J & S HEALTH, FITNESS & SPORTS ACADEMY

Health & Fitness Newsletter

VOLUME 3, ISSUE 5 SEPTEMBER/OCTOBER 2012

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:

No matter how good you get you can always get better and that's the exciting part.

Tiger Woods

INSIDE THIS ISSUE:

Exercise As If Your Life Depends On It....because it may

I am sure that you've heard it before but I will say it again, "It is critical to have a regular exercise regime." However, what exactly does it mean to have a 'regular exercise regime'? What precisely constitutes exercise? How often does one have to exercise for it to be considered 'regular'? And, furthermore, why is it so important to exercise regularly? This article will be assessing some of these areas as it seeks to embed the importance of **regular exercise**.

What is exercise?

When we talk about exercise we are referring to physical exercise which, simply put, is any physical activity that gets you moving. Based on this definition, anyone reading this article may be considered to be exercising as, you are turning pages, manipulating a mouse or performing some other activity which involves movement. Nevertheless, our bodies quickly adapt to such routine movements, and builds up an immunity whereby, there is little to no health and wellness benefits obtained from the movement. Consequently, for the purpose of this article, ***exercise will be defined as any form of physical activity that challenges the body in a manner that maintains and, or enhances physical fitness and overall health and wellness***. Such activities normally include walking, running or dancing but can also include activities such as gardening and mowing the lawn. It should be noted, however, that any activity can become monotonous; therefore, to be effective the intensity level of the activity needs to be considered in conjunction with the fitness level of the individual performing the activity.

Why do we need to exercise?

Our bodies are designed to deteriorate over time, that is, our muscles will weaken and even vital organs such as our heart will eventually fail. In the absence of physical activities which challenge our bodies this rate of deterioration is increased. Thus, exercise helps us to maintain strong, healthy bodies and there is often the additional benefit of a more focused and relaxed mind. Some of the scientifically proven benefits of exercise include:

- A reduced risk of dying prematurely.
- A reduced risk of dying of heart disease.
- A reduced risk of developing diabetes.
- A reduced risk of developing high blood pressure.
- A reduced risk of developing colon cancer.
- A reduced feelings of depression and anxiety.
- Helps control weight.
- Helps build and maintain healthy bones, muscles, and joints.
- Promotes psychological well-being.

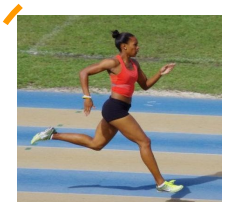
How often do we need to exercise?

To help maintain physical fitness and the overall health and wellness of the body the general recommendation is that **adults should do a minimum of 30 minutes of moderate-intensity physical activity, five days a week**. This recommendation was broken down in the *2008 Physical Activity Guidelines for Americans* which outlines precise recommendations for children (ages 6-17), adults (ages 18-64) and older adults (ages 65 and older). The insert to the right illustrates the recommendations for adults ages 18 to 64. For the full list of recommendations visit www.cdc.gov/physicalactivity/everyone/guidelines/index.html.

Adults (ages 16 -64) needs at least:

	2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity (i.e., brisk walking) every week **and**
	muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).
	OR
	1 hour and 15 minutes (75 minutes) of vigorous-intensity aerobic activity (i.e., jogging or running) every week **and**
	muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).
	OR
	An equivalent mix of moderate- and vigorous-intensity aerobic activity **and**
	muscle-strengthening activities on 2 or more days a week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

Sprinter's Workout



Sprinters are synonymous with persons with well toned, well developed muscles and very little body fat. Such body structures are partially linked to the constant short explosive runs which these individuals perform almost daily. So, if you are looking to achieve that toned, lean look, try taking your workout outside and incorporating a sprinting type routine.

SPRINT INTERVAL INSTRUCTIONS

- Before you begin one of the workouts take at least 10 minutes to properly warm up and stretch
- Run the required distance as quickly as you can, trying to maintain your pace for as long as possible. When you begin to tire focus on maintaining your running form.
- Stick to the recovery periods listed as closely as possible
- Cool down after the workout is finished

Workout Option A: 40m Dash (approx 30 mins)

Interval: Sprint 40m

Repetitions: 2 groups of 5 sprints

Recovery: Walk back to the start, resting 2 mins between each sprint in the group, and 5 mins between groups.

Workout Option B: Continuous Interval Sprints (approx 25 mins)

Interval: Sprint 15 sec, jog 60 sec

Repetitions: 20 sprint repetitions

Workout Option C: 100m Repeats (approx 40 mins)

Interval: Sprint 100m

Repetitions: 3 groups of 4 sprints

Recovery: Rest 3 mins between each sprint in the group, and 5 mins between groups.

Workout Option D: Sprint Pyramid (approx 45 mins)

Interval: Sprint 100m, walk back to start
Sprint 200m, walk back to start
Sprint 300m, walk back to start
Sprint 400m, walk back to start

Repetitions: 2 groups, repeat cycle in opposite order in the 2nd group

1. **False —** Basal metabolism contributes about 60% or more of the average person's daily energy output
2. **True**
3. **True**
4. **True**
5. **False —** The calorie value of a gram of fat is 9 calories, while the calorie value of a gram of carbohydrates or proteins is 4 calories .

Ask Yourself Answers

Research the Facts

Lean Red Meat Does Not Increase Blood Fats

Despite not all red meat is high in fat, many nutritional experts recommend avoiding red meat as a means of preventing elevated blood cholesterol and of reducing the risk of coronary artery disease. However, Spanish researchers compared total cholesterol LDL (bad cholesterol) and triglycerides in women who consumed either lamb (red meat) or chicken (white meat) three times a week for five weeks. The results showed that there was no significant difference in the blood fat levels between the two groups of women. Subsequently, the study showed that people can safely eat low-fat red meat (e.g. lamb, beef) without worrying about increasing blood fats.

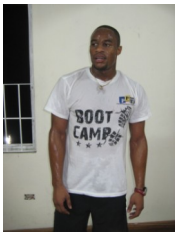
(British Journal of Nutrition, 107: 1403-1407, 2012)

Music Enhances Workout Quality

A Cal State University, Fullerton study led by Matthew Biagini showed that the 'training groove', which allows individuals to workout harder due to them listening to music, may actually be true. The study showed improved performance during explosive exercise when listening to self-selected music. Therefore, self-selected music doesn't only give you a better feeling, and in some cases a more tolerable workout, but can also ultimately improve your workout intensity and promote explosiveness.

(Journal Strength Conditioning Research, 26: 1934 - 1938, 2012)

Intense Exercise Causes Post Exercise 'After Burn'



During exercises caloric expenditure increases significantly compared to at rest. However, intense exercise can also provide additional caloric burn for hours after your workout has been completed. Mr. David Nieman from Appalachian State University in North Carolina, USA found that people burned 519 calories during 45 minutes of intense aerobics and 190 extra calories during the 24 hours immediately after the workout had been completed.

(Medicine Science Sports Exercise, 43: 1643 - 1648, 2011)

Instability Training is Useful For Low Back Rehabilitation

Through a review of literature, researchers from Canada, Australia, and the United States concluded that instability training was especially useful during back rehabilitation. This was due to the fact that instability training helps build muscle endurance, and *proprioception* capacity, that protects the low back from injury. Subsequently, instability training is appropriate for persons recovering from back injuries.

(Strength and Conditioning Journal, 33 (3): 72-81, 2011)

****

TIPS CORNER

Weight loss tip: *Eliminate or Reduce Condiments*

Beware of condiments that are high in sugars or sodium such as ketchup, barbeque sauce, steak sauce, seasonings and salad dressings. When eating out ask for your food to be prepared without seasonings, oils or sauces to help reduce the overall calorie totals of your meals.

TIPS CORNER

Muscle Building tip: Intensity Cycling

Progress as it relates to muscle or strength development is not always a straight line. Sometimes you need to take a step backwards to take two steps forward. Hence, by regularly cycling your workout intensity, making planned changes to your program variables (e.g. frequency, volume, exercise selection), you can systematically move past any plateaus which may occur.

Fueling Your Body For Success; Before, During and After Exercise

The dilemma of proper food and fluid consumption before, during and after exercise is generally high on a person's mind whether their goal is to optimize performance as a serious competitive athlete, or simply as a more recreational fitness enthusiast looking to achieve body weight goals. Recently, the American Dietetic Association, Dietitians of Canada and the American College of Sports Medicine published a joint position statement regarding nutrition and athletic performance that included recommendations about food and fluid consumption before, during, and after exercise. This article will discuss these guidelines as published by the American Dietetic Association, Dietitians of Canada & the American College of Sports Medicine.

Fuelling Before Exercise

In general, pre-exercise meals should be consumed three (3) to four (4) hours before exercise and should consist of :

- Between 1 - 4g of carbohydrates (e.g. whole grains, cereals, pasta, rice) per kg of body mass;
- moderate protein (e.g. chicken, fish, tofu, eggs); and,
- some healthy fats (e.g. olive oil, nuts).

For weight loss, half the plate should be vegetables and fruits, a quarter should be lean protein, with the remaining quarter being whole grains or legumes. However, if the exercise duration and/or intensity of the workout is planned to be high, or for persons who may exercise multiple times per day a pre-exercise meal would have a gradual focus on starchier carbohydrates, a quarter from protein, and a quarter from quickly digesting vegetables. The focus on the starchier foods is due to the fact that these foods can be absorbed quicker, better contributing to the stored energy for the exercise session.

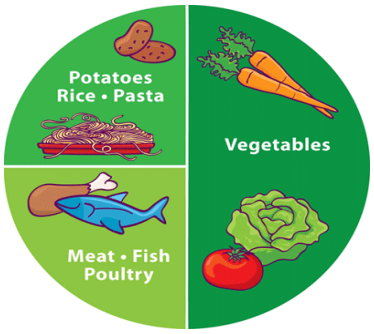


Figure 1: *The Weight loss Pre-Exercise plate*

The closer to the start of an exercise session, the smaller the pre-exercise meal should be. If the meal is less than 1 hour before exercise, small carbohydrate based items such as fresh fruit, a sports bar, half a bagel with peanut butter or a sports drink would be best.

Fluid wise individuals are advised to drink 5 - 7 ml (1.5 - 2 cups) of water or sports drink per kg of body mass at least 4 hours before your workout to optimize hydration and to allow adequate excretion of excess fluid.

Fuelling During Exercise

Carbohydrate (CHO) intake during exercise has been shown to maintain energy levels while improving exercise capacity and improving the performance of endurance and intermittent type sports. This is because carbohydrate supplementation helps maintain glucose concentration thereby, delaying the onset of fatigue.

Carbohydrate supplementation is not necessary (or beneficial) for all types of exercise. There is little benefit to using carbohydrate supplementation in situations where exercise duration is less than 60 minutes and the individual has eaten within 3 - 4 hours of exercise. However, where necessary, the consumption of some carbohydrates (e.g. sports drink, carbohydrate containing bar/gel) during exercise can be used to maintain exercise intensity and focus.

In situations where carbohydrate supplementation during exercise is beneficial, amounts between 30 and 60 grams per litre is typically recommended. Specifically, during moderate intensity exercise (exercise session 1 - 2 hours) 30g of CHO/hr is recommended while, for high intensity exercise (exercise session > 2 hours; includes multiple workouts) 60g of CHO/hr taken in 15 - 20 min intervals is recommended.

Fluid replacement during exercise should occur according to sweat rate, which can be estimated from pre-weight and post-weight measurements and fluid intake. Sweat rate can vary with various factors such as heat, humidity, exercise intensity, sport, age and sex. When determining your sweat rate 1 pound of body mass during exercise equals approximately 16 ounces of fluid loss.

Continues on Page 5

Continues from Page 4

Fuelling After Exercise

The aim of recovery nutrition is to replace what is lost during exercise (e.g. fluid, glycogen) and to support optimal hormonal and metabolic environment while promoting muscle building and repair. Therefore, the initial strategy for recovery nutrition should be to include fluid, electrolytes, carbohydrates and protein. However, the immediacy and the amount of recovery nutrition needed after a workout varies based on factors such as workout intensity, body composition (e.g. muscle mass), performance goals and the timeframe of your next workout. To achieve optimal rehydration after exercise, 1.5 times more fluid should be consumed than what was lost during your exercise.

The window for optimal recovery of glycogen (muscle energy) stores after exercise ranges from 30 minutes to 4 hours, with the earlier carbohydrates are ingested within this window the faster energy stores are replenished. A great way to initiate the recovery process is by using a sports drink since this manner assists in quick rehydration because of the fluid nature and the sodium and glucose in such drinks working together. Adding a protein source to a post workout recovery strategy also would support muscle repair and growth. Similarly, this should be ingested as soon as possible after exercise, especially after resistance exercises or intense endurance exercises. Recent research suggest that consuming approximately 15 - 25g of protein is the maximum needed to stimulate muscle growth and repair after exercise.

Conclusion

The above discussion outlines general recommendations as it relates to food and fluid consumption before, during, and after exercise; however, the unique situation of each individual's daily regime and workout program would help determine the mixture of nutrients and fluids necessary to best optimize fueling before, during and after exercise. In today's world many sports supplementation manufactures have targeted this important area of fitness/sports nutrition and have formulated products specifically targeted to providing 'optimum' nutrition for persons as it relates to pre-exercise, during exercise, and post-exercise nutrition . Some of these products lines include:

- Gatorade
- Power Bar
- Muscle Tech
- GNC
- Quest Nutrition
- BSN

The G Series Pre, During and Post Exercise Products
Source: http://danblewett.com/2010/05/gatorade-g-series-sports-drink/

ASK YOURSELF ..... True or False ?

Score: _____ ***out of 5***

Answers can be found on the bottom of page 2

1.	Basal metabolism contributes only a small percentage of a person's daily energy output.	***True***	***False***
2.	Caffeine can cross the placenta and enter the fetus.	***True***	***False***
3.	Fruits are essentially fat free.	***True***	***False***
4.	A person's energy needs are based on his or her age, gender, and physical activity levels.	***True***	***False***
5.	The calorie value of a gram of fat is the same as a gram of carbohydrates or protein.	***True***	***False***

NEWS, NOTICES AND EVENTS

2012 CENTRAL AMERICAN & CARIBBEAN, FITNESS & BODY FITNESS CHAMPIONSHIPS

- ***Congratulations to Ramona Morgan (2nd - Body Fitness Under 163cm class), Nicholas Harris (2nd - Super Heavy Weight class) and Rene Griffith (6th - Heavy Weight class) on their performances at the 2012 Central American & Caribbean, Fitness & Body Fitness Championships.***

INDEPENDENCE ~~FITNESS RETREAT~~ now FITNESS WEEKEND

- ***We have eliminated the sleepover option and reduced the price transforming the Independence Fitness Retreat to the INDEPENDENCE FITNESS WEEKEND. There will still be plenty of workout opportunities and, now you can book the entire weekend or individual workout sessions. Bookings open from November 1st, 2012. * For further information visit www.jandsacademy.com or contact Jamil Jones (233-6433) .***

PAST NEWSLETTER EDITIONS

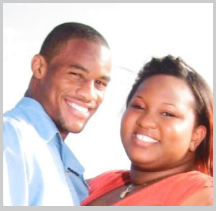
- ***Past editions of J&S Academy's Health & Fitness Newsletter can be downloaded from the gym's website (www.jandsacademy.com).***

CONTACT US

J & S Health, Fitness & Sports Academy

6 Holders Hill
St. James
Barbados
Tel: (246) 231-6792
Website: www.jandsacademy.com
E-mail: admin@jandsacademy.com

ACKNOWLEDGEMENTS



Writer: Jamil Jones

Editor: Janielle Jones

Photography: Janielle Jones & Jamil Jones

Special thanks to Sharon Larrier for her assistance with this issue

WANTED...

Models for the next publication of the Health & Fitness Newsletter

Contact Jamil Jones at 231-6792 (w), 233-6433 (c) or jamiljones@jandsacademy.com.

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**