



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:

“Fitness is not about being better than someone else..... it is about being better than you used to be”

- Unknown

INSIDE THIS ISSUE:

Activity Trackers: Are They Worth It?	1, 4 & 5
Heavy & Light Method	2
Research The Facts	3
Ask Yourself... True or False ?	4
Healthy & Great Recipe — “Better-for- you Buttermilk Pancakes”	6
Contact Us	7

Activity Trackers: Are They Worth It?



From the simple pedometers and to large wearable body monitors, activity trackers have been around for a long time. However, a new crop of smaller, ‘more accurate’, activity trackers have hit the market within the last 5 years causing their popularity to soar. These improved trackers have been touted as a wellness tool that will help

improve your fitness lifestyle making your life better and healthier. But, how accurate are these new wave of fitness accessories and, are they truly capable of helping to create a fitter you?



Most activity trackers on the market have evolved and now can provide stats such as your steps, active time, calories, length and deepness of sleep, heart rate, even skin perspiration and skin temperature. These stats can then be viewed and analyzed either directly on the tracker or with the help of a Smartphone or computer app. Despite various fitness entities proclaiming that their activity tracker is the best and most accurate, they all share one common thing; an accelerometer.

Accelerometers record changes in motion relative to the tracker: up and down, side to side, and front to back. The tracker then uses a software algorithm to analyze the recorded motion and estimate how active you are (e.g. number of steps, calories burnt etc), as well as your inactivity. Despite they do a relatively good job at recording a person's overall daily activity level the accelerometers are far from perfect. Some of the faults with the current accelerometers found in activity trackers are that:

Continues on Page 4

Heavy & Light Method

Overview:

This technique incorporates several heavy sets of an exercise, followed by several light sets of the same exercise. The theory is that the heavy sets will stimulate the fast-twitch muscle fibers better while the lighter sets promote capillarization of the muscles and induce fatigue. This method can be done with the incorporation of one exercise or two exercises per body part. If two exercises are incorporated the following rules should be generally followed*:

First Exercise — typically a basic, compound, multi-joint movement completed with heavy weight and low repetitions

Second Exercise — typically an isolation-type exercise completed with very light weight and high repetitions

* compound or isolation exercises can be used for both the first and second exercise if desired, however if a compound exercise is being incorporated it should always be completed as the first exercise

Table 1: Ratings of the Heavy & Light Method

Rating					
Time	1	2	3	4	5
Length	1	2	3	4	5
Difficulty	1	2	3	4	5
Results	1	2	3	4	5

*Highlighted numbers represent the rating given to the method on a scale of 1 to 5 whereby:

1 = shorter/easier/least effective

5 = longer/harder/more effective

Table 2 : Heavy & Light Single Exercise Sample Routine

Muscle Group	Exercise	Sets	Reps
Shoulders	Shoulder Press	3	5
		3	15
Chest	Bench Press	3	5
		3	15
Back	Barbell Row	3	5
		3	15

Table 3 : Heavy & Light Multiple Exercise Sample Routine

Muscle Group	Exercise	Sets	Reps
Shoulders	Shoulder Press	3	5
		3	15
Chest	Bench Press	3	5
		3	15
Back	Barbell Row	3	5
		3	15

Ask Yourself Answers

1. **True**
2. **False** — In humans the large intestine is 5 feet long, compared to 20 feet for the small intestine
3. **True**
4. **True**
5. **False** — Women’s testosterone levels are typically 5% —10% of men’s testosterone levels.

Grip Width Has No Effect On Muscle Activation During Lat Pulls



Contrary to convention weight training wisdom, which implies that wide-grip lat pulls activate the latissimus dorsi muscles more than narrow-grip lat pulls, a Norwegian study showed that grip width did not influence muscle activation during the lat pull exercise. In the study researchers estimated muscle activation with electromyography, while test subjects performed lat pulls on a straight bar, pulling the bar to their chest. The study showed that grip width had no effect on the activation of the biceps brachii, latissimus dorsi, trapezius or infraspinatus muscles during either the concentric or eccentric portions of the exercise.

(Journal Strength Conditioning Research, 28: 1135—1142, 2014)

Glute-Ham Raise and Romanian Deadlift are Best Hamstring Exercises

The hamstrings are made up of three muscles on the back of the thigh that flex the knee and extend the hip. The leg curl, involving knee flexion, is the most common and popular hamstring exercise. A study from the University of Memphis, led by Brian Schilling and Matt McAllister showed that the glute-ham raise and Romanian deadlift were the best exercises for activating the hamstring muscles. These exercises are relatively uncommon in many workout programs but are essential for building hamstring strength and power, and in preventing injury.

(Journal Strength Conditioning Research, 28: 1573—1580, 2014)

Suspension Training Is A Great Core Builder



In suspension training exercises the lower or upper body stays in contact with the ground during the movement. As a result of this fact these exercises are only possible through coordinated muscle action working across many joints. The muscles supporting the spine act as stabilizers which allow for the transfer of force between the legs and arms. A study from Hong Kong Polytechnic University in China found that suspension exercises triggered a high degree of muscle activation in the core muscles, with the level of muscle activation recorded being higher than those recorded with Swiss ball exercises.

(Journal Science Medicine Sport, published online January 29, 2014)

Raisins Improve Blood Sugar Control

According to a study led by James Anderson from the University of Kentucky eating raisins three times a week will reduce blood pressure, blood sugar and levels of glycated hemoglobin (a marker of long-term blood sugar regulation). In the study test subjects consumed either raisins or other snacks three times per week for 12 weeks, and while there were no differences in body weight consumption between groups the raisin consumption group showed improved blood sugar regulation and blood pressure by more than 10%.



(Postgraduate Medicine, 126: 37—43, 2014)

Activity Trackers: Are They Worth It?

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- (1) They cannot understand every different exercise and movement since they only measure motion and not exertion (for example, doing a biceps curl with a 50 pound dumbbell will record similarly — or even less intensely — compared to raising you hand rapidly to eat a portion of chips).
- (2) Many of today’s activity trackers are wrist worn and cannot recognize when you are engaging in a solely leg based exercise (e.g. cycling). Although some trackers have now been adjusted to be worn around the ankle, the majority still cannot achieve this.

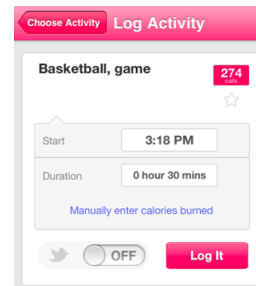


Outside of the possible inaccuracies in the accelerometers, the estimated calories burnt is another quantitative reading which many activity trackers produce that the validity and accuracy can be put into question. The estimated calories burnt is produced via the use of algorithms which take initial information from the activity data recorded by their accelerometers, along with the estimated resting calories burnt of the individual (calculated based on the individual’s initial entry data relevant to their height, weight, age and gender). The use of different algorithms by different trackers commonly result in wide ranging results of calories burnt depending on the tracker used. This variation is expected as the only way to truly get an accurate reading in relation to calories burnt is with an indirect calorimeter, which analyzes your oxygen consumption using a face mask.

Some trackers even acknowledge the inaccuracies in their calories burnt results by giving you additional options to better estimate and calculate your calories burnt, such as: (1) advising, or incorporating, the use of chest strap heart rate monitors; or, (2) allowing you to manually enter different types and durations of activities you have completed along with the calories burnt based on indirect calorimeter estimates/standards. However, similar to step counts, the calorie calculator has various flaws and is more of an estimate than a highly accurate calculation as it is sometimes portrayed.



Additional chest strap with activity tracker



Manually logging your physical activity and calories burnt

ASK YOURSELF True or False ?

Score: _____ out of 5

1. Neurons are nerve cells that transmit nerve signals to and from the brain	TRUE	FALSE
2. The large intestine of a human is longer than the small intestine	TRUE	FALSE
3. The world’s longest certified footrace is a multi-day race which is 3,100 miles (4,989 kilometers) long for which runners have 52 days to complete the distance	TRUE	FALSE
4. The largest muscle in the human body is the gluteus maximus	TRUE	FALSE
5. Women’s testosterone levels are typically 20% of men’s testosterone levels.	TRUE	FALSE

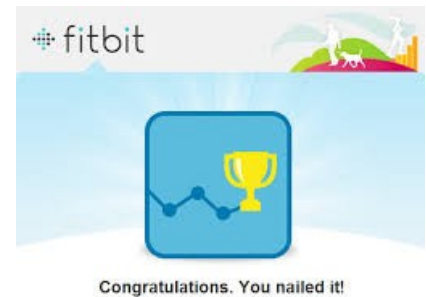
[Answers can be found on the bottom of page 2](#)

Activity Trackers: Are They Worth It?

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With such glaring flaws, can such items really be beneficial to person's fitness regime? The simple answer is "yes". Activity trackers can provide the following benefits:

- **Allows you to set daily goals** — the ability to set daily goals (e.g. steps or calories) and then track and compare your results against these goals not only encourage you to stay focused on your daily targets, but in most cases keep you mindful about your daily activity level and focused on achieving and surpassing these goals.
- **Provides motivation and encourages movement** — using trackers makes you more aware of your movement, therefore compelling and encouraging you to move more, and be more active during the day.
- **Incorporates a community/group based fitness setting** — many activity trackers allow you to use their websites or apps to integrate, communicate, and compete with persons around the world who have the same device as yours. This creates a friendly competitive based atmosphere as you compare results, which in many cases spur increased activity via competition.



Determining the worth of the current activity trackers therefore ultimately comes down to the user. If you are intrinsically motivated to workout and can be/are highly active on a daily basis the current crop of activity trackers will probably not benefit you in any significant way. However, for persons who desire, or require, either: (1) the data feedback, or (2) the competitive atmosphere, activity trackers can be an extremely worthwhile investment.

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.



Better-for-You Buttermilk Pancakes

Method

1. In a medium bowl, combine the flours, sweetener, baking powder, and baking soda.

2. In a separate bowl, whisk together the eggs, buttermilk, and vanilla extract. Pour the liquid ingredients into the dry ingredients and stir well until combined. Make sure not to over-mix the batter.

3. Spray a non-stick skillet or griddle with cooking spray and place over medium heat. Pour 1/4 cup of batter per pancake onto skillet and spread into a 4-inch circle. Cook the pancake for 3 to 4 minutes on the first side, or until golden on the bottom. Flip the pancake just once more and cook for an additional 2 to 3 minutes. Serve hot.

* top it off with no sugar pancake syrup (0 — 35 calories per 1/4 cup) or light pancake syrup (100 calories per 1/4 cup) to reduce the syrup condiment calories compared to regular pancake syrup (210 calories per 1/4 cup)

MAKES 6 SERVINGS

Dressing:

- ◆ 3/4 all-purpose flour
- ◆ 3/4 cup white whole wheat flour
- ◆ 1 1/2 tablespoons (2 packets) Splenda granulated sweetener
- ◆ 1 teaspoon baking powder
- ◆ 1/2 teaspoon baking soda
- ◆ 1 large egg
- ◆ 2 large egg whites
- ◆ 1 1/2 cups low-fat buttermilk
- ◆ 1 teaspoon vanilla extract

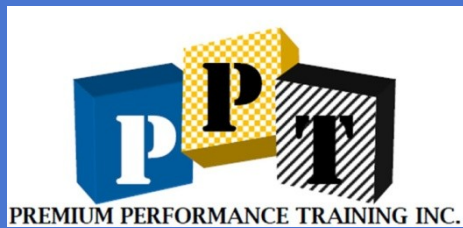
NUTRITIONAL INFORMATION PER SERVING (generous 2 pancakes)

Calories: 185 / Carbohydrates: 30g (Sugars: 5g) / Total Fat: 2g (Saturated Fat: 0g) / Protein: 8g / Fiber 2g / Cholesterol: 40mg / Sodium: 280mg

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

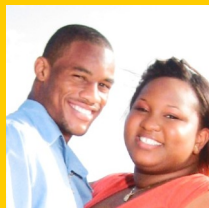
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Let Us Know What You Thought Of This Issue

Read something that you disagreed with, that you did not understand or that was really helpful? Send your feedback to

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