Gut Health: Do Your Patients Have the Guts to LIVE LIFE WELL?

May 10th 2019

ODA ASM

Dr U. Phillip Odiatu BA, DMD.
NSCA Certified Personal Trainer
Personal Training Specialist Can Fit Pro
Professional Member of ACSM
Cert Boot Camp Instructor
Cert Yoga Instructor

www.Twitter.com @Fitspeakers
www.linkedin.com Dr Uche Odiatu
Website www.DrUche.com
Phone 416-558-1774 Cell
fitlove@rogers.com Email for Dr Odiatu

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

“Your body is the ground and metaphor of your life,
the expression of your existence.”
~ Gabrielle Roth

“What is always speaking silently is the body.”
~Norman Brown
WHAT ARE SOME OF MY REASONS FOR BEING or GETTING IN THE BEST PHYSICAL CONDITION OF MY LIFE:

1

2

3

4

5

6

7

8

9

10
YOUR TRILLION LITTLE FRIENDS


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
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.

<table>
<thead>
<tr>
<th>Description</th>
<th>Great</th>
<th>Good</th>
<th>Fair</th>
<th>Needs Attention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of energy every day</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I enjoy eating a diet with lots of variety</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat at least 3-5 servings of vegetables daily</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat a variety of vegetables (many different colors)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat at least 3 to 5 servings of fruit each day</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I never feel bloated after eating</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I attempt to eat whole grain products and avoid refined (white flour) grain products</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I am careful to eat appropriate serving sizes of grain products (1/2 cup brown rice is one serving)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat dessert treats 2-4x a week (ice cream, éclairs)</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat 2 – 3 servings of meat and alternatives each day</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat beans and legumes</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I eat wild seafood / fish at least once a week</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I choose healthy snacks and avoid snacks that have low nutritional value</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I drink at least 6-8 glasses of water daily</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I take supplements (ie. multi-vitamin) to balance my diet and fill in the gaps of where I am deficient</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I read labels on all my processed food cans, wrappers</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>My body weight is perfect for my height</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I have no acne or skin eruptions</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I need coffee to get through the day</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I have no digestive issues</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

TOTAL:

70 – 80 – Outstanding!
60 – 69 – Great!
45 – 59 – Just okay
20 – 44 – Needs immediate attention
ARTICLE:

Great Guts – Live Life Well

Want to stay ahead of the curve and set yourself apart from pack? This process starts with incorporating the latest information from the world of science into your office. What else is new beside CBCT’s, silver diammine fluoride and digital impressions? Let’s talk about the human micro-biome. What’s that you’re asking? Gut flora.

There are trillions of them. Most dental people know of S.mutans and P.gingivalis but that is only two of the 1,000’s of single celled organisms that add up to 100 trillion in total. And they out number your human cells 10 to 1. Yes you are not alone.

This field is still very new. It’s only been since 2012 when the National Institute of Health completed the first part of the Human Microbiome Project (1). What’s it got to do with you…the practicing dentist? Well we are oral physicians and are the experts of one of the largest repositories of flora….the oral cavity. The GI tract or specifically the gut has 80% of the total flora in the body. The gut plays a major role in the immune system – 70% of the cellular parts of the whole immune system are made here (2). Ever wonder why some people don’t heal well after an extraction or implant placement? It could be more than simply smoking or poor flossing technique if they suffer, from reflux, constipation, irritable bowel, diverticulitis, etc.

When good bacteria are abundant they contribute in a major way to the immune system. The immune system is more than simply putting out the fires of infections but concerns the day to day repair and maintenance that keeps us healthy and strong. Probiotics help stimulate the immune cells: T-cell, B-cells, macrophages and natural killer cells. Our well-intentioned prescription for a broad spectrum antibiotic takes care of the abscess in the short term but our body’s flora take a hit for up to six months after - hence the new guidelines by the Canadian
Dental Association on prophylactic antibiotics. “There is no reliable evidence that antibiotic prophylaxis prior to dental procedures prevents prosthetic joint infections” (3). NOTE: Of course people need to speak to their surgeons to ensure their recommendations are taken in to consideration.

Another reason for the new way of looking at antibiotic prescriptions is growing antimicrobial resistance. Global health care organizations like the WHO (World Health Organization) are relaying the message that the overuse and misuse of antibiotics makes us susceptible to a whole dearth of diseases that we thought would not come back (4). Scientists are saying that if our arsenal of antibiotics doesn’t expand, drug resistance infections might kill more people worldwide than cancer by 2050 (5). All the more reason to consider carefully the necessity of prescribing an antibiotic for that emergency patient with a toothache.

Bacteria are very successful organisms. Microbes have been on the earth the last three billion years while animal life only 800 million years. The microbes in our body collectively weigh only 4 pounds but with roughly 1000 species they have more than 3 million genes (6). Their seniority on the planet makes them very versatile and their influence is powerful. Only recently they are thought to influence health as powerful as your genes stated Dr Mazemanian PhD professor of microbiology California Institute of Technology.

Do you want a novel approach to halitosis? Probiotics (naturally occurring in vegetables and healthy fibrous foods) and in capsule (dietary supplement) form support overall oral health. Good bacteria added to the diet in food or capsule form can bring more balance or harmony to the mouth and prevent the proliferation of hydrogen sulfide (linked to halitosis)(7). One study from Turkey demonstrated the group eating yogurt with Bifidobacterium had lower amounts of cavity-causing bacteria than the control group (7)
There is increasing scientific evidence suggesting that when there is an imbalance of harmful and beneficial of organisms, it supports the development of several serious chronic diseases: type 2 diabetes (8), cancer (9) and Inflammatory bowel disease (10) - another reason to maintain balance to your resident microbiome.

Dental professionals know the value of saliva in its many roles: mastication, immune system (IgA), smooth speech etc. With regards to mastication and nutrient absorption, did you know that there are only 30 human enzymes but over 6000 enzymes from our bacteria (11)? Imbalances in our bacteria mean that enzyme numbers get reduced. Nutrient absorption would be altered and over time, growth and repair of the human body would be negatively impacted. This would be a suitable addition to the discussion with patients who are suffering from dry mouth and report that their chewing has been adversely impacted. Knowing bacterial enzymes outnumber human enzymes two hundred to one, you could bring some hope or relief to their worry. As long as their gut flora is diverse and healthy, they are still going to be able to digest food. Going on an antibiotic at the same time for another condition however might disrupt their normal flora and impact their enzymatic action.

This is not meant to be an exhaustive piece on the subject but just an introduction to a new area of science that is coming to light. Looking at the bigger picture when asking updating a patient’s supplement list, asking more expanded lifestyle questions about eating habits, exercise (known to boost healthy gut flora (12)) and sleeping patterns are all part of adding to your influence on client or patient health. One of the reasons I love being a dental professional is that people not only come to me for their oral health concerns, but by helping patients with their oral care we are able to positively impact their overall health.

Scientific American May 2015
Campbell SC “Exercise is a novel promoter of intestinal health and microbial diversity” Exercise Sports Science Rev Vol 45, No 1 41-417 2017
CDA Canadian Dental Association and AMMI Association of Medical Microbiological and Infectious Disease Canada 2017.
CDA Essentials “Antimicrobial Stewardship in dentistry – no time to waste” Issue 1 2017
Discover Magazine Jan/Feb 2016 “Stamping Out Superbugs”
Steinberg B & Calre Fleshman M. Probitics: the Good Bacteria. Institute of Natural Resources © 2015
Cani et al. “Metabolic endotoxemia initiates obesity and insulin resistance” Diabetes 56(7): 1761-1771. 2007
Kostic AD et al. “Genomic analysis identifies association of Fusobacterium with colorectal carcinoma” Genome Res 2012. 22(2): 292-298
Strober W. “Impact of the gut microbiome on mucosal inflammation.” Trends Immunology 2013. 34(9): 423-430
Spector Tim PhD. “Diet Myth” 2015

Dr Uche Odiatu DMD is an internationally recognized wellness & performance expert. This practicing dentist is also a certified personal trainer, media personality (ABC 20/20 & Canada AM), a professional member of the American College of Sports Medicine & the author of The Miracle of Health. He has lectured
at the largest dental conferences in North America: ADA annual convention, AGD annual national convention, Pankey Alumni Weekend, Chicago Mid-Winter Meeting & more.
Want more information from Uche Odiatu?
Twitter @fitspeaerks
Instagram @Fitspeakers
Facebook “Uche Odiatu”
email: fitlove@rogers.com
Dental office: 1-416-224-1775
Direct line 1-416-558-1774

READING LIST FOR NUTRITION

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

Sam Graci. The Path to Phenomenal Health © 2005 Wiley


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 (2 minutes)

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 grizzle 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 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

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
High Intensity Interval Training info. From Uche Odiatu NSCA Certified Personal Trainer

This is just a brief summary. Please email me at fitlove@rogers.com or info@fitspeakers.com or TEXT me 416-558-1774 for more specific information

Benefits of HIIT:

1. 7 minutes of HIIT is an efficient way to train your cardiovascular system
2. You dip more into fat burning over a 24hr period than one hr of steady state cardio.
3. EPOC excess Post Oxygen Consumption for 24 hours is the same as for one hour of cardio. Meaning for 24 hours after you metabolism is kicked into high gear. Why do one hour if the same amount of EPOC as 7 minutes
4. Better transferable to everyday life where you have to run hard, recover and run hard again i.e. running for a gate change at an airport and then stopping once you get on a flight
5. The stop and go of HIIT is better at training aerobic capacity. i.e. you go to lactate threshold and then recover and then go hard again and then recover.
6. STATIONARY BIKE is easiest way to do HIIT in the winter in Canada.
7. HIIT is one of the best ways to build cardiovascular strength and is better for your heart than steady state training. – CAUTION – you need to have a healthy heart to start with must not have been warned that you have to be careful with any new exercise program.
8. LOW intensity – can maintain a conversation while exercise. Moderate
intensity – trouble finishing sentences. HIGH intensity – cant say more than a few words
9. Be wary of overtraining as HIIT is intense by definition and the joints, tendons, wrists, lower back need to be treated respectfully with the different modes of exercise
10. Whole idea is that intense work is followed by gentle recovery work
11. Ontario Society for Health and Fitness recommended benefits for older and for cardiac patients. Thye reported that 20 min of HIIT is equivalent to one hour of steady state running or jogging
12. HIIT has a huge after burn or EPOC vs steady state (no afterburn where the metabolism stays heightened after the exercise session).
13 HIIT has as much as 37% more fat burning after an exercise session than steady state due to its intensity
14. Due to its intensity one should leave one day in between HIIT workouts if intense enough ie 20 min of HIIT needs to be done only 3-4x a week
15. You can incorporate kettlebells, squats, stretching, DB weights etc into any HIIT workout as the between hi intensity cardio you can do active recovery

ie

Seven min HIIT using a stationary bike. Of course you can substitute an elliptical or treadmill (just increasing intensity by adding resistance on elliptical and speed + incline on treadmill)

one min of 5 out of 20 intensity knob or reading on your stationary bike
30sec at 10
30 sec at 20 (high intense)
30 sec at 5 (low intensity)
30 sec at 20 (high intensity)
30 sec at 5 (low)
30 sec at 20 (hi)
30 sec at 5 (low)
30 sec at 20 (hi)
30 sec (5)
30 sec at 20 (hi)
one min 5 (cool down)

this is a 7 min workout that I will do right now. This is a one to one ratio hi/low intensity. If someone was less trained it would be:

1:2 (high: low or 30 sec high and 60 sec low and back and forth after that...hope this makes sense. So one would have twice as long to recover between high intensity bouts
1:4 is one min high and 4 min recovery and allows more time to recover between intense bouts
1:9 is like beginner marathon training. One min jog and 9 min walking to allow even a beginner to do a marathon eventually

“When you fight something, you’re tied to it forever. As long as you’re fighting it, you’re giving it power.”
~ Anthony de Mello

IMPORTANT NOTE: Always obtain your doctor’s permission before beginning any exercise program or making changes to your diet or nutritional program.