digest it and absorb it (6000 of our enzymes have bacterial origin) (6), they need optimal masticatory function. Eating and digesting and absorption of nutrients is one of the most intimate things we do with our environment. MIC DROP

Questions from patients are a good opportunity to share our total health knowledge about the body mouth connection. It will also feel less like we are lecturing patients as they will have invited us to share once they have made an inquiry. And our answers can go beyond the usual: apples and cheese are healthy snacks and avoid juice and pop. And

What else can I do between hygiene visits to keep my gums healthy?

In the days following a dental hygiene appointment – especially if it is a patient that has not been in for regular hygiene their soft tissues may feel tender for 24 hours or more after. For adequate healing their immune

systems need to be in optimal health. We get calls sometimes from patients and they might ask “why were my gums tender after the last cleaning?” We can respond...healing depends on the ability of your immune system to do its job in the healing and repair process. An impeccable diet provides you with the building blocks for healing. Did you know that only 5% of the population eats the recommended 25g of fiber daily? (7). Our gut flora needs a regular intake of fiber – this is a keystone foundational relationship – this is where our gut bacteria make SHORT CHAIN FATTY ACIDS. Bob Hutchkins PhD food scientist U of Nebraska claims these are some of the body’s most powerful anti-inflammatory agents. Ian Chapple stated most of the destruction of periodontal structures were from the host and dental professionals need to include host factors when they are creating their treatment plans (8). 97% of the population does not eat the recommended amount of fiber. Without this keystone nutrients for the gut flora there will be a poor supply of SCFA’s. And the body cannot put out the fires of inflammation burning in the bodies of our patients. Roller coaster elevations in blood sugar from poor eating habits promote post-meal dysmetabolism which support inflammation and disease (9). Chronic inflammation which scientists now report to be a major player in most modern degenerative diseases.

Isn’t once a year hygiene visit enough?

60% of the population reports not getting sufficient

sleep to feel rested each night. This raises the red flag “poor sleepers are poor healers” (10). 70% of the adult population don’t eat a single piece of fruit each day (7). Red flag: less phytonutrients, fiber and antioxidants to help douse the flames of inflammation. Only 5% of the population exercises regularly (11). Red flag waving: 95% of patients don’t enjoy the anti-inflammatory benefits of exercise. Anyone who doesn’t have healthy lifestyle habits need to think about increasing their hygiene frequency to lower their inflammatory burden.

I am at a loss, my gums seem to bleed and be tender no matter what I do?

Dental hygienists scale, we root plane, we debride, we floss...all these procedures need our patients to have a high functioning immune system to recover and heal after our treatments. Seventy percent of our immune system is located in our GI tract. Our gut flora influences our immune cells. They do this through the TREG cells. This communication can only work well if the gut bacteria are stable and diverse in variety. This communication is facilitated if they haven’t been recently decimated by a recent course of antibiotics. Antibiotics have been shown to disrupt a third of a person’s good bacteria and it can take up to a year to bounce back (12).

My mouth has gotten drier over the last year. Should I be worried?

Well Epidemiologist Tim Spector PhD who studied

15,000 twins over ten years said there are many reasons for the human body deteriorating. A number of aging theories exist. He listed the loss of muscle, changing social circumstances but also affirmed the loss of dental integrity and lower amounts of saliva (6). This epidemiologist reported that all other factors accounted for, nutrition and diet stood out as the major factor in influencing the microbiome and its impact on the senior's health. How many times have you heard from patients as they sit down slowly in the chair, "Getting old is not for sissies" or "The golden years aren't so golden." By focusing on the importance of maintaining all their teeth acknowledging the the side effects of medicines that cause dry mouth we can be their health champion. We can encourage them to preserve arch integrity and replacing missing teeth, stay hydrated and help them choose OTC products to keep their mouths moist.

SUMMARY TIPS:

1. Eat free range hormone free meat

Eating hormone free, free range antibiotic free meat used to be a very expensive food choice.

Gastroenterologist Emaran Mayer MD reports that it is rather now seen as a good investment in our overall health and in particular our gut health.

Antibiotics fed to animals as animal growth enhancers have the ability to disrupt our delicate gut flora.

2. Exercise regularly

Regular exercise makes your gut bacteria more diverse in their make-up. This adds to the stability and potency and most of all.....keeps pathogens in balance (13).

3. Manage stress

Unmanaged stress also decreases diversity in your gut flora and therefore hampers fabrication of the cellular constituents of your immune system. Poorly managed stress or life events that not only rock us emotionally can thin the mucus lining of our patients stomachs and bring pathogenic bacteria in closer proximity to the general circulation (14)

4. Limit sanitizing and being hyper clean at home

Limit your use of hand sanitizers outside the operatory. Robynne Chutkan MD author of The Microbiome Solution wrote that part of developing a balanced gut flora means having them less disrupted by our patient's extreme sanitization practices at home

5. Eat more fruits and vegetables

There is irrefutable scientific evidence that food and its macro and micronutrients can ramp up or dial down inflammation in the body. Vegetables and fruits are loaded with phytonutrients, antioxidants, polyphenols and most of all fiber – which our gut flora need to make SCFA's – one of the body's most important anti-inflammatory agents. Health Canada's brand New Food Guide makes it perfectly clear – half the plate ought to be fruit and vegetables to enjoy optimal health (16).

6. Get good sleep

When you're awake your body's repair / recover

/rebuild system is running on standby mode. It is only while you're sleeping that your body launches its powerful offensive where close to 95% of resources are poured into regeneration mode. Without adequate sleep opportunistic gut bacteria can get the upper hand and cause disruption (15). We encourage patients to reevaluate their sleep habits to ensure they are getting adequate quality and quantity for optimal GI function.

7. Take a good probiotic

Probiotics are good bacteria and can be found in cheese, yogurt, kefir, sauerkraut, miso soup and assorted vegetables. If consumed regularly they will support optimal gut health and the fortification of an empowered immune system. How about probiotic supplements? Great question, everyone seems to be interested in this popular supplement. There's sound scientific evidence for the value of probiotics helping prevent antibiotic associated diarrhea. It is a developing science and many different companies are vying for top of mind in the consumer. For every day use? In a placebo controlled, double blind, random assigned study in the Journal of Strength and Conditioning Research January 2017 (17). It looked at thirty hard driving athletes and it showed that probiotic supplementation would help rebuild the first line defense or humoral immune system that gets beaten up from intense training in the winter months. The athletes who took the probiotic had less respiratory illnesses. The authors went on to say the findings could make a case for the consumption by

immunocompromised populations (the very young and the very old) who tend to get sick each winter. There are different formulations and numerous brands available in high-end health food stores, grocery stores and pharmacies. We prefer room temperature stable varieties with multiple strains that are easy to swallow. Our favourite is Hyperbiotics and a coupon code to save 20% on your first order at checkout on their site www.hyperbiotics.com is FITLOVE

SUMMARY STATEMENT:

Patients enjoy and welcome their dental professionals emphasizing total health along with focused attention on oral health. Talking nutrition that is relevant to oral health and overall health is within our scope of practice and lastly....our patients are hungry for it.

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PHYSICAL BALANCE EVALUATION

Assessment of Current Physical Condition and Activity Level

Directions: Physical condition or physical activity can best be described as the ability to have a physically active lifestyle. Listed below are statements that refer to physical activity. Using the scale, respond to each question by circling the number that best describes your current lifestyle.

Description	Great	Good	Fair	Needs Attention
Amount of energy every day	4	3	2	1
Cardiovascular endurance	4	3	2	1
Ability to perform a continuous activity for 30 minutes	4	3	2	1
Accumulate at least 30 minutes of physical activity most days of the week	4	3	2	1
Lower body strength	4	3	2	1
Upper body strength	4	3	2	1
Ability to lift and carry heavy objects	4	3	2	1
Perform resistance type exercise regularly (ie. Weight training)	4	3	2	1
The range of motion in my joints (ie. Flexibility)	4	3	2	1
Ability to move arms and legs with minimal pain and limitation	4	3	2	1
Participation in stretching and flexibility activities regularly	4	3	2	1
Posture	4	3	2	1
Physical Appearance	4	3	2	1
Body weight	4	3	2	1
Amount of body fat vs. muscle	4	3	2	1
Live an active lifestyle	4	3	2	1
Ability to engage in activities with a moderate amount of effort or intensity	4	3	2	1
Level of current physical fitness	4	3	2	1
Physical condition for my age	4	3	2	1

60 – 76 Outstanding!

45 – 59 Great

30 – 44 Okay

19 – 29 Needs immediate attention

INTERVAL TRAINING Exercise –When Less is More with HIIT!!!

By Uche Odiatu BA, DMD NSCA Certified Personal Trainer

Want to begin a regular exercise habit and don't have the time? With a busy practice, four kids 13, 10, 7 and age 4, a busy lecture /travel schedule the last thing I have is loads of time to spend exercising. However if you are already an athlete, this is one training modality you can add to your current program and take everything to the next level. By the time you get half way through this article it will dawn on you that H.I.I.T. is going to be your way out of sedentary living. I know it's hard to believe that anything in the exercise industry is new, but H.I.IT. is all the rage in high end personal training circles. And it's time for me to blow the doors open on this insider strategy with my dental colleagues!

HIIT stands for High Intensity Interval Training and can be performed anytime anywhere with little or absolutely no equipment. From beginners to seasoned exercisers it can improve your muscular strength, increase cardiovascular fitness, boost a sluggish metabolism and burn incredible amounts of fat. It is the intensity in this new style of exercise that makes it different than "run of the mill" steady state styles of exercise ie jogging. What are the major physiological adaptations? Skeletal muscles form new mitochondria – the powerhouse factories in every cell that burn fuel for performance and energy (1). Want a second wind at the end of a long clinic day? Say good bye to the afternoon blahs and hello to renewed energy for you and your family when you get home. Have I got your attention? And by the way my resting pulse is 57 beats per minute, blood pressure 120/80, and body fat 10%, and have been a practicing dentist for more than 25 years might. I also don't exercise every day and never more than an hour even when I include my formal weight training at a gym five minutes from our home.

A HIIT exercise session is made up of a warm up period, followed by three to ten repetitions of high intensity exercise periods, alternating with medium intensity exercise as a recovery, and consummating with an easy cool down. The high intensity portion ought be done at near heart rate maximum (HRM). The medium exercise section is recommended to be about 50% intensity or 50% HRM. The exact number of reps and length of time each depends on your current fitness level and overall goals. There may be as few as four repetitions with as little as 30 seconds of high intense exercise bursts alternated with moderate periods for recovery.

Benefits of HIIT:

Time Efficient: 5-10 min as good as 50-60min to boost lung health
Excellent Fat burner: metabolism is heightened for 24 hours after
Unique: a new challenge for your heart, lungs & muscles
Engaging: multiple adjustments of intensity demand your attention
Simple: easy to implement for almost any type of exercise
Cost Effective: needs little or no equipment
Boost V02 max: the gold standard of measuring your fitness level
Strengthens your immune system: purges stale immune cells
Fun to do: a very different but pleasurable way to exercise

Why is HIIT getting so popular? Because of its lack of complexity and huge payoffs in physiological benefits! 85% of the population does not participate in regular exercise – each for many different reasons. Time being the number one! But many don't exercise because they aren't sure what to do or have made the entire process too complicated themselves.

Is it just cardio or aerobic exercise that is done with HIIT? Not at all! HIIT workouts may include a variety of exercises and drills that include bodyweight exercises, jumping ropes, dumbbells, kettle bells, rebounders and tractor tires/sledge-hammers. Yes I said sledge hammers...one of the advantages of being a certified trainer means that I get to attend loads of continuing education at personal trainer conferences around North America and I see the wildest most invigorating workouts you can imagine.

HIIT workouts that include multiple exercises and pieces of equipment might be a little confusing or overwhelming for people in the beginning. They would include a general warm up ie walking or using an elliptical but would move on to a series of alternating exercises ie walking lunges from one side of the room to the other with Sun Salutations from Yoga and jumping on the rebounder (mini trampoline).

FOR EXAMPLE:

3 minutes on the treadmill (warm up – no incline & walking)
Walking lunges (from one side of the room to the other)
Standing toe touches 1 set of 10
Walking lunges
Dumbbell chest presses on an incline bench 1 set 12 reps
30 sec on rebounder
Dumbbell chest presses 1 set of 12 reps
1 min on elliptical with intensity
lat machine pull-downs 1 set 12 reps
1 min on elliptical with intensity
Dumbbell curls 1 set 12 reps

Push-ups (until failure)
Dumbbell curls 1 set of 12 reps
Push-ups (until failure)

Research at The University of Western Ontario has reported that short interval type training and long continuous runs produce similar health and fitness results, but they do it using remarkably different techniques.

Is there an easier strategy to follow for the beginner (there's way more beginners than elite athletes in this world)? I am going to focus on the beginner or novice exerciser as it's these people who need to be sold on the value of exercise and understand the payoffs.

For my favorite group to inspire I will spend some time on an area they will appreciate. I am going to choose the stationary bike as it is one of the simplest pieces of exercise equipment to use to learn HIIT and experience the benefits. It's hard to fall off and no previous experience is required to ride it.

Warm up (2minutes)

Set the resistance at a low level – one that you can still breathe easily without any labor. RPM (Revolutions Per Minute) are 60-80.

Moderate Intensity

Set your resistance at a higher level – now you can say a few sentences but that is it. Keep the RPM the same (60-80) so you are working at a higher level. Maintain this for one minute. It will feel more challenging than the warm up and so it ought to be, "you are exercising!" You will feel your heart pumping and you may even break a sweat. Once you reach the one minute mark, set the resistance lower and enjoy some recovery

Recovery

In this phase you are allowing your body to recover and replenish. Breathing ought to return to normal and you will get a sense that you could push it again.

High Intensity

Yes, the moment people have been waiting for. Set the resistance higher

than in your moderate intensity phase and stay at 60-80 RPM for 30 seconds. 15 seconds into it, it will feel like your thighs muscles are on fire. You may even need to stand up on the pedals as you go and pull on the handle bars like the cyclists do climbing Mont Ventoux in the Tour De France. You are working very hard and you can not even utter a few words as all your energy is going toward getting you away from an imaginary grizzly bear chasing you through the forest. At the 30-second mark you will be ready for the next recovery phase.

Recovery

This phase you will again be providing your 600 muscles a much needed rest. It can last as long as one minute (but can be as long as 3 minutes for deconditioned people). After one minute (if that is what you have chosen), you can go back to High Intensity.

This pattern of back and forth High intensity / recovery can go until you have been working for approximately 5-12 minutes depending on your fitness level. This type of training, even though it might seem very basic is capable of providing incredible fat reduction results. But the results aren't just for shrinking the adipose tissue (one of your body's biggest culprits for fuelling chronic

Exercise physiologists have shown that HIIT burns more fat in the post exercise phase because EPOC or EXCESS POST-EXERCISE OXYGEN CONSUMPTION is higher with HIIT than steady state exercises

inflammation in your body).

HIIT is capable of boosting cardiovascular strength and endurance. The heart is a muscle and needs to be worked hard beyond what it is routinely capable of to get a training adaptation. Your chest has the bench press to strengthen it, but your cardiac tissue doesn't have hands to grab a dumbbell. In one sixteen week study, it was found that maximum aerobic capacity was greater with interval training than regular steady state or continuous training (2).

An important key to remember is to be gentle with your body with any new exercise program. HIIT like any other exercise technique adds new stress to your body and can be very demanding and can lead to overtraining if you push too hard. Add some HIIT at most two to three times a week. And make sure you incorporate other types of exercise into a complete exercise routine. Good quality sleep and excellent nutrition must be a part of the recipe if you want the body to respond by growing stronger.

Don't start a new exercise program unless you have the approval of your medical doctor or health care provider

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