

## HEALTH TIP

### Healthy Tip Read Food Labels

Look at the ingredients, the main ingredients are listed first. If the first few ingredients on the label include processed sugar (i.e. high-fructose corn syrup.) or saturated fat or trans-fatty acids (coconut oil, palm kernel oil, hydrogenated or partially hydrogenated oil, vegetable shortening), you may do well to make another food choice.

## POPQUIZ

What type of exercise is considered anaerobic?

- a. Cycling
- b. Weight Training
- c. Yoga

Answer can be found below.

## The Concept of Periodization

How do you get ready for your desired sport or activity? Do you play yourself into shape or do you have a system that builds in intensity till you reach your peak performance at just the right time? If you play yourself into shape, you are behind your competitors. The old days of showing up for games and practices and getting into shape are over. Every baseball player, cyclist, bodybuilder, track and field athlete have a plan to be in peak physical performance by the time the season has started.

How do they do it? Secret Training tips? No. The process is called Periodization. Periodization is a systematic approach to training that divides the year into different phases. Each phase has a different goal and objective. The overall goal is to gradually increase the intensity of the workout and perform exercises that mimic your specific sport.

Even if you are a weekend warrior or just looking to improve the shape of your body, periodization can help accomplish that. There are at least four phases: Adaptation, Hypertrophy, Strength, and Power. See the table below for the details of each phase.

Phase	Sets/Reps	Rest	Duration	Intensity
<b>Adaptation</b>	2-3; 15-20	60 secs	4 weeks	Low
<b>Hypertrophy</b>	3-4; 8-12	90-120 secs	4-6 weeks	Moderate
<b>Strength</b>	3-4; 5-6	2-4 minutes	4-6 weeks	High
<b>Power</b>	3-5; 2-5	3-5 minutes	4-6 weeks	Very High
<b>In-Season</b>	1/4-6; 8-12	90 secs – 4 minutes	Competitive Season	Very High

As you can see, each phase builds upon the next by increasing intensity to increase performance. The **adaptation phase** strengthens the neuromuscular system. Research has shown that the first few weeks benefit the neuromuscular system before gains in muscular strength occur. The **hypertrophy phase** is designed to increase muscle mass and to increase overall work capacity. Some limited sport specific exercises can start to be introduced in this phase. The **strength phase** is designed to do just that: improve muscular strength. The **power phase** is designed to improve force production associated with the particular sport activity.

After the power phase, an **in-season phase** can be performed to maintain power and strength levels gained during previous stages. The repetition range varies from heavy, power exercises (4-6 reps) to the muscle building hypertrophy phase (8-12).

If your goal is to improve body composition, improve your golf game, decrease your 5K time, or improve strength levels, periodization is the way to do it. By planning your workouts from your target date and working backwards, you can easily put together a plan that can work to help you reach your goals.

If you have questions about periodization, ask your Precision Fitness trainer for more details about what periodization can do for your performance .

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.

## DID YOU KNOW

Tendons attach **muscle to bone**, while ligaments attach **bone to bone?**



## Hot Topics

### *Flexibility gains not improved during resistance training activity*

Adequate levels of flexibility and muscle strength are necessary **for activities of daily living (ADL) and optimal performance** in sports. The purpose of this study was to determine if strength training, done by itself, can improve flexibility, and vice versa. **The researchers sought to determine if separate training programs necessary to develop muscle strength and flexibility.**

Subjects were 43 healthy, young adults; they were assigned either to a **flexibility training only, a resistance-training group**, a mixed training group (resistance and flexibility training,) or a control group.

The researchers found that **muscle strength increased** with resistance training alone, and **when strength training was combined with flexibility training**, but did not increase in the flexibility only group. The flexibility increased when only flexibility training was done, and **when flexibility was done in combination with resistance training**. Flexibility did not increase for the group that did resistance training only. **The control group experienced no gains in strength or flexibility.**

The results of this study indicate that in young, healthy subjects, while resistance training, by itself, does not increase flexibility, **it also does not interfere with increases in range of motion** when combined with flexibility training. **These results indicate that separate training protocols need to be employed when working with young healthy adults in order to increase muscle strength and flexibility.** It would be interesting to have this study repeated using **older adults whose flexibility is often compromised** to see if the results are different.

*Nobrega, Antonio, C. L. et al. Interaction between resistance training and flexibility training in healthy young adults. Journal of Strength & Conditioning Research. 2005, 19(4).842-846.*

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

## FACTOID

Your body has three types of muscles:

1. **Skeletal** – biceps, triceps, legs, etc.
2. **Cardiac** – heart muscle.
3. **Smooth** – muscles of the intestines, etc.

## Trainer Spotlight



Lara Fass  
LMT, CDM  
Soft Tissue Therapist

Lara holds a degree in Sports Medicine and Athletic Training from the University of South Carolina. Lara is a Licensed Massage Therapist and is one of only a handful of practitioners in the Carolinas certified in the highly effective practice of myofascial release therapy. With extensive experience in both the clinical and spa setting, Lara has been helping individuals feel and perform better for over eight years.

## Pre/Post Hydration Strategies for Sport Performance

With the weather warming up and sport leagues starting to practice, hydration is of extreme importance. Dehydration is a serious matter that can cause the following serious medical complications:

- Heart arrhythmia
- Heat stroke
- Syncope (fainting)
- Hyperthermia

A loss of body fluid of 1-2% can have a negative impact on performance. According to the NATA (National Athletic Trainers Association), "minimizing dehydration is the simplest, yet the most effective step athletes can take to protect both health and performance."

There are some signs that dehydration is occurring: thirst, loss of mental focus, fatigue, and irritability. The problem is that most athletes do not recognize these symptoms as dehydration happen. As a result, the athlete becomes more and more dehydrated and performance continues to drop.

Below are some basic guidelines for pre, during and post exercise hydration.

### Pre:

1. Consume at least 16 ounces of fluid two hours before exercise. Fluids should be cool to encourage gastric emptying.

### During:

1. Drink **at least** 20 ounces of fluid for every hour of exercise.
2. If exercise exceeds 60 minutes, use a sports drink (Gatorade, PowerAde, etc.) with a 8% carbohydrate solution.
3. If exercise is less than 60 minutes, water is fine.

### Post:

1. Drink at least 20 ounces of fluid per pound to replace lost fluid.

One way to check your hydration levels is to weigh yourself before and after exercise. If your weight is the same, proper hydration was achieved. If you weigh less than when you started, you have lost fluid and it must be replaced.

## Congratulations!

The next generation of Precision Fitness Trainers is here!

**Kevin Fass**  
Born March 16th,  
2006  
7lbs, 11oz.

**Congratulations to Bryan and Lara!!**

### Quiz Answer:

*Anaerobic* means without the presence of oxygen. Cycling requires oxygen to continue as does yoga. Therefore the answer is **C. Weight training**

## Chef's Corner...

### Chicken Stir-Fry with Broccoli, Water Chestnuts and Mushrooms

This recipe serves: 4

#### Ingredients

- 1 teaspoon chopped garlic
- 1 tablespoon peanut oil
- 1 tablespoon chopped ginger
- 2 large skinless, boneless chicken breasts, sliced thinly (about 4 - 5 ounces each)
- 1 cup broccoli florets cut into small pieces
- 1/4 cup sliced water chestnuts
- 1 cup thinly sliced mushrooms
- freshly ground black pepper
- 1/4 cup low-sodium soy sauce



#### Cooking Instructions

1. Heat a skillet or wok large enough to accommodate all the ingredients over medium-high heat.
2. Add the garlic, peanut oil and ginger, and stir quickly for 30 seconds.
3. Raise the heat to high. Add the chicken and stir-fry for 2-3 minutes. Then add the broccoli, then add the water chestnuts, then add the mushrooms, stirring quickly after each addition.
4. Season with pepper.
5. Add the soy sauce and cook until the vegetables are tender, about 2 more minutes.

**Serving Size:** about 1 cup

#### Nutrition Information

**Number of Servings: 4**

Per Serving			
<b>Calories</b>	132	<b>Carbohydrate</b>	5 g
<b>Fat</b>	4 g	<b>Fiber</b>	1 g
<b>Protein</b>	40 g	<b>Saturated Fat</b>	1 g
<b>Sodium</b>	321 mg		

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

## **Our Training Philosophy:**

**"M.P.E.  
TRAINING"**

**MAXIMUM  
PHYSICAL  
EFFICIENCY**

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## **"Back" Page**

I am often asked, what is the best machine for me? The answer that I always give is none. With the exception of a few specialized pieces of functional equipment, machines in your gym or home are designed to fit the mass population. So we go to exercise and are forced to contort ourselves into a machine that forces us to move in a specific pattern. The unfortunate fact is these patterns are almost always single joint movements (bicep curl). The problem with single joint movements is life involves multiple parts of the body functioning together. Any time isolation exercises are performed the joint and surrounding tissues are exposed to high stresses and loads. These stresses cause injurious forces to the tissues exposing the exerciser to joint and soft tissue damage.

Sadly some of the most loved machines actually don't work. I will list just a few of the most common ones, the first being the seated inner/outer thigh machine. What is not understood is the inner and outer thigh musculature are primarily stabilizers, and stabilizers need to be weight bearing to contract effectively, sitting to exercise them actually makes them weaker and does nothing for toning and shaping. Turn on the TV and you will see ads for abdominal machines. Much research has been done and machines will make your abdominal muscles work, but the price is high. Abdominal machines cause very high stresses on the spine which will cause damage to the disks. No machine can ever make the core contract properly because as I have previously stated machines isolate and the abdominal wall like the hips was designed to stabilize and that is hard to do laying down. One of the most dangerous machines in the gym is the back extension. The spine has very little ability to move on it's own, it is influenced strongly by the hips and abs. The spine musculature consists of stabilizers that serve to protect the disks, and the extensors of the lower torso. Just like the abdominal machines performing a hyperextension on a machine or bench can cause up to 1000lbs of compressive force on the spine, there are better and safer exercises.

A rare commodity in health clubs today is floor space, and that is just what is needed for the best and most efficient types of exercise. We go to exercise and are forced to contort ourselves into a machine that forces us to move in a specific pattern. Machines do not allow us the freedom to balance or to simply engage our 'core' muscles.

What if I said that all you need to exercise efficiently, effectively and safely is a stability ball, some light free weights and a resistance band. The amazing part is that all this will cost you under \$100 dollars. With these three things we can mimic and even improve upon any gym exercise with the added ability to activate more muscles with each exercise. Consider this, a chest press on a machine or bench uses roughly 8 muscles of mostly the chest, shoulder and arm. A chest press lying on a ball activates every muscle in the body, stimulates balance throughout the body, core control and stabilization of the shoulder and trunk musculature. Life and sports are not performed sitting down, why exercise sitting down. Try performing your exercises standing, initially on both feet with the knees bent, then progress to one foot or stand on a foam mat, anything to make the body work harder. While standing on one leg you can train almost any body part in a much more functional manner than a machine will allow. The exercises you can perform are limitless and if you start to get board simply integrate in the ball to increase and challenge balance and rotational control.

At this point we must touch on the difference between rubber bands and free weights. Both are excellent mediums for resistance exercise that you must control in efficient and natural patterns. Bands allow you to mimic cable machines but if you have trained with bands before you know that the greater the movement the tighter the bands become. This means that the muscles work much harder at the end of the movement then at the beginning. Free weights stay consistent throughout the movements you perform with them, but they are gravity dependent. There are simply some exercises that can not be performed with free weights. Both bands and free weights are safe, effective and allow the user freedom of movement. Stabilizers must fire at all times, balance increases and the stresses on the joints are decreased because a machine is not dictating how you must move.

Most commercially produced gym equipment forces us to exercise in set patterns that require only single joint movements. This causes increased strain on the tissues surrounding the joint and on the joint it's self. Life is not a single joint movement. It requires a symphony of balance, coordination, strength and endurance. Unfortunately none of those can be achieved on a machine. As a society we have become sedentary, we sit too much. Common sense dictates that we should exercise to counteract and correct the faulty postural patterns that we live in. The more muscles that we can activate, contract, at one time the greater the benefit from the exercise which means less work with more benefit.

**Authored by bryan fass**