



Welcome to YOUR FIT NEWS!

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"Tabata 'Discussed'" by Gabe Rinaldi, FIT General Manager

Tabata Discussed

Tabata is not toasted ciabatta bread - although that sounds really good right now. If you've trained at FIT for a while, then the mention of Tabata may bring up feelings of intense exhaustion. This article will discuss where the term Tabata originates, the science behind it, and why we use it at FIT.

Tabata is an interval protocol that was studied by several Japanese researchers at the National Institute of Fitness and Sports in Japan. The lead researcher was Dr. Tabata and we have him to thank for the term Tabata as it applies to the interval protocol. The main research study was published in 1996 in the journal "Medicine and Science in Sports and Exercise". The title of the research was "Effects of Moderate-Intensity Endurance and High-Intensity Intermittent Training on Anaerobic Capacity and VO₂max".

The research study consisted of two training experiments. In the first experiment 7 random male students who were members of various varsity sports teams trained 5 days per week for 6 weeks on an indoor exercise bike. During each training session they rode the bike at moderate intensity (70% of VO₂ max). The resistance was increased throughout the duration of the study to maintain the same intensity as aerobic fitness improved. The researchers were measuring anaerobic capacity (the maximal accumulated oxygen deficit) and aerobic capacity (VO₂ max). At the conclusion of the 6 weeks it was found that anaerobic capacity did not statistically significantly increase. Aerobic capacity (VO₂ max) did significantly increase about 10% (53 +/- 5 ml/kg/min to 58 +/- 3 ml/kg/min).

In the second experiment 7 different random male students who were also members of various varsity sports teams trained 5 days per week for 6 weeks on an indoor exercise bike. During each training session they did a 10 minute warm-up, then performed 7 to 8 sets of 20



seconds of high intensity exercise (about 170% VO2 max) followed by 10 seconds of rest. The resistance was also increased throughout the duration of the study to maintain the same intensity as anaerobic fitness improved. At the conclusion of the study it was found that this group increased aerobic capacity about 14% and anaerobic capacity by about 28%.

This research showed that moderate-intensity aerobic training improves only aerobic capacity, but high-intensity intermittent training improves aerobic capacity to an even greater extent and also improves anaerobic capacity. The group that did the intervals exercised for 70 minutes (50 of which was warming up) per week. The group that did the steady state moderate intensity cardio exercised for 300 minutes per week. I don't know about you, but I would rather exercise for less time and get greater benefits.

Many other research studies have also found high intensity interval training to be more effective for fat loss compared to lower intensity steady state exercise. It is beyond the scope of this article to discuss that research, but it is another reason to incorporate the Tabata protocol into your routine.

The Tabata protocol can be applied to virtually any exercise like jumping rope, squats, push-ups, pull-ups, sit-ups, box jumps etc. At FIT we incorporate this method when appropriate and eventually strive to have our clients perform the intervals at very high intensity. Dr. Tabata said the participants in his research study were literally laying down in exhaustion at the end of the 4-minute interval workout. It may not be fun, but it produces incredible results. We strive to make the workouts at FIT as effective as possible. We scale everything to an appropriate level, but eventually you may be asked to perform a Tabata. If you feel the need to curse at Dr. Tabata afterwards, you may want to mention his fellow researchers Nishimura, Kouzaki, Hirai, Ogita, Miyachi, and Yamamoto.

"Intensity in Exercising: Serious Results or Macho Perversity?" by John Nguyen

I had a track coach in high school that ran us in the field so hard that we spent more time flat on our backs and sucking air than we did on our feet. Then, when the dreaded whistle blew again, we got up and repeated the whole thing until our lunch shot to our feet, followed by our breakfast, and then our dinner from last night, too. If our lungs, intestines, bowels and kidneys weren't connected, they would've splattered on our shoes, too. Finally someone on the team summoned the courage (or had the sense) to ask Coach why he trained us like this and his reply was as sharp as the pre-season air: "I like watching you suffer."

There are training programs that have a way of putting the hammer down, pomposity bordering on masochism. Throwing up breakfast is not necessarily indicative of an effective training program; however, the fact remains that, to gain the most benefit and to affect the biggest positive changes in the body, a certain level of discomfort and duress must be part of the training experience. If you are not mentally prepared for this truth, then you'd probably say that the hammer falls pretty darn hard. And this may very well be the case, but this doesn't make you a softie and your trainer a bully. It means she is prescribing you an exercise program that is guaranteed to bring positive changes. If, however, you are uncomfortable with this idea, then you should communicate this to your trainer so that she may replace the hammer with fluffy pillows and a cup of tea.

So maybe I'm being facetious, and that you don't necessarily want soft pillows and tea but neither do you want to throw up your lunch, breakfast and last night's bottle of Paso Robles. You must acknowledge, however, that exercise is physically demanding and requires your full concentrated effort, if it were to make the best impact on your health, fitness, and body composition. Gabe's article in this month's newsletter ("Tabata Discussed") explains a protocol that is high in intensity and big in results, while minimal in time investment. One rationale for the inclusion of high intensity in your training program is that it leaves you with a greater fat-burning effect. This phenomenon is called "excess post-exercise oxygen consumption," or EPOC.

A study by Murphy and Schwarzkopf (1992) found that a circuit training program, in which the subjects moved from one resistance exercise to the next with little rest, was more effective at raising and prolonging EPOC, as compared to a regular weight training program with longer rest periods. The implication with this finding is that, after the exercise bout, the circuit-style training program produces a greater fat burning effect that lasts much longer.

As many of you who are our clients know, FIT has added the Crossfit application to its own training philosophy. Although the Crossfit philosophy itself is based on simplicity, its rationale is far more complex than this article can discuss; but, suffice it to say that one of the many positive effects you get from applying Crossfit into your training is that you'll achieve the same (or better) physiologic



responses that the Murphy and Schwarzkopf study found with the use of circuit training: greater and longer fat burning. And we shouldn't ignore the fact that this style of intense training also increases other fitness factors such as increased VO2 uptake, greater lactic acid buffering and removal, and improved cardiovascular and respiratory function. (I want to make it clear that Crossfit isn't simply "circuit training," but has purpose, methods and effects far beyond it.)

I personally have incorporated the Crossfit training philosophy into my own training program, and I can say first-hand that it is probably THE most effective training program that I have ever used in my life for becoming fitter, leaner and healthier.

So with that, we would rather not see our clients "go through the motion," session after session, while conversing about irrelevant topics with trainers or workout partners, or talk on the cell phone about what the stock is doing. We would like everyone to realize that, during training, focus and mental energy must be keen; so, for the three hours spent training with us each week, one should reach the kind of physical intensity that the other 165 hours of the week will often never see.

We are a serious gym. And as such, I am concerned that some people might confuse our drive at effectiveness with masochism, and mistake our knuckle-down, disciplined philosophy as simply an imprudent macho doctrine. (By the way, we don't tolerate trainers who approach training with a macho attitude; therefore, we encourage you to report these trainers so that we can take them out back and beat them down with sticks.)

As a company, we have decided that we would generally prescribe exercise programs that are proven to make the most positive impact on the health and fitness of our clients, in the quickest amount of time. This means that almost everyone from the elite athlete to the grandparent are encouraged to work at his or her best effort whenever possible, while nourishing in our forethoughts the rule that everything done is scalable to individual skill and experience.

We hope you understand that exercise, if it were to be maximally effective, must be taken to a level that may cause discomfort – muscle burns, increased respiration, deep fatigue, etc. Though we wouldn't want to carry a waste basket around in the hopes that you'll fill it up with the ravages of training brutality, we do want you to achieve results from the time you spend with us.

As for the cruel and unusual punishment our track team suffered under the dictatorship of our coach, what was the result? Our team won second place in an 11-school Invitational meet for that year. We all found out later that the coach for the first-place track team made our coach seemed like an angel. Bullies!

"The 'Before you Diet' Test", by Scott Kolasinski, FIT Metabolic Director

BEFORE DIETING, MAKE SURE YOU'RE READY

For this time of year, many people are preparing for another New Year's resolution of weight loss. Studies have shown that those people successful at losing fat have shown that it is more than just a cosmetic issue. Lifestyle change – most notably, modification of eating behavior, physical activity, and psychological factors like attitudes, goals, and emotions – is the central determinant of whether people will lose weight (i.e. fat weight) and maintain the loss.

Below is a questionnaire from the lab of Dr. Kelly D. Brownell out of Yale University to assess whether the time is right to try to lose weight, to see if you really are prepared. Take this questionnaire seriously. Too many people rush into diets or lifestyle changes under circumstances that make lasting success unlikely. This may create the problem of yo-yo dieting – losing weight and gaining back all or more of it – which doubles the risk of developing heart disease and dying from it.



THINKING ABOUT DIETING? TAKE THIS TEST BEFORE STARTING

Goals and Attitudes:

Score 1 for not at all, 2 slightly, 3 somewhat, 4 quite, 5 extremely

1. Compared with previous attempts, how motivated to lose weight are you this time?
2. How certain are you that you will stay committed to a weight loss program for the time it will take to reach your goal?

Score 1 for cannot, 2 can somewhat, 3 uncertain, 4 can tolerate well, 5 can easily

3. Consider all outside stress in your life (work, family obligations, etc.) To what extent can you tolerate the effort required to stick to a new eating lifestyle?

Score 1 for very unrealistic, 2 somewhat unrealistic, 3 moderately unrealistic, 4 somewhat realistic, 5 very realistic

4. Think honestly about how much weight you hope to lose and how quickly you hope to lose it. Figuring a weight loss of 1 to 2 pounds per week, how realistic is your expectation?

Score 1 for always, 2 frequently, 3 occasionally, 4 rarely, 5 never.

5. While eating less, do you fantasize about eating a lot of your favorite foods?
6. While eating less, do you feel deprived, angry, or upset?

If you scored 6 to 16, it is not a good time to diet; inadequate motivation and commitment and unrealistic goals can get in your way; 17 to 23, think about ways to boost your diet readiness before you begin, 24 to 30, your path is clear.

Hunger Cues:

Score 1 never, 2 rarely, 3 occasionally, 4 frequently, 5 always.

7. When food is mentioned, do you want to eat even if not hungry?

8. Do you have trouble controlling your eating when your favorite foods are around the house?

Score 1 always, 2 frequently, 3 occasionally, 4 rarely, 5 never.

9. How often do you eat because of physical hunger?

If you scored 3 to 6, try to control the attitudes that occasionally make you overeat; 7 to 9, dieting will be easier if you try to resist external cues and eat only when you are physically hungry.

Control Overeating:

Score 1 if you would eat much less, 2 if you would eat somewhat less, 3 if it would make no difference, 4 if you would eat somewhat more, and 5 if you would eat much more:

10. Although you planned to skip lunch, you are talked into going out to eat.

11. You go off your diet by eating a fattening, forbidden food.

12. After faithfully following your diet you decide to test yourself by eating a "treat."

If you scored 3 to 7, you recover rapidly from mistakes, but should get professional help if you often alternate between strict dieting and eating out of control; 8 to 11, you have a flexible, balanced program that is not disrupted by unplanned eating; 12 to 15, your reaction to problem-causing eating events can be improved.

Binging and Purging:

Score 2 for yes, 0 for no.

13. Have you ever eaten lots of food rapidly and felt the eating was excessive and out of control?

Score 1 for less than once a month, 2 about once a month, 3 a few times a month, 4 about once a week, 5 about 3 times a week, 6 daily:

14. If yes, how often over the past year?

Score 5 for yes, 0 for no.

15. Have you ever purged to control your weight by using laxatives, diuretics, or induced vomiting?

Score 1 for less than once a month, 2 about once a month, 3 a few times a month, 4 about once a week, 5 about 3 times a week, 6 daily:

16. If yes, how often during the past year?

If you scored 0 to 1, binge eating and purging are not your problem; 2 to 11, get professional help if these eating patterns arise more often; 12 to 19, your potentially serious eating problem needs immediate professional attention.

Emotional Eating:

For each of the next three questions, score 1 never, 2 rarely, 3 occasionally, 4 frequently, 5 always.

17. Do you overeat when you feel anxious, depressed, angry or lonely?

18. Do you celebrate feeling good by overeating?

19. When things don't go well with others or on your job, do you eat more than you would like?

If you scored: 3 to 8, you don't seem to let emotions affect your eating; 9 to 11, monitor your occasional tendency to eat in response to emotional highs and lows and find alternative activities; 12 to 15, you need to find other ways than eating express your feelings.

Exercise:

Score 1 for never, 2 rarely, 3 occasionally, 4 somewhat, 5 frequently.
20. How often do you exercise?

Score 1 for not at all, 2 slightly, 3 somewhat, 4 highly, 5 completely.
21. How confident are you that you can exercise regularly?

Score 1 for completely negative, 2 somewhat negative, 3 neutral, 4 somewhat positive, 5 completely positive.
22. Do you have a negative or positive picture about exercise in your mind?

Score 1 for not at all, 2 slightly, 3 somewhat, 4 quite, 5 extremely.
23. How sure are you that you can work regular exercise into your daily schedule?

If you scored 4 to 10, change attitudes that are blocking your way to regular exercise; 11 to 16, to feel more positive about exercise, think of ways that are fun and fit your lifestyle; 17 to 20, your path is clear to a more active life.

Give the Gift of Fitness for the Holidays By: Cathy Siciliano, CMO, HyperStrike

Give the Gift of Fitness for the Holidays

By: Cathy Siciliano, CMO, HyperStrike

HyperStrike, F.I.T.'s online training partner, is offering gift subscriptions this holiday season. A gift subscription is a great gift for anyone who trains at F.I.T, has home gym equipment or likes to workout on their own. And at \$24.95 for 3 months, you could easily buy a subscription for yourself for your off days or when you travel and can't get into F.I.T.



What You Give

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What They Get

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Buy Now or Learn More

<http://www.hyperstrike.com/pages/Give-Gift-Of-Fitness/>

FIT Client of the Month for December 2006- Jeff Cox

Name: Jeff Cox

Age: 40

FIT Member since: April of 2001

Goal: Lose weight and get stronger

Results: As of yesterday he weighs 186lbs... one pound away of his goal of 185, which was what he weighed in high school. He started here at 217lbs. 31 pound weight lose.

Likes: Biking, snow-boarding, golfing, fishing, and classic muscle cars. Having fun outdoors with my wife and three kids.

Dislikes: Disappointment. Dishonesty. Doing things with a half assed attitude.

PR 500 meter row: 1:30

PR Chin-ups: 9 strict consecutive

Keys to success: Jeff is very driven and disciplined. Jeff knows what he needs to do to reach is goals. He has found a good balance of work, family and healthy lifestyle all while still having some fun.

When Jeff started at F.I.T. he was looking to lose some weight and just generally get in better shape. We were accomplishing this when something very unexpected happened. He had a heart attack, in his thirties. Bypass surgery later he is now having a very healthy life with his family and still enjoying biking and kicking my butt on the golf course.

Quote from client: I've always been athletic, and enjoyed working out, but two years ago I had a serious wake up call with an unexpected heart attack and bypass surgery. I'm a general contractor, building high end homes in this area, and the stress of owning this type of business is pretty intense. After the heart attack, I realized that I needed to find more constructive ways of channeling my stress. Coming to FIT and working out with my trainer is something I really look forward to. I may not be able to enjoy a beer while riding the exercycle here, but I've managed to get back down to my optimum weight, and lower my stress considerably. I think as a result, I'm better at work, and with my family.



"Holiday Season injury Prevention" – Chris Reed MPT, OCS, ATC

Holiday Season Injury Prevention by Chris Reed MPT, OCS, ATC



With Thanksgiving behind us, the Winter Holiday Season has officially begun. It is that time of year when everyone breaks out the decorations and tries to "out-do" the neighbors. It is also that time of year that we all play in winter pick-up games of football and hockey with our family and friends. The American Academy of Orthopedic Surgeons reports over 49,000 luggage-related injuries and over 500,000 winter sports injuries in 2004. The Center for Disease Control estimates that every year between November 1 and January 31 nearly 5800 injuries are caused by falls while putting up holiday decorations or doing other holiday related activities. Below are a few guidelines to keep in mind this Holiday Season as you put up the lights and spread your Holiday Cheer.

Ladder Safety:

1. Inspect the ladder to ensure it is in good working order. Make sure to clean off any mud or liquids that may be on the ladder.
2. Place the ladder on stable level ground prior to climbing on it.
3. Place extension ladders 1 foot from the wall for every 4 feet in length.
4. Stay centered on the ladder while climbing. Make sure to move materials carefully while on the ladder as you may lose your balance.
5. Reposition the ladder often. Do not reach or lean too far to one side.
6. Do not stand on the top two rungs.
7. Do not sit on the ladder while resting.

Luggage Safety:

1. Use luggage with handles and wheels.
2. Pack lightly. Use a couple smaller bags instead of one large piece of luggage.
3. Stand next to your luggage and bend at the knees to lift it. Do not bend over from the waist. Hold the luggage close to your body while carrying it.
4. Do not turn or twist while lifting or carrying luggage.
5. Do not carry bulky items. Get someone to help you.
6. Carry light pieces in both hands instead of in just one hand to decrease the stress on the spine.
7. Lift carry-on luggage to the top of the airplane seat first, then into the overhead compartment wheels first.
8. Use two shoulder straps whenever possible. When only one is available, make sure to switch sides often.
9. Carry all rolling luggage up or down stairs.

Snow Shoveling/Blowing Safety:

1. Make sure you are in good physical condition. If you have any medical conditions that hinder you from being able to exercise, consider hiring help.
2. Never add fuel with the snow blower running.
3. Make sure you know how to use your snow blower before starting. Read the manual if you don't.
4. Wear light, layered clothing that repels water. Don't forget your FIT stocking hat, or your gloves and thick socks.
5. Do a 10-minute active dynamic warm up prior to beginning to shovel.

6. Pace yourself, make sure to take regular breaks and to drink water while you work.
7. Use a shovel that fits your height and strength.
8. Use your legs to lift the snow, not your back.
9. Move small amounts at a time. Don't try to do it all at once.
10. Don't throw snow over your shoulder. It causes you to twist while lifting.

By following the above guidelines, you should have an injury free Holiday Season and be able to spend more time celebrating with your family and friends.

Have a Safe and Happy Holidays!!

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