PREMIUM PERFORMANCE TRAINING INC.

Health & Fitness Newsletter

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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:

"Run when you can, walk when you have to, crawl if you must, just never give up"

- Dean Karnazes

INSIDE THIS ISSUE:

Blood Glucose Control - The Important Role of Insulin & Glucagon

Your blood glucose or blood sugar level is the amount of glucose (sugar) present in your blood. With some exceptions, glucose is the primary source of energy for the body's cells. Our bodies are naturally designed to tightly regulate its blood glucose levels through the use of the endocrine hormones insulin and glucagon, whose roles are to restore any fluctuations in blood glucose levels which occur. These hormones can be described as the yin and yang of glucose maintenance as they are equally important, but operate in opposite ways to manage your blood glucose levels. Insulin is designed to reduce the blood glucose level when it is over the normal target range, while glucagon's role is to increase the levels of glucose in your blood stream, when it is below the normal target range, with both cases resulting in the blood glucose levels returning to within the normal/acceptable ranges.

How Insulin Works

Insulin is a peptide hormone produced by beta cells in the pancreas. A healthy pancreas is always releasing small amounts of insulin. However, after a meal, the carbohydrates digested are converted to glucose. This causes a rise in blood glucose levels in your blood. The increase in blood glucose signals your pancreas to produce and release increased amounts of insulin into the bloodstream to help regulate the amount of glucose in your blood and return it to normal levels. The amount of insulin released initially in response to a meal is determined by the amount of glucose encountered in the previous meal, therefore the more you needed last time, the more is released initially. Insulin is meant to be a fast acting hormone as it stimulates your cells to rapidly take up glucose from your bloodstream to use it as energy, with any excess glucose being stored in the cells of the liver and muscles as glycogen (or as fat once the glycogen stores become full). These stores are then used overtime to help fuel your body between meals as a …...

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Merry "SMITHmas" - Smith Machine Only Workout

Background:

The smith machine consists of a barbell fixed within steel rails, which allows it to move only in a vertical or near-vertical direction. Along each vertical post there are a series of safety notches on which the barbell can be hooked, therefore unlike a free weight barbell the barbell on the Smith machine can be secured at any point along the post. This can make the use of the Smith machine safer for those persons who lift without a spotter, as one only needs to twist the wrist in order to lock the barbell back in place in the event that the weight becomes too great. Most models also incorporate blocks, pegs, or other devices which can be adjusted to automatically stop the barbell at a predetermined minimum height. Because lifting on a Smith machine requires less stabilization by the lifter, lifters can usually lift more weight on a Smith machine than with a free-weight barbell. It should be noted however that due to many of the safety and stabilization benefits listed above it has been shown that the use of the Smith machine causes less activation of muscle when compared to free-weights, and it does not develop the stabilizer muscles. Similarly for some leg exercises the Smith machine results in an unnatural movement and can put added stress on your knees and lower back.

Instructions:

- Do the following listed exercises as straight sets (complete all the required sets of each exercise before moving onto the next exercise listed)
- Use weight whereby the last 3 - 5 repetitions of each set are challenging

Exercise	Sets	Repetitions/Time
Smith Machine Incline Bench Press	**4**	**8**
Smith Machine Front Squats	**4**	**10**
Smith Machine Bent Over Rows	**3**	**10**
Smith Machine Pulsing Lunges	**4**	**10 (each leg)**
Smith Machine Close Grip Bench Press	**2**	**12**
Smith Machine Isometric Barbell Holds	**2**	**15 seconds**
Smith Machine Straight Leg Deadlifts	**3**	**15**
Smith Machine Front Press	**3**	**10**
Smith Machine Calf Raises	**4**	**20**

Ask Yourself Answers

1. **False - Diving. Marjorie Gestring became the youngest Olympic gold medalist when she won the gold medal in 3-meter springboard diving at the 1936 Summer Olympics at the age of 13 years, 268 days.**
2. **True**
3. **True**
4. **False - The death rate from Prostate Cancer is almost three times as high as the death rate from Breast Cancer**
5. **True - Up to 30% of its calories are used for digestion and assimilation for proteins, compared to up to 15% for carbohydrates and up to 5% for fats**

Research the Facts

Train Frequently For Greater Hypertrophy

The idea behind split routines is that they allow athletes to train specific muscle groups more intensely, while performing the same training volume. Some believe that split routines may promote muscle growth, enhanced neuromuscular performance and prevent overtraining. However, according to a study led by Brad Schoenfeld from CUNY Lehman College in New York whole-body workouts practiced three days per week were superior to split workouts which emphasized specific muscle groups one time per week while training three times per week. The study showed that hitting muscle groups more frequently might produce more hypertrophy. It should be noted that this study used college students who were relatively untrained, so it is difficult to determine if the results apply to elite athletes.

(Journal Strength Conditioning Research, published online April 30, 2015)

Isometric Training Builds Core Stiffness

For more than 100 years, traditional core training included exercises such as sit-ups, back extensions and twists. Isometric core exercise might be a better way to develop core strength and stiffness, which is vital for athletes because it strengthens muscles, improves muscular endurance, reduces lower back pain and boosts sports performance. A landmark study by Benjamin Lee and Stuart McGill showed that isometric exercises for the core resulted in greater core stiffness than performing whole-body, dynamic exercises that activated core muscles. Examples of isometric core exercises include planks, side-bridges and cable wood chops. The results of this study casts doubts on traditional core-training methods.

(Journal Strength Conditioning Research, 29: 1515 - 1526, 2015)

Exercise is Better than Dieting for Improving Metabolic Health

Most studies show that effective weight loss requires cutting calories as well as exercising more. However, calorie cutting alone does little to improve metabolic health. Researchers from Changi General Hospital in Singapore compared weight loss and metabolic health in people attempting to lose weight through diet or exercise alone during a 24-week weight-loss study. Patients in both groups lost nearly eight pounds, but markers of inflammation and blood sugar regulation improved more in the exercise group. This therefore showed that exercise was the most important way of improving metabolic health and that trying to lose weight through caloric restriction alone is counterproductive for long-term health, appearance and longevity.

(International Journal Sports Nutrition Exercise Metabolism, published online May 22, 2015)

FDA: Nonsteroidal Anti-inflammatory Drugs (NSAIDs) Increase the Risk of Heart Attack, Stroke and Heart Failure

The U.S. Food and Drug Administration (FDA) issued a warning that non-aspirin nonsteroidal anti-inflammatory drugs (e.g. ibuprofen & naproxen), which are widely used to fight pain and inflammation, increase the risk of stroke, heart attack and heart failure by 10% - 50% depending upon dosage and health status. The FDA warning included prescription and over-the-counter NSAIDs. It should be noted that the risk of serious cardiovascular events is higher in people with established cardiovascular diseases, but even healthy people are at risk.

(The New York Times, July 10, 2015)

Blood Glucose Control - The Important Roles Of Insulin & Glucagon

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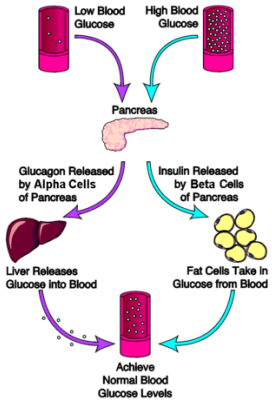
…. (as a) readily available source of energy to support the demands of physical activity and exercise. Once the glucose levels in your blood returns to normal (pre-meal) levels, insulin release slows or stops.

How Glucagon Works

Glucagon is a peptide hormone produced by the alpha cells in the pancreas. Its effect is opposite to that of insulin, as its role is to signal the liver to break down the glycogen stored within the cells, into glucose and release the glucose back into your bloodstream. A well-nourished adult can store approximately 500 grams or 2000 kcal of carbohydrates. Of this, approximately 400 grams are stored as muscle glycogen, 90-110 grams as liver glycogen, and 25 grams circulate in the blood as glucose. Under normal circumstances, the glucose levels in your blood become reduced, approximately four to six hours after you eat, this time frame can be significantly shorter if exercise or a high intensity activity has taken place. When this reduction occurs and your body needs more glucose than is available in the bloodstream to support energy demands the production of glucagon in the pancreas is triggered. When the panaceas begins its secretion of glucagon it suppresses insulin secretion and results in the release of glucagon into the bloodstream. The presence of glucagon signals the liver to convert stored glycogen into glucose, and release it back into the blood, thereby resulting in the replenishment of the blood glucose concentration in the bloodstream to its normal levels.



Picture Showing the Relationship of Insulin and Glucagon in Regulating Blood Glucose

Appropriate Blood Glucose Levels

Under normal circumstances blood glucose is generally maintained between 70 mg/dl and 110 mg/dl. Hypoglycemia is characterized by blood glucose levels below 70mg/dl, while hyperglycemia is a condition where blood glucose levels are 180mg/dl or more. As mentioned previously it should be noted that blood glucose levels do rise immediately after a meal and can stay elevated for up to 2 hours depending on the content/volume of the meal. In such cases, during this time frame a blood glucose level of up to 140mg/dl would still be considered normal.

ASK YOURSELF ..... True or False ?

Score: _____ out of 5

1. The youngest person to win a Summer Olympic gold medal competed in the sport of gymnastics	**TRUE**	**FALSE**
2. Consistently averaging less than 5 hours sleep a day increases your risk of a number of health problems, including death	**TRUE**	**FALSE**
3. Your brain receives 100 million nerve messages each second from your senses	**TRUE**	**FALSE**
4. In Barbados the death rate of Breast Cancer is higher than that of Prostate Cancer	**TRUE**	**FALSE**
5. The thermic effect of food is highest for proteins	**TRUE**	**FALSE**

Answers can be found on the bottom of page 2

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 flavour.

Strawberry Cheesecake Crepes

MAKES 8 SERVINGS

- 2½ cups sliced strawberries
- 2 tablespoons Splenda granulated sweetener
- ½ cup low-fat cottage cheese
- ¼ cup light tub-style cream cheese
- 1½ tablespoons Splenda granulated sweetener
- ¾ cup light whipped topping
- 8 (9-inch) crepes
- Powdered sugar, for garnish

Method

1. Reserve about 8 strawberry slices to use later for garnish. In a small bowl, mix together the remaining strawberries and 2 tablespoons of sweetener.

2. Place the cottage cheese in the bowl of a food processor or blender and process until smooth.

3. In a medium bowl, beat the cream cheese and remaining sweetener. Add the cottage cheese and mix well. Gently fold in the whipped topping.

4. To assemble the crepes, place 2 tablespoons of the cream cheese mixture into the center of each crepe. Top with ¼ cup strawberries. Fold in half. Sprinkle the tops with the powdered sugar and a strawberry slice or two for garnish.

DARE to COMPARE .....
Swap out the usual Strawberry Shortcake for crepes for a significant reduction in calories and fat. Good Housekeeping estimates a serving of Classic Straberry Shortcake has over 400 calories and 20 grams of fat.

NUTRITIONAL INFORMATION PER SERVING
Calories: 110 / Carbohydrates: 15g (Sugars: 6g) / Total Fat: 3.5g (Saturated Fat: 2.5g) / Protein: 4g / Fiber 1g / Cholesterol: 10mg / Sodium: 190mg

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 & diabetic diets

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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@premiumperformancetraining.com**