



PREFACE

This newsletter is a bi-monthly publication of J & S Health, Fitness and Sports Academy—a gym located in St. James, Barbados. The main purpose of this newsletter is to keep members of the gym informed about current health and fitness trends.

Quote to remember:

To get rich never risk your health. For it is the truth that health is the wealth of wealth.

Richard Baker

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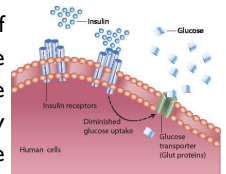
The Glycemic Index: A Small Change Can Make A Big Difference (prt 2)

The Glycemic Index and Disease Prevention



In the July/August 2011 Newsletter we commenced our discussion on the Glycemic Index (GI). As mentioned in this earlier edition, your body performs best when your blood sugar levels are kept relatively constant. Such constant levels can be obtained through the consumption of a Low GI Diet (mainly Low and Medium GI foods). The maintenance of a relatively constant blood sugar level has been proven to result in significantly lower risks of developing various diseases that occur due to large insulin demands which are common after high glycemic meals. Information on some diseases and on other health problems related to the consumption of constant high glycemic meals are listed below.

Type 2 Diabetes - High dietary loads have been associated with an increased risk of developing type 2 diabetes in several large prospective studies. In cases such as these, the onset of *type 2 diabetes* results due to the loss of the insulin-secreting function of the pancreatic beta cells (insulin resistance) overtime. This insulin resistance occurs gradually due to the common occurrence of excessive insulin secretion that takes place in response to rapid rises in blood glucose levels after high glycemic meals.



Cardiovascular Diseases - The impaired glucose tolerance and insulin resistance risk factors found in type 2 diabetes are also known risk factors for cardiovascular disease. However, these are not the only high dietary glycemic load risk factors linked to cardiovascular disease as increased serum triglyceride concentrations and decreased high-density lipoprotein (HDL) cholesterol concentrations are additional risk factors.

Obesity - The insulin which is secreted after a high glycemic meal to combat the rise in blood glucose levels is done primarily by converting excess sugar to stored fat. Similarly, when excess insulin is secreted during this process your blood sugar levels are commonly driven back down too low, therefore creating an increased incidence of hunger, and the possibility of consuming more calories within a shorter period of time to combat this feeling. Thus a dangerous cycle can occur after high glycemic load meals that can lead to a significant increase in calorie intake, which overtime can lead to the possibility of obesity*.



*This process has also been inversely proven as there are many published studies demonstrating that the consumption of low-glycemic index foods delays the return of hunger, increases satiety and delays subsequent food intake compared to high-glycemic index foods.

Cancers - Unlike previously listed health related problems, the evidence linking high glycemic loads with the development of various cancers are more inconsistent. However, while there are conflicting results, various studies throughout the world have reported positive associations, or increased risk of several different cancers (e.g. breast cancer, colorectal cancer, endometrial cancer) with high overall dietary index diets.

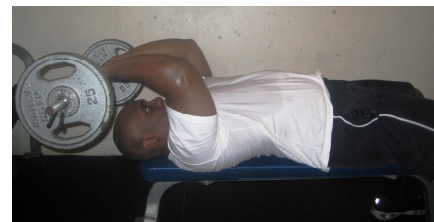
A 5 - 10 - 20 workout is an advanced version of a Tri-set workout where exercises are performed for repetitions of 5, 10 or 20. The combination of these 3 repetition ranges within your workout results in a program that trains the muscles targeted in every respect necessary to get them big, lean and strong. Exercise selection plays an important role in the 5 - 10 - 20 workout due to the different repetition ranges imposed.

5 - 10 - 20 Workout Overview:

Perform one set of each exercise resting just long enough to set up on the next exercise. After the last exercise is completed rest 2 - 3 minutes before repeating in the same order. Repeat for a total of 2 - 4 sets based on experience and muscle size. This workout is demanding on your targeted muscles, as such, you will need adequate rest for optimal recovery. Thus, you should rest the muscle groups trained with a 5 - 10 - 20 workout at least 3 - 5 days before training them again. This program is commonly used as a filler to help train troublesome body parts to bring them up to par, but if this workout regiment is used as a core portion of your workout program you may risk overtraining if you maintain this program for longer than 6 consecutive weeks.

First Exercise:

- ◆ 5 repetitions
- ◆ Should be a basic, multi-joint exercise (preferably with a barbell)
- ◆ Ideal for building muscle strength



Second Exercise:

- ◆ 10 repetitions
- ◆ Should be another basic exercise (similar to the first) but performed with either dumbbells or a machine
- ◆ Ideal for building muscle mass

Third Exercise:

- ◆ 20 repetitions
- ◆ Should be a single joint isolation exercise performed with either dumbbells, cables or machines (cable or machines are preferred options to give your muscles continuous tension throughout the entire range of motion)
- ◆ Ideal for muscle endurance and helping reduce body fat



5 - 10 - 20 Workout Samples:

QUADRICEPS

Exercise	Sets	Repetitions
Hack Squats	4	5
Close or Low Feet Placement Leg Press	4	10
Leg Extension	4	20

TRICEPS

Exercise	Sets	Repetitions
Triceps Dips (with added weight if necessary)	2	5
Lying Barbell Triceps Extension	2	10
Cable Triceps Pushdowns	2	20



Cell Phone Use may Reduce Male Fertility



Researchers at the Medical University of Graz in Austria, and from Queen's University in Canada found that while cell phone use increased testosterone levels within the body it also decreases the levels of luteinizing hormone present. Luteinizing hormone is secreted by the pituitary gland in the brain and is a regulator of reproductive health and function. Thus, a reduction in this important reproductive hormone has the potential to lower sperm quality and subsequently decrease fertility in males. This decrease in fertility can have the greatest effect on males who have been diagnosed with poor sperm quality as it would significantly decrease their ability to produce offspring.

(Queen's University press release, May 19, 2011)

Free Weights Bench Press Results In Greater Muscle Activation Compared to the Smith Machine Bench Press

Smith Machines generally allow for greater training loads compared to free weights, and are touted for their better safety features. However, Jared Coburn and co-workers from California State University found that when it comes to muscle activation in the 'Bench Press' exercise at weights 70% and 90% of the subjects 1-rep maximum, free weights were the superior choice in relation to the activation of the medial deltoids (middle shoulder muscles). No significant differences were found however, in the activation levels of the anterior deltoids (front shoulder muscles) or pectoralis major (chest muscles).

(Journal Strength and Conditioning Research; 24: 779 - 784, 2010)

Cold Water Immersion Speeds Recovery



Warren Gregson and colleagues from the John Moores University in Liverpool found that immersing your muscles in cold water (8° C) for 10 minutes increased skin blood flow and decreased muscle blood flow. This reduction in muscle blood flow results in the alleviation of exercise induced muscles soreness commonly found after intense training sessions. Thereby allowing you to recover at a faster rate.

(American Journal Clinical Nutrition, 39: 1316 - 1323, 2011)

Diet & Exercise Combined is the Best Formula for Long-Term Weight Loss

A review of literature of 18 studies performed between 1966 and June 2008 was done by researchers from Harvard University to determine whether the effect of diet-plus-exercise interventions vs. diet-only interventions was greater on both long-term and short-term weight loss. The researchers found that people who combined a reduced calorie diet with exercise lost had a pooled weight loss of 2.5 lbs per person more than persons who used low calorie diets alone. In fact, not only was the amount of weight lost greater for persons who combined both diet and exercise during the programs analyzed, but when secondary analysis was carried out after the programs were completed persons who fell into the 'diet and exercise' classification were the most successful in keeping the weight off (even though partial weight regain was observed in both groups).

TIPS CORNER

Weight loss tip: *Cut out Liquids Calories*

Regular soft drinks and high sugar fruit juices can easily derail any weight loss plan due to the fact that not only are they high in calories and easily consumed, but they also contain high quantities of sugar which causes an insulin spike after consumption, ultimately resulting in an increased appetite soon after drinking.

TIPS CORNER

Muscle Building tip: *Intensity Cycling*

Regularly vary your training intensity (e.g. training frequency, training volume, use of high intensity techniques) by making planned changes in your overall workout program and intensity. The idea is to take two steps back at some points to take three steps forward so that you can systematically move past plateaus that may occur in your muscle and strength development.

The Glycemic Index: A Small Change Can Make A Big Difference (prt 2)

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Limitations and Criticisms of relying on the Glycemic Index

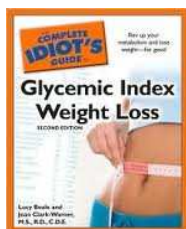
There are many benefits of analysing the GI values of the items you eat, however, the use of the glycemic index is limited by several factors:

- 1) The GI does not take into account other factors besides glycemic response. (e.g. insulin response which is measured by the insulin index, can be more appropriate in representing the effects of some foods contents other than carbohydrates)
- 2) The GI is significantly altered by the type of food, its ripeness, processing, length of storage, cooking methods and variety.
- 3) The glycemic response of a particular item can vary from one person to another.
- 4) The GI values do not show the impact on glucose levels after two hours.
- 5) The GI values of foods is determined under experimental conditions after an overnight fast and may not apply to foods consumed later in the day since glycemic response is strongly influenced by the composition of the previous meal, especially where meals were consumed within an interval of a few hours.
- 6) It is possible to follow a Low GI diet that is high in fat and lacking in healthy nutrients as there are some foods with a low GI value that are high in fat (e.g. whole milk) or salt (e.g. cashew nuts) and contain few nutrients.

Glycemic Index Resources

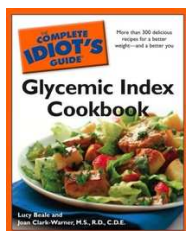
With the increase in popularity of the glycemic index and GI based diets (e.g. South Beach Diet, The Atkins Diet) there are a wide variety of glycemic index information both online and in print. Two of the more extensive information sources related to the glycemic index online can be found at:

- ◆ **www.glycemicindex.com** - This website is the official website for the glycemic index and an international GI database. The website is sponsored by the University of Sydney in Australia and is updated and maintained by the University's GI Group which includes research scientists and dieticians working in the area of the glycemic index, health and nutrition. The department is headed by Professor Jennie Brand-Miller, one of the originators of the glycemic index. Each month the group publishes a free e-newsletter (GI News) to bring consumers and health professionals up to date with the latest GI research from around the world.
- ◆ **www.mendosa.com** - The author of this website is Mr. David Mendosa, a freelance medical writer and consultant who specializes in diabetes. His website has extensive information on the glycemic index (e.g. articles, reviews, newsletters). The website includes a complete glycemic index listing of every food tested and as well as glycemic loads for standard serving sizes.



In print books that are also very informative on the glycemic index are:

The Complete Idiot's Guide To Glycemic Index Weight Loss, second edition
by Lucy Beale and Joan Clark-Warner, M.S., R.D., C.D.E



The Complete Idiot's Guide Glycemic Index Cookbook
by Lucy Beale and Joan Clark-Warner, M.S., R.D., C.D.E

Bodybuilding & Fitness Championships

Deidre Archer



Rene Griffith



Ramona Morgan



Nicholas Harris



Pictures taken by:

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Photographer: Richard Boyce

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&

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NEWS, NOTICES AND EVENTS

2011 BABBF NATIONAL BODYBUILDING & FITNESS CHAMPIONSHIPS

- ◆ Congratulations to Ramona Morgan (2nd - Ladies Body Fitness), Deidre Archer (2nd Ladies Bodybuilding), Rene Griffith (2nd - Light Heavyweight Division) and Nicholas Harris (1st Heavyweight Division) on their performances at the 2011 BABBF National Bodybuilding & Fitness Championships.

2011 CENTRAL AMERICAN & CARIBBEAN BODYBUILDING & FITNESS CHAMPIONSHIPS

- ◆ Congratulations and good luck to Ramona Morgan who was selected to represent Barbados at the 2011 CAC Amateur Bodybuilding & Fitness Championships in El Salvador from September 21 - 26.

PAST NEWSLETTER EDITIONS

- ◆ Past editions of J&S Academy's Health & Fitness Newsletter can be downloaded from the gym's website (www.jandsacademy.com).

CONTACT US



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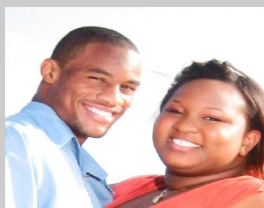
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WANTED...

Models for the next publication of the Health & Fitness Newsletter

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Let Us Know What You Thought Of This Issue

Read something that you disagreed with, that you did not understand or that was really helpful? Send your feedback to

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