PREMIUM PERFORMANCE TRAINING INC.

Health & Fitness Newsletter

VOLUME 6, ISSUE 3 MAY/JUNE 2015

PREFACE

This is a bi-monthly publication of Premium Performance Training Inc. aimed at providing general information regarding current health and fitness trends.

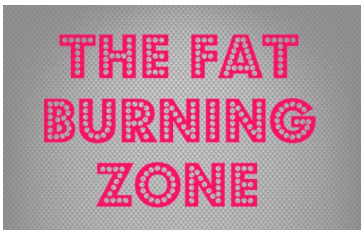
Quote to Remember:

"A feeble body weakens the mind"

- **Jean-Jacques Rousseau**

INSIDE THIS ISSUE:

The Fat Burning Zone - Real or Myth



The Fat Burning Zone is very real and does exists, and is built in scientific fact, however at the same time it is one of the most misinterpreted or misinformed facts within the fitness industry.

During exercise your body has 3 possible sources of energy: fats, carbs & protein (protein is a last resort of the 3 energy sources). Whether your body takes energy from glucose (which it gets from the breakdown of carbs), or fats, depends on the intensity of your workout. When you exercise at a high level of intensity (heart rate > 70% of your maximum heart rate) your body draws on carbs as its energy source, as they are a more efficient source of energy. However, if you are training at a low level of intensity (heart rate ≤ 70% of your maximum heart rate) your body doesn't need to be as efficient and subsequently draws on fats as its main source of fuel, hence the term 'Fat Burning Zone'. Unfortunately the fact that we burn a higher percentage of calories from fat while within this lower intensity zone had led to the constantly publicized, and totally incorrect notion that for burning fat and losing weight it is best to aim to keep your heart rate within the Fat Burning Zone by focusing on lower intensity aerobic exercise. There are 2 specific reasons why following such a belief is incorrect and should be discarded:

Percentage of Calories verses Absolute Calories

It is true that a higher percentage of calories is burnt from fat while performing lower intensity exercise compared to higher intensity exercise. However, while the ratio of fat-to-carb calories burnt is higher during low-intensity exercise total calories burnt per minute is significantly lower in lower intensity exercise when compared to similar lengths of higher intensity exercise. Therefore you would have to exercise for a longer period of time at the lower intensity levels to burn ……..

Continues on Page 4

Total Body Circuit

Below is a total body circuit designed to get your heart pumping. The circuit comprises of strength, core and cardiovascular exercises. After completion of each exercise move as quickly as possible into the following exercise in the circuit. Aim to complete 3 sets of the circuit, and take 3 to 5 minutes rest between sets.

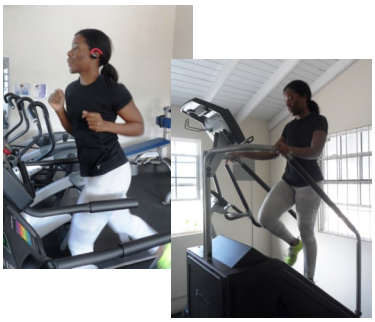
****Warm up on any cardio machine for at least 10 minutes before beginning the first set of the circuit****

Dumbbell Clean & Press

Lying Back Extensions (Superman)

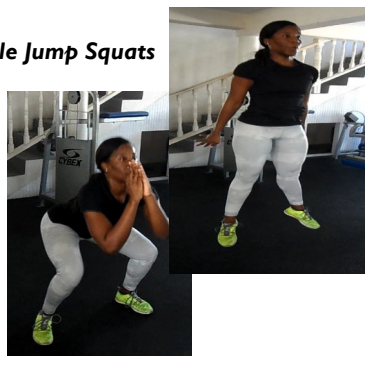
Exercise	Repetitions / Time
Dumbbell Clean & Press	15
Push Ups	20
Dumbbell Alternating Lunges	20
Inverted Rows	20
Pile Jump Squats	20
Russian Twists with medicine ball	30
Front Plank	1 minute
Lying Back Extensions (Superman)	20
Cardio at 75% - 90% MHR (rpe 7 - 9)	2 minutes

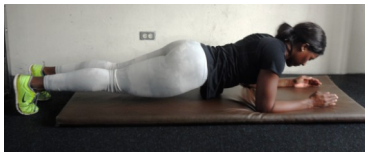
Inverted Rows



Cardio

Pile Jump Squats





Front Plank

Ask Yourself Answers

1. **True**
2. **False - In the fat burning zone a higher percentage of calories burnt are from fat**
3. **True - Fat cells cannot be lost. They can only be shrunken…..but, this doesn't mean that they cannot shrink close to nothing**
4. **False - Dehydrating a muscle by 3% can cause a 10% loss of strength (and an 8% loss of speed)**
5. **False - Muscles can only pull**

Research the Facts

Hamstrings Can Be Regionally Targeted Through Exercise Selection

The hamstrings are multi-joint muscles that flex the knee and extend the hip. Hamstring injuries typically occur during hip extension in activities such as sprinting, jumping and cutting. Many persons do leg curl rather than hip extension to build the hamstring after injuring them. A study led by Brad Schoenfeld from CUNY Lehmen College in New York found differences in regional hamstring activation during leg curls and straight-leg deadlifts. Straight-leg deadlifts showed greater activation of the upper part of the muscles, while leg curls showed greater activation of the lower parts. This study has important implications for hamstring development and for injury rehabilitation following hamstring injury.

(Journal Strength Conditioning Research, 29: 159 - 164, 2015)

Jet Lag Promotes Obesity

Christoph Thaiss and co-workers from the Weizmann Institute of Science in Israel, in a study on mice, found that jet lag promotes obesity by altering the microbes in the gut. Crossing time zones threw off the normal feeding patterns of the microbes that bias the metabolism towards fat storage. This study helps to explain why frequent fliers (& shift workers) have an increased risk of the metabolic syndrome - a group of symptoms that include high blood pressure, high blood fats, abdominal obesity, poor blood sugar regulation and inflammation.

(Cell 159: 514 - 529, 2014)

Capsaicin Makes You Feel Full

Capsaicin is a chemical found in red chili pepper. It reduces appetite and calorie intake and helps promote weight loss by releasing a hunger-suppressing hormone (serotonin) in the gut. A study from Maastricht University in the Netherlands found that supplementing capsaicin increased satiety and fullness and prevented overeating in people in energy balance (balance between calories in and calories out). Capsaicin also decreased the desire to eat after dinner during caloric restriction. While we have little information about the long-term effects of capsaicin, it appears to decrease appetite, reduce caloric intake and increase metabolic rate.

(Appetite, 77: 46 - 31, 2014)

Caffeine Improves Performance Better During Morning Workouts

Consuming 200 to 400 milligrams of caffeine before training or sports competitions improves performance in endurance and high-intensity exercise. Spanish researchers from the University of Castilla-La Mancha in Toledo found that caffeine improved performance in the bench press and squat when taken in the morning but not in the afternoon. Caffeine is an important supplement for improving training intensity, however it is more effective for morning than afternoon workouts as consuming caffeine supplements in the afternoon was found to be less effective and produced more side effects.

(Journal of Science and Medicine Sport, published online April 26, 2014)

The Fat Burning Zone - Real or Myth

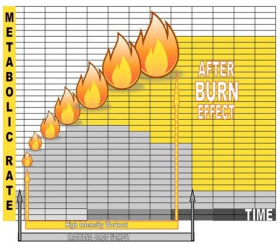
….Continued from Page 1

….the same amount of overall or absolute calories compared to when exercising at higher intensity levels. Thus exercising at the higher intensity levels is a more effective method of burning calories as the calorie output from higher intensity exercise will surpass the calorie output of the lower intensity exercise, over the same time span, and therefore has the ability to produce more positive weight loss results.

Table 1: Comparison of Calories Burnt for a Low vs High Intensity 30 Minute Workout

30 Minutes of Exercise	Total Calories Burned	Fat Calories Burned	Glycogen (carb) Calories Burned
Low Intensity Group (50% MHR)	200	120 (60%)	80 (40%)
High Intensity Group (75% MHR)	400	140 (35%)	260 (65%)

The Afterburn Effect (Excess Post-Exercise Oxygen Consumption - EPOC)



The scientifically labeled 'excess post-exercise oxygen consumption or EPOC' is known simply as 'the afterburn effect' in fitness circles and refers to the correlation between the number of calories burnt post-exercise and the activity's intensity. Research has suggested a strong correlation between the number of calories burnt post-exercise and the activity's intensity as the longer and more intense the exercise, the more oxygen the body consumes afterwards, and thus a higher sustained metabolic rate and more calories burned after the activity. Estimates of the afterburn effect vary depending on the exercise method, workout intensity and even how it is measured. However, one common fact that has been agreed upon is that while this phenomenon of a continued calorie burn immediately after exercise does occur with low - medium intensity exercise, it is only really considered relevant, significant or evident enough with workouts at high intensity levels. An example of such was in a study by Dr. Christopher Scott and the University of Southern Maine, in which the total calorie burn of low intensity exercise verses high intensity exercise was examined. In the study a low intensity exercise group cycled at a steady rate for 3.5 minutes, while the higher intensity group did three 15 second all out sprints. In the comparison of the 3.5 minutes of exercise for the low intensity group to the 45 seconds of exercise for the sprinting group it was found that the lower intensity group burned 29 calories verses only 4 calories for the sprinting group.

ASK YOURSELF ..... True or False ?

Score:* _____ *out of 5

1. Muscle glycogen is approximately 3 parts water to 1 part glucose	**TRUE**	**FALSE**
2. The fat burning zone burns more total fat calories	**TRUE**	**FALSE**
3. Once an adult, fat cells can be created but cannot be lost	**TRUE**	**FALSE**
4. Dehydrating a muscle by 3% does not have any impact on the strength of the muscle	**TRUE**	**FALSE**
5. Muscles can push or pull.	**TRUE**	**FALSE**

Answers can be found on the bottom of page 2

The Fat Burning Zone - Real or Myth

….Continued from Page 4

However, when the analysis was expanded to include the calories burned after exercise the numbers were significantly different as the low intensity group totaled 39 calories, while the sprinting group totaled 65 calories. In fact, a staggering 95% of the total calorie burn for the springing group occurred after the exercise had been completed.

Conclusion

The Fat Burning Zone is not a myth, however the myth is that you should exercise mainly or solely in that low -medium intensity zone if you are aiming to lose weight since the greater percentage of calories burnt while in this zone are from fat. To get the best results to this respect one should aim to incorporate forms of high intensity interval training into your usual cardio routine. This is not to say that lower intensity exercise does not have its benefits, or place within a workout regime, as persons who are now beginning a fitness regiment, or have physical ailments (e.g. cardiac conditions, injuries), would derive more benefits from bouts of longer lower intensity exercise compared to higher intensity exercise, which could possibly result in undue discomfort and possible injury.

Healthy & Great Recipe

Eating healthier does not have to mean eating boring. In our 'Healthy & Great' recipe section we will introduce you to some incredible recipes which are lower in sugar, fat and calories compared to their 'traditional' counterparts but are still full of flavor.

Breakfast BLT Sandwich

MAKES 1 (ONE) SERVINGS

- 1 Light Multigrain Thomas' English muffin (or 2 slices light wheat bread)
- 2 slices center cut bacon
- 1 large egg, beaten (or 1/4 cup liquid egg substitute)
- 2 mounded teaspoons light mayonnaise
- 2 leaves of lettuce
- 2 slices tomato

Method

1. Spray a small skillet with non-stick cooking spray and place over medium heat.

2. Place bacon on a paper towel and microwave according to instructions on the package or until desired crispiness.

3. While the bacon is cooking, place English muffin halves in toaster. Pour the beaten egg into the preheated skillet and use a spatula to push the cooked portion to the center and allow the uncooked egg to flow to the edges. As the egg continues to cook, move to the center of the pan and shape to fit the size of the muffin. When the egg is firm enough, flip and briefly cook second side. Remove from the heat.

4. Spread mayonnaise evenly over each half of toasted muffin. Place a lettuce leaf on one muffin half. Add one slice tomato, then egg, bacon slices, then remaining tomato and lettuce. Top with muffin second half.

Perfect Pairing....
Pair your BLT sandwich with an 8-ouce glass of freshly queezed orange juice to complete this tasty meal and get over 100% of your daily required value of vitamin C.

NUTRITIONAL INFORMATION PER SERVING (3/4 cup)
Calories: 260 / Carbohydrates: 26g (Sugars: 2g) / Total Fat: 12g (Saturated Fat: 4g) / Protein: 17g / Fiber 9g / Cholesterol: 230mg / Sodium: 570mg

Recipe obtained from "Eat What You Love" - By Marlene Koch
Contains more than 300 incredible recipes which are low in sugar, fat and calories and are great for weight loss & diabetes diets

CONTACT US

PREMIUM PERFORMANCE TRAINING INC.

Premium Performance Training Inc.

17 Hoytes Terrace
St. James
Barbados
Tel: (246) 233-6433
Website: www.premiumperformancetraining.com
E-mail: admin@premiumperformancetraining.com

ACKNOWLEDGEMENTS

Writer: Jamil Jones

Editor: Janielle Jones

Special thanks to Rashida Daisley for her assistance with this issue

---

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@premiumperformancetraining.com**