J & S HEALTH, FITNESS AND 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:

Our health always seems much more valuable after we lose it.

Unknown

INSIDE THIS ISSUE:

HIIT - Push Your Limits to Get The Results

Part 2

In our July/August Newsletter we introduced the topic of **High Intensity Interval Training** (HIIT). In that edition, we explored the fact that HIIT is a form of training which allows one to burn more calories in less time through incorporating short periods of maximum intensity exercise (work) alternated with periods of lower intensity exercise (recovery). (***Visit our Newsletter Archive at www.jandsacademy.com to obtain a copy of the July/August edition.***) In this edition, we continue to explore the HIIT phenomenon.

So you've heard a lot about HIIT and you think that it would be beneficial to incorporate HIIT into your training regime. After all, you're frequently short on time and you would like to use the little time that you have available to have an impactful workout. But, where do you start? What factors do you need to consider when developing a HIIT workout?

Factors To Consider When Creating a HIIT Workout

(1) ***Choose an Appropriate Mode of Exercise*** — Certain modes of exercise would be more suited for particular individuals based on their experience, fitness level, familiarity with equipment, weight and injury susceptibility. (E.g. Stationary bikes are a more suitable mode of exercise for attempting HIIT for persons who are obese or are easily susceptible to injury, compared to a treadmill.)

(2) ***Determine Segment Intensity Levels*** — When HIIT programs are being performed on cardio machines where intensities can be regulated, the program (and segment) intensity levels should be chosen according to an individual's fitness level.

(3) ***Determine Segment Intensity Length*** — Similar to segment intensity levels, segment intensity length should be based on the participant's fitness levels. Nevertheless, regardless of fitness level the 'work' segment should not be shorter than 10 seconds or longer than 60 seconds. The most common work segment used during HIIT workouts is 30 seconds.

(4) ***Allot Segment Length Ratio*** — Segment lengths are usually considered on a ratio basis. Generally segments vary from 1:3 (work:recovery) for beginners/individuals with low fitness levels, to 1:1 for persons with high fitness levels.

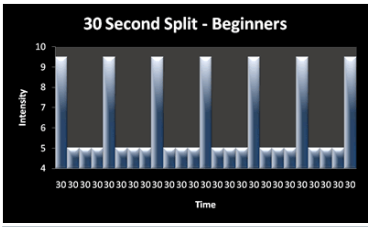
(5) ***Determine Number of Sets****—The number of sets completed per workout is generally linked to the fitness level of the individual. In most cases, persons with higher fitness levels are able to perform more sets within a workout (given the same mode, intensity level and segment lengths). Most HIIT workouts are comprised of 5 - 15 sets.

**One set consist of one 'work' segment and one 'recovery' segment*

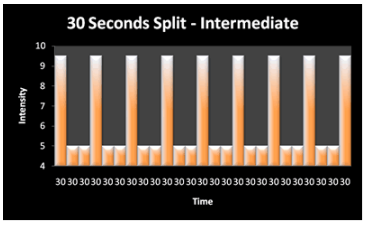
(5) ***Determine Workout Length*** — The length of a HIIT workout is directly related to the experience and fitness level of the individual as a more experienced and fit individual would be able to more efficiently complete a longer HIIT session (once the mode of exercise, segment intensity level and intensity length are similar). Most HIIT workouts (excluding warm-up and cool-down portions) are 10 - 20 minutes in length.

Continues on Page 2

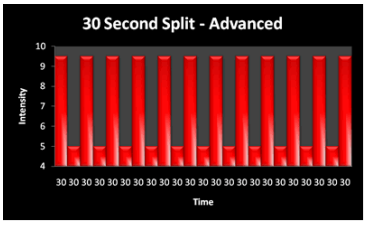
Diagrams Showing How A 30 Second HIIT Workout Many Vary Based On The Experience or Fitness Level of The Individual



Sprint Phases	Rest Phases	Number of Sets
30 Seconds	90 Seconds	6-8



Sprint Phases	Rest Phases	Number of Sets
30 Seconds	60 Seconds	8-10



Sprint Phases	Rest Phases	Number of Sets
30 Seconds	30 Seconds	10-12

HIIT– Push Your Limits to get Results

Continued from Page 1

Varying The Intensity of HIIT Workouts

Similar to all workout programs, HIIT can result in a plateau occurring if training intensity is not increased over time. Plateaus very seldom occur with HIIT workouts in which a defined speed cannot be set (e.g. running on a track, swimming, cycling) as the use of maximum effort negates the possibility of the program becoming stagnant over time. However, if the HIIT sessions are performed on cardio machines where the speed is manually manipulated (e.g. treadmills, steppers), the possibility of plateaus occurring are higher as if variables are not altered over time your body would eventually adapt to the workout intensity. The intensity of your HIIT workouts can be increased by:

(1) increasing the time and, or intensity of the 'work' segment

(2) increasing the intensity of the 'recovery' segment

(3) decreasing the time of the 'recovery' segment

(5) increasing the number of segments

HIIT Programs on Cardio Equipment at J & S Health, Fitness and Sports Academy

Persons can attempt and create their own HIIT workouts on any piece of cardio equipment at J & S Health, Fitness and Sports Academy by simply increasing the intensity of their workout at particular segments of the workout in '*Manual*' or '*Quick* Start' mode. However, there are also preset '*Interval*' programs on specific cardio machines which can be used as HIIT programs. These programs would vary in intensity based on the level, or difficulty, chosen. Below are a list of the cardio machines present at J & S Health, Fitness and Sports Academy, along with their relevant programs which, can be tailored towards HIIT.

Cardio Machine	Program Name	Levels	Segment Length (in seconds)	
			'Recovery'	'Work'
Arc Trainer 600A & 610 A	Interval	1 - 10	60	30
	Strength	1 - 10	45	15
Arc Trainer 750AT	Interval 1:2	1 - 10	60	30
	Interval 1:1	1 - 10	60	60
	Strength	1 - 10	45	15
Stepper 530S	Interval	1 - 10	60	30
	Sprint	1 - 10	45	15
	Ramps	1 - 10	30	30
Stationary Cycle 530 C & 530 R	Interval	1 - 21	60	30
	Strength	1 - 21	45	15
Concept 2 Rower	:30/:30r	1 - 10	30	30
	v1:00/1:00r…7	1 - 10	60	60
	Intervals: Distance	1 - 10	variable	variable
	Intervals: Time	1 - 10	variable	variable
	Intervals: Variable	1 - 10	variable	variable

TIPS CORNER

Weight loss tip: *Eat the Right Fats*

All fats are not bad for you. Believe it or not, the incorporation of fats into your diet is essential for a healthy diet. It would be impossible to cut all fats out of your diet so ensure that the majority of you fat intake is from 'good' fats (monounsaturated and polyunsaturated) sources.

TIPS CORNER

Muscle Building tip: *Rest and Recuperate*

Your muscles grow when you are resting, not training. If you do not let your muscles properly recover between workouts over training can result. Over training does not lead to muscle hypertrophy (muscle gain) but actually muscle atrophy (muscle breakdown) and the increased potential for injury.

ADVANCED AB/CORE EXERCISES

Tired of the same old crunches and sit ups? Try including these 4 more advanced abdominal and core exercises into your normal abdominal routine to give you some variety and an added push.

LEG RAISES with HIP THRUST


A

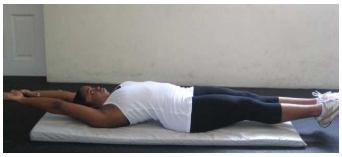

B


C

Execution: Lie face-up with your legs fully outstretched a few inches off the floor. Keeping your legs as straight as possible, raise your legs towards the ceiling until they form a 90° angle with your body. At this point raise your hips and glutes straight upwards by using your abdominals. Hold for a second at this position before lowering your hips and glutes and ultimately returning your legs back to the starting position.

Increase the Difficulty: *Perform it on a declined bench with your head at the higher end*

V-SIT UP


A


B

Execution: Lie face-up with your arms fully extended overhead and your legs fully outstretched a few inches off the floor. Contract your abdominals to flex your spine and slowly raise your legs and arms simultaneously, brining them as close together as possible in a jack-knife (V) position. Keep your arms and legs as straight as possible. Slowly lower your arms and legs back to the starting position.

Increase the Difficulty: *Wear ankle weights, or hold a dumbbell/medicine ball in your hands*

TWO-POINT PLANK


A


B

Execution: Beginning in the standard plank position, lift your opposite hand and foot off of the ground, and extend them forwards and backwards respectively, at the same level as your back, while trying to hold your body in a perfect, stable position. After you have reached your target time repeat the exercise using your opposite hand and leg.

Questions & Answers

What is my Basal Metabolic Rate (BMR), and how can I calculate it?

Your Basal Metabolic Rate (BMR) is the amount of energy your body needs to maintain basic physiological processes (e.g. breathing, heartbeat, maintenance of body temperature). Your BMR accounts for the largest component of your daily calories needs as it encompasses approximately 60% - 65% of the energy your body expends on a daily basis. There are a number of factors which influence your BMR. These factors are height, weight, age, gender and body composition. There are various formulas which can be used to calculate an estimate of your BMR. One such formula is listed below:

Women:
655 + (4.35 x weight in pounds) + (4.7 x height in inches) - (4.7 x age in years)

Men:
66 + (6.23 x weight in pounds) + (12.7 x height in inches) - (6.8 x age in years)

N.B. This formula does not take into account body composition and, as such ,will underestimate, and overestimate, Basal Metabolic Rates in very muscular individuals, and obese individuals respectively.

Have a question you want answered? Read something you disagree with? Send your questions or comments to jamiljones@jandsacademy.com and we will try to answer them for you in our next issue.

Know Your Fats

Fats are comprised of fragments of carbon, hydrogen and oxygen molecules linked together into chains known as fatty acids. Most people have the impression that fats are bad for you, so it may come as a surprise to learn that fats are an integral component in the maintenance of a healthy diet. Fats are generally defined based on their degree of saturation (the number of hydrogen atoms the fatty acid chain is holding). If all the carbon atoms are attached to hydrogen atoms the fat is considered a saturated fat or saturated fatty acid, while if there are one or more points where hydrogen atoms are missing the fat is considered an unsaturated fat or unsaturated fatty acid. Your body can synthesize all the fatty acids its needs, except for two - linoleic acid (an Omega-6 fatty acid) and linolenic acid (an Omega-3 fatty acid) from other food sources (carbohydrates, fats, proteins). Therefore, Omega-6 and Omega-3 are considered essential fatty acids, or essential fats, and must be supplied by the diet or they will become deficient. Luckily however, these essential fatty acids can be readily stored by the body, making deficiencies unlikely.

The Functions of Fats in the Body

Outside of being the major components of cell membranes fat is the body's chief storage form of energy from food in excess of immediate need, and can be stored in practically unlimited amounts. Between meals the fat stored is used as an energy source for cells equip to use it, as it provides approximately 60% of the energy needed to perform much of the body's work during rest, as well as extended periods of light to moderate intensity exercise. Fats also have other practical functions within the body as it: (1) helps to maintain internal climate control, (2) serves as a shock absorber; and, (3) helps nourish your skin and hair.

Fats in the Diet

Determining what kind of fats to include into your diet can be puzzling,. After all, it has been widely proven that the excess consumption of fats are linked to several diseases (e.g. heart disease), as well as many forms of cancer (e.g. colon caner). Yet, some forms of fat are actually essential to a healthy diet. Recommendations of fat intake vary depending on the organization however, some common factors are similar throughout all recommendations: (1) the overall intake of fats in your diet should be a small portion of your entire diet (20% - 35% of total calorie intake), (2) the majority of this fat intake should come from unsaturated sources (monounsaturated and polyunsaturated); and, (3) there should be as little as possible consumption of saturated and trans fat sources. It should be noted, that all fats are a mixture of saturated, monounsaturated and polyunsaturated fatty acids, however, fats are defined by the name of the fatty acid of which they possess the highest percentage.

SATURATED FATS

- All the carbon atoms within its chain are attached to a hydrogen atom
- Are typically solids at room temperature
- Increases total cholesterol and LDL (bad) cholesterol
- Increases risk of heart disease
- E.g. - all animal meats, butter, cheese, coconut, lard, stick margarine, shortening, chocolate, coca butter, dairy products made from whole or reduced fat (2%) milk

Lard

Cheese

TRANS FATS

- Industrially created by the addition of hydrogen atoms to unsaturated fats to make them more solid and more resistant to spoilage
- Are more solid than unsaturated fats at room temperature but are not as solid as saturated fats
- Increases total cholesterol and LDL (bad) cholesterol
- Increases risk of heart disease
- E.g. - commercially baked goods (cookies, cake), hard stick margarine, hydronated peanut butter, doughnuts, chips, many fast food items

Peanut Butter

Fast Food Items

MONOUNSATURATED FATS

- There is one point within its chain where a hydrogen atom is missing
- Are typically liquids at room temperature, but become solid when chilled
- When used to replace saturated fat they decrease total cholesterol and LDL (bad) cholesterol, without decreasing HDL (good) cholesterol
- Decreases risk of heart disease
- E.g. - some vegetable oils (olive oil, canola oil, peanut oil, sunflower oil) almonds, avocadoes, cashews, peanut butter, olives, peanuts

Advocado

Olives

POLYUNSATURATED FATS

- There is more than one point within the chain where hydrogen atoms are missing
- Are typically liquids at room temperature, and when chilled
- When used to replace saturated fat they decrease total cholesterol, LDL (bad) cholesterol, and HDL (good) cholesterol
- Decreases risk of heart disease
- E.g. - some vegetable oils (soybean oil, corn oil, safflower oil, sesame oil) walnuts, mayonnaise, liquid/soft margarine, fatty cold-water fish (salmons, mackerel, herring, trout)

Salmon

Walnuts

NEWS, NOTICES AND EVENTS

PAST NEWSLETTER EDITIONS

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

NEW SPIN CLASS

- ***Due to popular demand J & S Academy has introduced an additional Spin Class on Wednesdays at 6:30pm.***

CLASS RESERVATION AND CANCELLATIONS

- ***To reserve a space in any of J & S Academy's classes it is necessary to signup for the class in advance. Signup Sheets for ALL CLASSES are available from the Monday of the preceding week.***

- ***If you cannot attend a class, PLEASE CANCEL YOUR RESERVATION AS EARLY AS POSSIBLE.***

IDENTIFICATION

- ***Please remember to BRING YOUR GYM IDENTIFICATION CARD when visiting J & S Health, Fitness and Sports Academy. J & S Academy reserves the right to deny access to its facilities where the appropriate identification is not provided.***

CONTACT US

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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**