J & S HEALTH, FITNESS & SPORTS ACADEMY

Health & Fitness Newsletter

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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:

Time and health are two precious assets that we don't recognize and appreciate until they have been depleted.

Denis Waitley

INSIDE THIS ISSUE:

The Glycemic Index: A Small Change Can Make A Big Difference (prt 1)

"**Not *all foods are created equal.***" This saying is especially true as it relates to carbohydrates various '*carbs*'- as they are commonly known- can behave quite differently in our bodies. In the past carbohydrates were classified as either **simple** or **complex**, based on the number of simple sugars in the molecule. With this knowledge, the advice was to eat less simple carbohydrates (carbohydrates composed of 1 or 2 simple sugars) and more complex carbohydrates (carbohydrates composed of long chains). This position was based on the assumption that complex carbohydrates would lead to smaller increases in blood glucose levels after consumption. However, this approach turned out to be too simplistic. It was later determined that the blood glucose (glycemic) response to complex carbohydrates was significantly variable. Thus, the concept of the ***Glycemic Index (GI)*** was created.

What Is The Glycemic Index?

The Glycemic Index (GI) is a numerical index that ranks carbohydrates, on a scale of 0 - 100, based on their glycemic response (effect on blood glucose/blood sugar levels). Foods with a higher GI are more rapidly digested and absorbed within the body, compared to lower GI foods, and subsequently results in greater fluctuations in blood sugar levels. On the GI index scale pure glucose serves as a reference point with a GI value of 100[1]. Based on this reference, carbohydrates are classified into 1 of 3 categories (Low, Medium, High) based on their GI values: A Low GI food is one with GI values of 55 or less; Medium GI foods have GI values of 56 - 69; while, High GI foods have GI ratings of 70 and more.

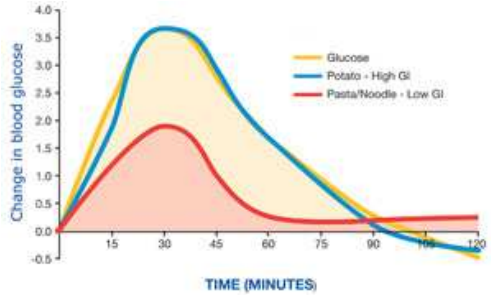

Figure showing the Comparison of the GI chart of 2 items (Potato & Pasta) verses the standard

The GI rating for foods is determined by an experimental method in which measured portions of the food are fed to 10 healthy individuals after an overnight fast. Blood samples are then taken every 15 to 30 minutes over the next two hours and are used to construct a blood sugar response curve for the 2-hour period. The calculated GI value of the food would be the area under the constructed 2-hour blood glucose curve, for the food item, divided by the area of the standard (glucose or white bread) 2-hour blood glucose curve, multiplied by 100. The published GI rating for the food would be the average GI rating from the data collected from all 10 test subjects.

[1]*White bread can also serve as a reference point with the use of an alternate GI scale, in which white bread has a GI value of 100 and pure glucose has a GI value of 140*

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Stretching Routine

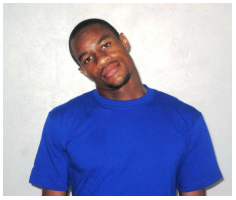
Stretching is one of the most commonly overlooked portions of a workout. However, you should be warned that all the effort you may be putting into your workout maybe resulting in less than optimum results if you are ignoring the importance of including some form of stretching routine within your daily workouts, as without consistent stretching you will be limited by poor flexibility. Below are a few stretching tips and a quick general full body stretching sequence that can be completed in as little as five minutes that you should include in each workout to help reduce the chances of becoming injured due to a lack of flexibility.

Stretching Tips:

- Warm up prior to stretching
- Stretch before and after exercising
- Stretch gently, slowly and only to the point of tension
- Breathe slowly and easily while stretching
- Hold each stretch for 10 - 30 seconds

Stretching Routine

Neck



Lateral Neck Stretch (right & left)

Forward Neck Flexion Stretch

Arms, Chest & Upper Back

Behind The Back Chest Stretch

Reaching Upper Back Stretch

Triceps Stretch

Stomach, Lower Back & Buttocks

Rising Stomach Stretch

Lying Double Knee-To-Chest Stretch

Sitting Knee - Up Rotation Stretch

Side

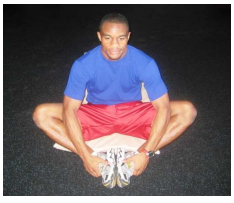
Standing Lateral Side Stretch

Quadriceps & Hamstrings

Lying Quadriceps Stretch

Lying Bent knee Hamstring Stretch

Adductors



Sitting Feet Together Adductor Stretch

Calves

Single Heel Drop Calf Stretch

Research the Facts

Toning Shoes May not be Scientifically Better Than Standard Shoes to Obtain Results

With the boom of popularity of toning shoes (soft sneakers with a rocker-shaped sole) within the last two years there has been a subsequent increase in independent scientific research targeted towards the manufacturers' claims that these shoes can help wearers exercise more intensely, burn more calories or improve muscle strength and tone in areas such as your calves, thighs and buttocks. This research has begun to produce a small but growing body of evidence which does not support the manufacturers' claims. The majority of the results obtained thus far have found that variables such as muscle activation and oxygen consumption or calorie burning effects were not significantly different from standard shoes. Depending on the variable being tested however, some benefits were obtained by wearing the toning shoes but not to the extent that it was being touted by the shoe manufacturers in their advertisements.(e.g. several studies did find that for first time users the toning shoes did result in the initial activation and strengthening of small, underused muscles in the feet and ankles that stabilized balance; however, after period of time those stabilizing muscles were not being exercised to the same extent).

Weight Loss Increased by Whey Protein

A University of Toronto study found that consuming whey protein before a meal decreased food intake during the meal and also reduced the quantity of insulin released. Therefore whey protein supplements can be an effective tool in promoting weight loss as it not only stimulates protein synthesis, but it also helps to reduce appetite, minimize food intake and improve blood sugar control.

(American Journal Clinical Nutrition, 91: 966 - 975, 2010)

Quick Descent on Squats Increases Load

A study lead by Jason Bentley from the University of Houston showed that descending quickly during the squat actually resulted in a greater amount and rate of musculoskeletal loading compared to descending in the conventional slower fashion. Thus athletes can increase loading with a lighter weight by increasing the speed of the descent phase of the squat. This could be especially beneficial in situations where increasing the actual weight being used may not be in the athlete's best interest.

(Journal Strength and Conditioning Research; published online April 09, 2010)

Decreasing Fiber Intake Increases Abdominal Fat

A two-year study of Latino youth 11 to 17 years old living in the U.S.A. found that decreasing fiber intake contributed to abdominal obesity as over the course of the study kids who cut fiber intake by 6 grams per day (approx 27 - 37 % of recommended daily intake) gained four inches in waist circumference. However, increasing fiber intake above the recommended daily intake values had only a small positive effect on waist size.

(American Journal Clinical Nutrition, 90: 1160 - 1166, 2009)

TIPS CORNER

Weight loss tip: *Eat for what you're Doing*

Plan your food intake for the activity you will be undertaking……. If you will be sitting at your desk all day eat smaller meals as your body will not require that much fuel. However, if you plan to undertake a strenuous activity (eg. strength training) then you should eat more calories to fuel your body for your activity's duration.

TIPS CORNER

Muscle Building tip: *Emphasize the Negative*

Much emphasis is rightly placed on the concentric phase of a lifting repetition as muscle growth is the by product of muscle contraction. However, the stretching of the muscle during the eccentric (negative) phase where the muscle lengthens while maintaining tension can directly cause muscle hypertrophy as well.

The Importance of Resistance Training For Older Adults

As a person ages their overall functionality steadily declines and everyday tasks become more difficulty to execute. This decline is inevitable. However, the rate at which the decline occurs can be controlled as, this loss in functionality is directly related to the loss of muscles mass. Thus, greater emphasis is being placed on the importance of resistance training for older adults.

Research has shown that between the ages of 25 through 40 persons lose approximately 4% of their muscle mass per decade compared to a 10% loss per decade after the age of 50 and, more significantly, a 15% reduction per decade after the age of 70 . Resistance/strength training allows one to build and maintain muscle and, as such, it reduces the rate at which the loss of muscle mass occurs. Consequently, resistance training is very important for older adults as it helps to keep the muscles strong, allowing them to preserve their independence and lifestyle.

Along with the preservation of an older adult's independence and lifestyle other advantages associated with resistance training are;

1) A reduced likelihood of several chronic diseases (e.g. diabetes)
2) A leaner body - increasing or maintaining muscle mass helps with the ability to burn higher number of calories
3) Stronger bones - the best way to strengthen bones is not only to eat a healthy diet but to also stimulate the muscles that pull them
4) An improved posture - stronger muscles help to maintain an erect posture which plays a vital role in reducing many orthopaedic problems associated with the hips, knees and back..

It must be noted that resistance training programs for older individuals should always incorporate an element of caution. Programs should neither be too hard or too intimidating as such inappropriate programs may result in injury or other setbacks .

Recommended General Guidelines For Resistance Training For Older Adults:

- Minimum of two sessions per week, with at least 48 hours between sessions
- Repetitions per set between 8 to 20 repetitions
- Exercises which keep the individual upright and provide additional back support are more appropriate (e.g. seated back rows are more appropriate compared to t-bar rows)
- Exercises which put significant stress on the lower back muscles should be avoided (e.g. stiff leg dead lifts)
- Exercises which require more coordination and put added stress on knee joints should be avoided (e.g. lunges)
- Isometric or static exercises which involve tensing the muscles against an immovable object should be avoided as this type of exercise places enormous pressure on the heart and can raise blood pressure
- Exercises that increase the risk of falls during exercise or that decrease the individuals confidence should generally be avoided (e.g. performing exercises with weights on unstable surfaces)

(A.J)

Continued *from* Page 1

The Glycemic Load

It is not only the GI value (quality) of a food that leads to the relevant increase in blood sugar levels as, equally important, is the amount of food (quantity) that is consumed. The concept of the **Glycemic Load** (GL) combines both the factors of quality and quantity into a single number that best predicts how a portion of food consumed is likely to affect your blood sugar levels.

*Glycemic Load = (Glycemic Index x Available Carbohydrates***)/ 100*
***Available Carbohydrates = total carbohydrates minus dietary fiber content

GL values therefore function on a different scale from GI values. As such, a GL portion of food with a value of 10 or less is considered Low, Medium GL portions are those with values of 11 - 19, and High GL portions are those which result in values of 20 or above. With most GI list the GL value of a defined potion serving size is usually also included to allow for easier conversion values of GI to GL.

	Glycemic Index	Glycemic Load
High	70 or more	20 or more
Intermediate	55 - 69	11 - 19
Low	54 or less	10 or less

The Benefits of Knowing Your Glycemic Index and Glycemic Load

Your body performs best when your blood sugar levels are kept relatively constant. Therefore, the theory behind the GI is to allow persons to identify, and mainly consume foods which would keep your blood sugar levels relatively constant (Low and Medium GI foods) and generally avoid foods which have a significant effect on your blood sugar levels (High GI foods). Eating mainly low GI foods have been shown to help keep your energy levels balanced and to provide longer periods of satiety (you feel fuller for longer periods of time); however, Low GI diets have been praised with many other advantages as it relates to a healthy lifestyle,. These benefits include:

- Effectively helps persons lose and manage their weight
- Increases the body's sensitivity to insulin
- Improves diabetes management
- Improves blood cholesterol levels
- Reduces the risk of heart disease

(J.J)

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

- The Glycemic Index and Disease Prevention
- Glycemic Index Limitations & Criticisms
- Glycemic Index Resources

NEWS, NOTICES AND EVENTS

SPAGO PIZZERIA DISCOUNT

- ***Spago Pizzeria** is offering all J&S* **Health, Fitness and Sports Academy members a 15% discount on all purchases at any of their 3 locations (Second Street, Holetown; Settler's Beach Hotel; and, Lanterns Mall). To receive this discount members must present their J&S Academy Membership Card at point of purchase and inform their waiter or cashier of their request for the discount.**

BABBFF NATIONAL BODYBUILDING & FITNESS COMPETITION

- ***Good Luck to all gym members competing at the BABBFF National Bodybuilding & Fitness Competition at the Plantation Garden Theatre on Saturday August 20th, 2011 at 6 pm.***

PAST NEWSLETTER EDITIONS

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

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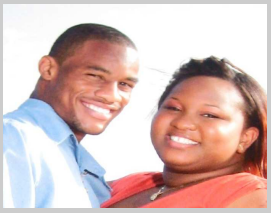

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WANTED...

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 **jamiljones@jandsacademy.com**