

Buffalo Niagara Dental Meeting

50 Shades of Inflammation

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*"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 BEING or GETTING IN
THE BEST PHYSICAL CONDITION OF MY LIFE in 2017:**

1

2

3

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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 3-5 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 never feel bloated after eating	4	3	2	1
I attempt to eat whole grain products and avoid refined (white flour) grain products	4	3	2	1
I am careful to eat appropriate serving sizes of grain products (1/2 cup brown rice is one serving)	4	3	2	1
I eat dessert treats 2-4x a week (ice cream, éclairs)	4	3	2	1
I eat 2 – 3 servings of meat and alternatives each day	4	3	2	1
I eat beans and legumes	4	3	2	1
I eat wild 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 6-8 glasses of water daily	4	3	2	1
I take supplements (ie. multi-vitamin) to balance my diet and fill in the gaps of where I am deficient	4	3	2	1
I read labels on all my processed food cans, wrappers	4	3	2	1
My body weight is perfect for my height	4	3	2	1
I have no acne or skin eruptions	4	3	2	1
I need coffee to get through the day	4	3	2	1
I have no digestive issues	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
-
- Eat healthy
-
- Sleep
-
- Exercise
-
- Stress levels
-
- MD/DO physical
- Allied health visits

Articles for reference for the Mouth Body Connection:

**Fay Goldstep. Periodontal Inflammation Simplified.
Oral Health Journal December 2013**

**Chapple I. Potential Mechanisms Underpinning the Nutritional
Modulation of Periodontal Inflammation. JADA Vol 140.Feb 2009
www.jada.ada.org**

**Michaud DS et al. Periodontal disease. Tooth loss and cancer
risk in male health professionals: a prospective cohort study.
Vol 9 550-558. June 2008 Lancet**

**Ward W et al. Obesity and Periodontal Health: What's the Risk?
Should I Be Concerned? Ward W. and Fritz P. October 2012 Oral
Health Journal**

READING LIST FOR EXERCISE:

**Crowley C., Lodge HS, Younger Next Year © 2005 Workman
Publishing**

Schoenfeld Brad, The Max Muscle Plan © 2013 Human Kinetics

**John Ratey. Spark: the Revolutionary New Science of Exercise
and the Brain © 2008 Little, Brown & Company**

The One Minute Workout © 2016 Martin Gibala PhD

READING LIST FOR SLEEP & LIFESTYLE

O'Brien M. The Healing Power of Sleep © 2009 Biomed

***Dispenza J. Breaking the Habit of Being Yourself © 2012
Hay House***

Coelho P., The Alchemist © 1993 Harper Collins

Jacobs AJ. Drop Dead Healthy © 2012 Simon & Schuster

MINDFUL EATING STRATEGIES

***REFERENCE: (for dental patient influence & motivational
interviewing strategies)***

***Chapple I. Potential Mechanisms Underpinning the Nutritional
Modulation of Periodontal Inflammation. JADA Vol 140.Feb 2009
www.jada.ada.org***

From Branding and Food Consumption Researchers

- ✓ Use smaller serving dishes or bowls – You will take less food if you use a smaller dish, and the less you take, the less you eat.
- ✓ Research has shown that we rely heavily on visual cues to determine if we are full. If you fill a larger portion of your plate up with vegetables, your mind/stomach will be tricked into thinking that you have eaten more food and so you will be less likely to snack after
- ✓ Use smaller plates – A six ounce pasta serving will look like a small amount of food on a large 12 inch plate. Put the same amount of food on an 8 inch plate and it will look like a good size serving.
- ✓ Don't buy bulk of your favourite foods – it leads to eating them much more than you would normally
- ✓ Use slender glasses for alcoholic beverages – Studies show that you will tend to pour 30 percent more into a wide glass than into a tall, slender one. Use the wide glasses for water – which you want to pour more
- ✓ See while eating it – If you can see what you have already eaten, you will eat less. Same goes for drinking. If the empty glasses and bottles are left on the table, people tend to drink less.

- ✓ The 20 percent rule – Think 20 percent less. Only put 80 percent of what you think you might be able to eat on your plate. Eat slowly and you probably won't miss that 20 percent. This will help you to stop eating when you are no longer hungry – instead of when you are bursting full.
- ✓ Don't put serving dishes on the table – Having them seven feet away will allow you that chance to ask yourself whether you really need to get up for more. Keep the salad and veggies on the table.
- ✓ Do not keep candy, mini-chocolate bars scattered throughout the house unless you want to gain approx 6 pounds per year. Keep little dishes of treats off your desk at work unless you want sneak on extra pounds during the year.
- ✓ De-junk your house – Impulse foods will get eaten if they are available. Put leftovers in the freezer or give them away after a dinner party.
- ✓ Minimize distractions while eating – Only eat food in the kitchen and dining room and use plates or a bowls when snacking. Watching TV (eat 25% more food) and eating out of the bigger container or original bag is a recipe for overeating.
- ✓ Use chopsticks at Chinese food buffets. It encourages slower eating. Studies have shown that overweight people usually opt for forks and spoons at Chinese food buffets.
- ✓ When you eat dinner out or at home, if you keep clearing dishes away, your brain thinks you can keep eating. Leaving plates on the table gives your brain cues that you have eaten enough and you will have less tendency to keep eating or ordering more
- ✓ Water based soups eaten before your entrée make you eat ~25% less calories overall when you eat out.
- ✓ When the entrée comes to your table while dining out and it looks like it could feed a linebacker from the Dallas Cowboys, have the waiter immediately take half or a third away and place it in a doggie bag – “Out of Site – Out of Mind!”
- ✓ Adjust vs. purge some old habits – If you are in the habit of going for ice cream every weekend, try something new like low-fat frozen yogurt with fruit.
- ✓ Use fruit with yogurt for dessert vs. pastries (full of trans fats and sugar)

- √ Don't deprive yourself – Keep your comfort foods, but eat them in smaller amounts and eat them less often.
- √ Start with one thing at a time. Do not try to change all your eating habits at once, unless you just got selected for the Olympic team as an athlete.

READING LIST FOR NUTRITION

Tim Spector. The Diet Myth: the Real Science Behind What We Eat. © 2015 Weidenfeld and Nicolson

Nancy Clark's SPORTS NUTRITION GUIDEBOOK 5th ED. © 2014 Human Kinetics

Sam Graci. The Path to Phenomenal Health © 2005 Wiley

David Servan-Schreibner. Anti-Cancer: a New Way of Life. © 2008 Harper Collins

Michael Greger MD How Not to Die © 2015

The Microbiome Solution

YOUR TRILLION LITTLE FRIENDS

Russell R PhD., Exercise: the Next Frontier in Microbiota Research. Exercise and Sport Reviews. 2016 American College of Sports Medicine. 2016 Pp4-5

Trillions of organisms live in our intestines and their metabolic activities affect intestinal health and modulate chronic disease

Evidence from animal studies show exercise modulates microbial communities in a positive way.

Campbell Sara et al., “Exercise is a novel promoter of intestinal health and microbial diversity” American College of Sports Medicine October 2016

Exercise produces a more diverse microbiota and decreases pathogenic bacteria and boosts good bacteria.

HIIT was shown to improve insulin sensitivity and positively affect microbiota communities

YOUR EATING HABITS AND YOUR MICROBIOTA

The more diverse your diet and the more vegetables and fruits you eat the healthier your microbiota will be

Reference:

Tim Spector PhD, *The Diet Myth*, Weidenfeld and Nicolson 2015

OPTIMAL PREBIOTIC & PROBIOTIC SOURCES:

Fruits

Vegetables

Whole Grains

Fermented foods: sauerkraut, pickles, kimchi (from fermented cabbage), miso (paste made from soybeans), tempeh (made from rich whole

soybeans), kombucha (tangy beverage from fermented tea).

DAIRY:

Yogurt

Kefir

Cheese

Reference:

***Sternberg B PhD, Fleishman Clare MS, RD.,
Probiotics: the Good Bacteria. Institute of Natural
Resources March 2015***

Physical Activity:

“There’s an inverse relationship has been reported between regular physical activity and markers for chronic inflammation” – Inflammation: Causes, Prevention & Control Biomed 2010

Patients who exercise or live active lives will have lower markers for overall inflammation in their bodies.

The dental professional is able to promote whole body health:

Langster et al shared: “The dentist can become an advocate for general health promotion & disease prevention. The relationship between periodontal disease to diseases & disorders at distant sites” JADA 2008; 139 (10) 1389-1397

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 enjoyed 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 is good	4	3	2	1
Upper body strength is good	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 is optimal	4	3	2	1
Overall physical Appearance	4	3	2	1
Body weight ideal for height	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

Resistance Training:

O'CONNOR et al 2010 "Mental health benefits of strength training in adults" Am J of Lifestyle Med 4(5) 377-396

1. Reduces anxiety after extensive study on the value of a moderate intensity program alleviated participants' condition. Anxiety is such a common issue in North America. Poor stress management strategies lead to ambient anxiety, which over time will lead to learnt helplessness and then depression – one of the most incapacitating conditions.
2. Improved executive functioning – ability to make decision
3. Reduced fatigue and alleviated chronic fatigue symptoms. 50% of population complain of being tired
4. Improved self-esteem. Jack Canfield PhD reported that 78% of people have lower self esteem that prevents them from enjoying a fulfilling life
5. Improved sleep quality – Anyone suffering from any chronic disease spends more time in Stage 2 vs stage 4 where all your healing occurs
6. Lowered blood pressure
7. Improved posture
8. Improved BLOOD SUGAR MANAGEMENT
*****VERY IMPORTANT AS 50% of POPULATION IS EITHER DIABETIC OR PRE-DIABETIC
9. Builds youthful vigor into your every step
10. Less chance of falling
11. Adds functional fitness to your life

12. Leads to independent living after 65 years
13. Adds confidence
14. Helps with arthritis symptoms
15. Alleviates Parkinson's Symptoms (American College of Sports Medicine)

Guidelines for Resistance Training

NOTE: Learning new strength exercises with one's bodyweight may be enough to start. Over time you can progress to resistance bands and then free-weights and/or machines.

Definitely get your physician's approval before starting any new exercise program.

1. Always perform a warm-up
2. Pick up/replace weights with control
3. Never hold your breath while lifting
4. Utilize proper technique
5. Use controlled movements
6. Increase the training load progressively
7. Combine with sound nutrition for best results
8. ONCE per week for maintenance *****IDEAL FOR BUSY PEOPLE. 30 minutes once a week has physiological benefits
9. TWICE PER WEEK for growth
10. THREE TIMES a week for optimal growth

11. FOUR TIMES a week if you're a teenager living in your parents basement and have very little else to do except make your bed and put your dishes away
12. HIRE A Certified personal trainer ideally if you aren't a self-starter and have little background

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 10, 7, 4 and 13 months, 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.I.T. 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 to 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

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

results. But the results aren't just for shrinking the adipose tissue (one of your body's biggest culprits for fuelling chronic 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

References:

- 1 Journal of Applied Physiology 111:1554, 2011
- 2 Journal of Cardio. Rehab. Prev. 31: 378, 2011

Dr Uche Phillip Odiatu BA, DMD is the author of The Miracle of Health & Fit for the LOVE of IT! This practicing dentist is a NSCA Certified Personal Trainer & professional member of the American College of Sports Medicine. He lectures at all major conferences. Friend him on www.facebook.com/Odiatu Follow his Tweets on @Fitspeakers Take a peak at www.DrUche.com