

## Notes from Editor

I was up in New York State for a quick weekend and I noticed the leaves were starting to change color. This had me thinking that the end of 2007 is coming quick!!

I hope your fitness goals that you decided upon when you made your New Year's resolution are still within reach if you haven't reached them.

The holidays are coming up quickly, start planning time to exercise during this very busy time of the season!

Yours in health,

Dave Radin  
Editor

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## Understanding the Fitness Continuum

Over the past 15 plus years, we have been bombarded with medical experts, fitness professionals, and the media citing the benefits of exercise. You ask anyone in America and they should be able to tell you at least one benefit of exercise. The information is out there and we all know we should incorporate exercise on a daily basis. However the number of Americans who are overweight or obese is continually rising!! Obesity is even starting to impact our youth. Juvenile diabetes and obesity seems to be rising on a daily basis. Why? The lack of movement or exercise.

Many, if not most, of people who don't currently exercise either hate it, or do not know where to start. Fortunately the fitness continuum can be a big help. The Fitness Continuum is designed to allow individuals to move along in either direction depending on their motivation. Each category is defined below:

**Sedentary**— no exercise or movement at all. "Couch potato."

**Activities of Daily Living (ADL's)** - daily movement. Stairs vs. escalator, park further away from the store and walk in. Yard work, walking the dog, playing with your kids.



**Intentional Exercise**— involves going to the gym, doing your cardiovascular exercise, strength training, and flexibility. Goals will help determine how your exercise program works.

**Recreation**— golf, softball leagues, basketball leagues, flag football, etc. "Weekend warriors." This category is usually based on enjoyment of the activity and socialization of others with competition.

**Athletics**— Competition. These individuals base their exercise program on performance versus health benefits. Triathletes, cyclists, runners, swimmers, NASCAR drivers.

Movement along the continuum can go either way. Trying to find your comfort level along the continuum is the key. Being athletic is not the end all be all, it depends on your goals. If you are sedentary, increase your ADL's to gradually increase your movement and improve your health. If you are in the intentional exercise realm, try a recreational sport to try something different and add something new to your routine. Try entering a competitive athletic tournament if you are in the recreational category.

The point of all this is to not be stagnant or sedentary. Find your place along the continuum and you can be on your way to improving your overall health or fitness.

*authored by dave radin*

# LOOK!

Did you know if you refer friends and family who sign up for a training package, you can receive complimentary sessions!! For more information, ask your trainer the next time you are working out, or call either the Mooresville or Cornelius locations for more information.

## Fitness Quiz

What is the percentage of North Carolinians who are classified to be overweight or obese?

- A. 30-40%
- B. 40-50%
- C. 50-60%
- D. 60-70%

answer can be found on page 4

## Hot Topics

### Over-speed Training Improves Function in Older Women

The decline in speed and efficiency of gait is one consequence of aging that can result in poor functional capacity and increase the risk of inactivity-related disease. Improving speed and decreasing the energy demands of walking could significantly improve quality of life among older adults. A recent study reports a unique strategy to accomplish this. Researchers incorporated **body weight unloading** using a gait treadmill to exercise a group of 75 to 85 year old women at high speed and intensity over 12 weeks.

During the initial six weeks the group completed interval sessions on a treadmill with 40% body weight unloading at a speed equivalent to the **ventilatory threshold (Tvent)**. Tvent is the point at which breathing begins to become labored. Intervals consisted of 4 sets of 5 minutes alternating 1 minute at Tvent with 1 minute of recovery walking speed. Speed was increased over the first six weeks after which body weight unloading was reduced to 10% for the final 6-weeks of training. **The researchers evaluated energy cost and speed of over-ground walking before and after 12-weeks of training.**

The results indicated that **energy cost at slow, comfortable and fast walking speeds decreased up to 21%**. In addition, maximal walking speed and mechanical power output at Tvent increased, 13% and 67%, respectively.

This study represents a **breakthrough in training for older adults**. Therapeutic exercise programs aimed at reducing risk of falling and increasing function in older adults **should consider the methods used in this study for practical application.**

*Thomas, E.E. et al (2007) Speed training with body weight unloading improves walking energy cost and maximal speed in 75-85 year old health women. Journal of Applied Physiology. Sept*

[www.exerciseetc.com](http://www.exerciseetc.com)

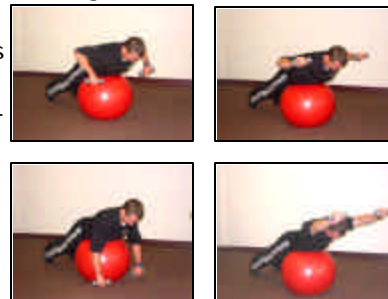
## Exercise of the Month—Dragons

### Preparation:

- Lie prone on a stability ball with knees extended and weight on toes.

### Movement:

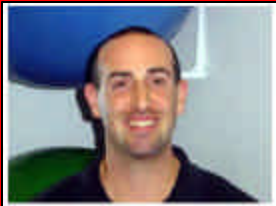
- Engage inner abdominals and pelvic floor muscles to assure spinal stabilization.
- Begin by pulling the arms back (row) and squeezing the shoulder blades together.
- Slowly rotate the arms up so arms are parallel to the floor. Maintain the squeeze between the shoulder blades.
- Maintaining neutral spine press the arms out, pause and reverse the movement back to the beginning.
- Repeat.



## FACTOID

***Even when you sleep, the brain consumes 20% of the oxygen you consume.***

## Trainer Spotlight



**Bryan Fass**  
ATCL, CSCS, NREMT-P

Bryan Fass holds a bachelors degree in sports medicine and is a Certified / Licensed Athletic Trainer, Nationally Certified Strength and Conditioning Specialist, as well as a Nationally Registered Paramedic. Bryan brings over ten years of clinical rehabilitation and sports medicine experience and is highly skilled in Myofascial Release and soft tissue therapy. Aside from being an expert in the field of rehabilitation and corrective exercise, Bryan is also highly experienced and knowledgeable in developing strength and conditioning programs for improved sports performance.

## The Seven Secrets of Weight Loss

When embarking on a weight loss program people will almost always focus on just one or two of the seven necessary components needed to achieve their goal. In order to maximize ones weight loss results they must combine all seven components. I like to call these components the "Seven Secrets of Weight Loss" do to the fact that they are almost never explained in simplistic terms to the average person making them somewhat of a secret. Below you will find a brief description of the seven secrets that will help you achieve maximum weight loss.

Each of the seven secrets represents the seven necessary components needed to achieve maximum weight loss.

### Secret #1 (Proper Mind Set)

A proper mind set is an essential part of any successful weight loss program. You must first ask yourself why losing this weight is important to you. Write it down so you can read it aloud to yourself every day. Make a commitment to yourself to follow through with what you start. Create a schedule for your meals and workouts. By scheduling something it will become reality. Without a proper mind set, a true commitment to succeed, and plan of action it will be very unlikely that you will reach your goal.

### Secret #2 (Caloric Intake)

A decrease in caloric intake and an increase in daily activity will create a natural caloric deficit which is the foundation of all weight loss. Reducing your calories can be achieved by eating smaller portions, increasing the quality of your foods and eating small meals about every three hours to regulate blood sugar. The regulation of blood sugar levels will keep you from getting hungry and making poor food choices. Protein portion sizes should be about the size of your palm. Carbohydrate portion sizes should be about the size of your clenched fist. Vegetable portions sizes should be about the size of a small handful. Combine a protein with a carbohydrate to make a small meal. Add a serving a vegetables to two of your meals. In addition it is recommended that you have an Omega 3 fatty acid food source with one meal per day. (See food quality for Omega 3 sources)

### Secret #3 (Food Quality)

Quality food choices are usually low in calories and loaded with a variety of vitamins, nutrients, anti-oxidants, and fiber which are the building blocks of a healthy lean body. Some quality foods choices include lean proteins (egg whites, chicken/turkey breast, fish, etc.), quality complex carbohydrates (sweet potato, oatmeal, brown rice, bran cereal, etc.), vegetables (broccoli, green beans, asparagus, spinach, etc.) and Omega 3 fatty acid sources (flax seed oil, canola oil, salmon, tuna, walnuts, etc.).

### Secret #4 (Water Consumption)

Consume at least 8-12 glasses of water throughout the day or a ½ ounce of water per pound of body weight. Water is the most important nutrient in the human body and has many benefits involving weight loss. Proper hydration will increase the amount of oxygen in the bloodstream which in return will increase the body's fat burning ability and overall energy output.

*(Continued on page 6)*

## Chef's Corner...

### Grilled Honey Mustard Chicken Sandwiches

This recipe serves: 4

#### Ingredients

##### **For the chicken:**

1/4 cup olive oil  
2 tablespoons white wine vinegar  
2 tablespoons Dijon mustard  
2 tablespoons honey  
1 teaspoon salt  
1/2 teaspoon cayenne pepper  
1/4 cup fresh rosemary  
4 chicken breasts (4 ounces each)

##### **For the sandwiches:**

1/2 cup cream cheese, low-fat whipped  
2 tablespoons diced, sweet onion  
4 large whole grain sandwich buns, sliced in half  
4 large green leaf lettuce leaves, shredded

#### Cooking Instructions

##### **For the chicken:**

1. Mix the olive oil, vinegar, mustard, honey, salt, cayenne pepper and rosemary together in a large resealable plastic bag. Add the chicken breasts and seal the bag. Turn the bag over several times to thoroughly coat the chicken with the marinade and refrigerate at least 30 minutes or up to 4 hours.
2. Preheat the grill to medium high.
3. Remove the chicken from the marinade, shaking off any excess and season on both sides with salt and pepper. Discard the leftover marinade.
4. Grill the breasts until golden brown, about 4 minutes. Turn them over and cook an additional 4 minutes, or until the chicken is well browned and cooked through. Remove the chicken from the grill and place on a cutting board to rest.

##### **For the sandwiches:**

5. In a small bowl, combine the cream cheese and onion. Add salt and pepper to taste.
6. Lay the sandwich buns out on a work surface in front of you. Divide the cream cheese mixture among the sandwiches and spread it out on each side. Place one chicken breast on each sandwich and divide the lettuce among the sandwiches.
7. Cut each sandwich on a diagonal and serve.

#### Nutrition Information

**Serving Size:** 1 sandwich

**Number of Servings:** 4

Per Serving			
<b>Calories</b>	495	<b>Carbohydrate</b>	95 g
<b>Fat</b>	8 g	<b>Fiber</b>	2 g
<b>Protein</b>	66 g	<b>Saturated Fat</b>	4 g
<b>Sodium</b>	663 mg		

#### Quiz Answer:

**C. 50-60%**

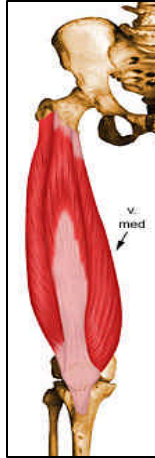
North Carolina has at least **50%** of it's citizens classified with a BMI over 25.

Persons with BMI's over 25 have increased risks of chronic diseases.

[www.eatsmartmovemorenc.com](http://www.eatsmartmovemorenc.com)



## Muscle Anatomy



**Muscle:** Vastus Medialis

**Origin:** Inferior portion of intertrochanteric line, spiral line, medial lip of linear aspera.

**Insertion:** Medial base and border of patella

**Eccentric Action:** decelerate knee flexion, adduction, and internal rotation during heel strike.

**Isometric Action:** stabilize subtalar joint and tibio-femoral joint

**Concentric Action:** knee extension and hip flexion.

The Vastus Medialis, also known as the **vmo**, forms the tear drop shape on the inside of the knee. The VMO is very important for overall knee stability and tracking of the kneecap. The VMO is typically found to be very weak in many individuals. As a result of the weakness, knee pain is usually associated with it. Myofascial release (foam rolling or massage therapy) followed by stretching is a great way to reduce the knee pain.

Strengthening exercises for the VMO are quad sets, terminal knee extensions, and functional exercises (squats, lunges, etc.)

### What's That???

The human brain has approximately **100 billion**, that's right, **billion** nerve cells that help regulate regulate, heart rate, conscious thought, movement and breathing.

[www.medtropolis.com](http://www.medtropolis.com)



Foam Roll—Quadriceps



Quad Sets



Squats



Lunges

## Our Training Philosophy:

**"M.P.E.  
TRAINING"  
MAXIMUM  
PHYSICAL  
EFFICIENCY**

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**We're on the Web!**  
[www.lakenormanfitness.com](http://www.lakenormanfitness.com)

Want to learn about something that has not been on previous newsletters? Send an email to:

[dave@ncprecisionfitness.com](mailto:dave@ncprecisionfitness.com)

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### **Secret #5 (Meal Frequency)**

Eat five to six smaller meals spread approximately three hours apart over the course of a day. Your body only has the ability to process so much food at one time. By eating smaller meals every three hours you will never overload your body with fuel (food) yet there will always be fuel (food) to burn do to adequate frequency. Meal frequency will also regulate blood sugar levels which will ease hunger.

### **Secret #6 (Resistance Training)**

Muscle is the primary part of your body that burns calories from fat stores. Resistance training will improve the conditioning of your muscles resulting in an increase in metabolism. Metabolism is often defined as the rate at which your body burns energy (including fat stores) to sustain itself. By improving the condition of your muscles you will burn more calories 24 hours a day, seven days a week and help in the reduction of body fat. It is recommended that some type of resistance training be performed at least 3 times per week focusing on all of the major muscle groups.

### **Secret #7 (Aerobic Training)**

Aerobic training perform at intensity of 65% to 80% (Target Heart Rate Zone) of ones maximum heart rate will use fat stores as a primary source of fuel. Aerobics training is a great way to increase your daily calorie expenditure while using fat stores as a primary source of fuel. Perform aerobic activity 25 to 45 minutes 3 to 6 times per week. Aerobic exercise for fat loss is most effective when performed first thing in the morning before a meal or immediately after resistance training.

Target Heart Rate Zone  $220 - \text{Age} \times .65 = \text{BPM}$  (Beats Per Minute) 65%  $220 - \text{Age} \times .80 = \text{BPM}$  (Beats Per Minute) 80% (Perform aerobic exercise at a heart rate between 65% and 80%)

In conclusion we must all remember that we are all individuals with different genetics. In some cases results may vary due to hormone imbalances or other medical conditions. The seven secrets of weight loss are the components that will drive you towards your genetic best and vastly improve your overall health.

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