

## Notes from Editor

The weather is very hot!! This is very early to feel this type of heat in June.

If you are outside exercising, be aware that dehydration and heat stroke are always around the corner.

Drink water frequently!!! Stay safe, healthy, and enjoy this months newsletter!!

Yours in Health,

Dave Radin  
Editor

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## Pre/Post Hydration Strategies for Exercising in the Heat

With the hot weather we have been experiencing the past few weeks, you can tell that summer is finally here. There are a lot of camps that go on during the summer for kids plus recreational leagues for adults. While these camps provide a great way to get exercise and physical activity, the heat can be dangerous.

If you exercise in the heat, dehydration can lead to some very serious 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:

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

### During:

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

### Post:

- 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.

Be safe this summer and stay hydrated!!

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# 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

Does watching too much TV influence the prevalence of obesity in juveniles?

- A. Yes
- B. No

*the answer can be found on page 4*

## Hot Topics

### Maximal Strength Training Improves Running Economy

Researchers from Norway have strengthened the ties between maximal strength training and running economy. Running economy is one of three components essential to performing well, **the other two being maximal oxygen consumption and lactate threshold.**

Well-trained male and female runners either participated in strength training 3 times per week for 8-weeks or served as controls. **The strength training group performed 4 sets of 4 repetition maximum (RM) half-squats.** Both groups completed their normal endurance training routines.

The strength training group increased their 1RM in the half-squat by 33.2%. **Their rate of force development increased by 26%, their running economy improved by 5%, and their time to exhaustion at maximal aerobic speed improved by 21.3%.** VO2max and bodyweight remained unchanged.

Because endurance activities are mostly dependent on aerobic metabolism it would seem to make sense to think that performance would be determined by training the aerobic energy systems. **However, the ability to produce joint actions at submaximal intensities, as in running, is related to maximal strength.** This study has supported the need for strength training in the runner and has also found that **running does not interfere with the ability to gain strength.**

*Støren, O. et al (2008) Maximal Strength Training Improves Running Economy in Distance Runners. Medicine and Science in Sports and Exercise. May 2. (ePub ahead of print)*

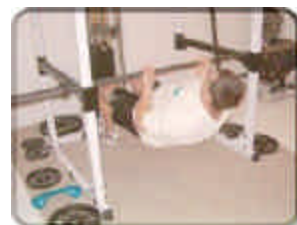
## Exercise of the Month—Bodyweight Rows

### Preparation

- Position yourself under a bar that is secure and grasp it with a bench press width.
- Lock the body straight with feet on the floor.

### Movement

- Engage inner abdominals and pelvic floor muscles to assure spinal stabilization
- Pull chest towards the bar while performing scapulae retraction.
- Return to the start position and repeat.



## FACTOID

the brain consumes about **20% of the energy** used by the entire body at rest.

## 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.

## Strength Training for the Young Athlete: The Benefits Will Last a Lifetime!

Strength Training is not training to see how much weight one can push around the gym. Simply stated, Strength Training is a method of conditioning that will increase an individual's ability to handle the physical demands of activity. Strength Training may involve the use of weights or other external resistance (bands, medicine balls, pulleys, etc.), it may involve body weight (push-ups, pull-ups, sit-ups, etc.) and it may involve the use of body weight and ground forces (skipping, hopping, jumping, etc.)

There is an interesting trend in the physical activity of today's youth, a trend that makes the integration of a strength training program more important than ever. Today, kids are specializing in a particular sport at an early age. Kids are picking one sport and playing it year round. Because of this specialization and the fact that kids don't engage in "free play" the way they used to, young athletes today aren't developing the fundamental motor skills, and musculoskeletal balance necessary for peak performance and injury prevention.

We all want our young athlete to be as successful on the field as possible. Coaches spend a great deal of time with young athletes on skills and drills. Parents enroll children in speed and agility camps and provide private instruction hoping to develop a better player. While skills and drills and sport specific instruction may make the player more proficient kicking a soccer ball or throwing a baseball, chances are they won't make them a better overall athlete, and they certainly won't decrease the chance of sport related injury.

Repetitive training of only specific sport related movements tends not only to limit performance, but sets the stage for faulty movement patterns and overuse injury. In most sports, common sites for overuse injuries include the heel, ankle, and knees. You can add shoulders and elbows to that list for the young baseball, tennis, and volleyball player. Well designed Strength Training programs will not only make muscles stronger but will strengthen other supporting tissues like bone, ligaments and tendons thus decreasing the chance of acute injuries such as sprains and ligament tears.

Health organizations such as the American College of Sports Medicine (ACSM), The American Academy of Pediatrics (AAP) and the National Strength and Conditioning Association (NSCA), have helped put to rest the long held belief that strength training for children is unsafe and ineffective. These organizations now support the participation of children in appropriately designed and competently supervised strength training programs.

At what age can a child begin a strength training program? If a child has the capacity to follow directions, then the child is old enough to follow a properly designed and supervised age-appropriate strength training program. Protect your young athlete's future and let them bring their game to the next level.

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## Chef's Corner...

### Red Snapper Vera Cruz

This recipe serves: 4

#### Ingredients

##### For the red snapper:

2 shallots, chopped  
 2 cloves garlic, chopped  
 1 teaspoon fresh lime juice  
 1 pinch sea salt  
 1/2 cup white wine  
 1 teaspoon fresh oregano  
 freshly ground black pepper  
 4 red snapper fillets, about 4 to 6 ounces each

##### For the salsa vera cruz:

1 red bell pepper, seeded; 1 yellow bell pepper, seeded  
 2 teaspoons olive oil; 1 tomato, chopped  
 2 cloves garlic, minced; 1 tablespoon fresh oregano, chopped  
 1/2 jalapeño chili pepper, seeded, roasted and chopped;  
 2 tablespoons capers, drained; 1/4 cup black olives, chopped  
 1/2 cup white wine; 1/4 cup chicken stock or water  
 salt to taste; freshly ground black pepper  
 4 lime wedges, for garnish; fresh oregano sprigs, for garnish

#### Cooking Instructions

1. Preheat the grill. In a bowl, combine the shallots, garlic, lime juice, sea salt, wine, oregano and pepper. Coat the snapper with the marinade and marinate in the refrigerator for 10 minutes.
2. While the fish is marinating, make the salsa. Grill the bell peppers and when charred evenly on all sides, cut them into julienne strips.
3. Heat the olive oil in a sauté pan over medium heat. Add the tomato, garlic and oregano and cook for 2 minutes. Add the peppers, chili pepper, capers, olives, wine and stock and simmer for 5 minutes over low heat. Season to taste and set aside until ready to use.
4. Grill the snapper fillets about 2 minutes on each side, depending upon thickness. Top with 2 tablespoons of the salsa. Garnish with a lime wedge and a sprig of fresh oregano.

#### Nutrition Information

**Serving Size:** 1 snapper filet with 2 tablespoons salsa

**Number of Servings:** 4

Per Serving			
<b>Calories</b>	268	<b>Carbohydrate</b>	11 g
<b>Fat</b>	6 g	<b>Fiber</b>	2 g
<b>Protein</b>	37 g	<b>Saturated Fat</b>	1 g
<b>Sodium</b>	524 mg		

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

#### Quiz Answer:

A. Yes

I hope this wasn't a trick question. The answer is obvious.

In a study performed in 1996, researchers found that juveniles who watched TV for up to five hours/day had about a 35% chance of developing obesity.

Those who watched less than 2 hours/day had only a 12% chance of developing obesity.

The researchers reasoned that junk food and high calorie content foods are eaten.

This summer, get your kids outside and let them play!!



## What's That???

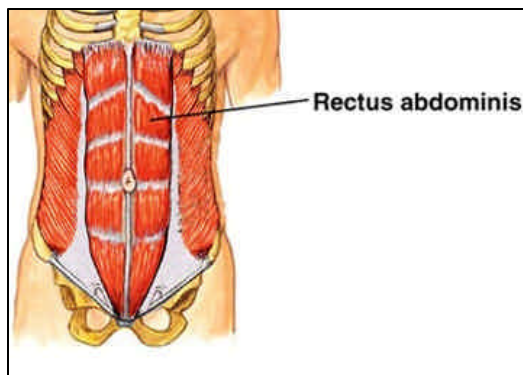
Your heart pumps an average of **3600** gallons of blood per day!!

<http://www.drienkravitz.com/Pages/fitnesstrivia.html>

Suffer back, hip, knee pain while playing golf? Good news for you!! The pro's at Precision Fitness put together the most comprehensive golf book on the internet. Go to: [www.playbetterlonger.com](http://www.playbetterlonger.com) to buy the book and improve your golf game today!



## Muscle Anatomy



**Muscle:** Rectus Abdominus

**Origin:** Pubic Crest

**Insertion:** 5,6,7 ribs; xiphoid process

**Eccentric Action:** decelerate extension and rotation.

**Isometric Action:** stabilize lumbo-pelvic hip complex (LPHC)

**Concentric Action:** flexes the spine

The rectus abdominis is the muscle that most individuals want to look lean and sexy. Females want the appearance of a toned midsection while men want the "six-pack" look.

To achieve the results that everyone wants, more is not necessarily better. The abdominals work just like any other muscle group. They need to be challenged to get stronger.

Traditional exercises are typical crunches and all the variations of them. Common things to watch out for:

1. Do not lock your feet into pads (incline benches). This forces your hip flexors to do a lot more work than is necessary, which can lead to back pain.
2. Make sure you have proper pelvic stabilization!! Without you can be doing more harm than good.
3. Brace your abs the whole time!! Do not relax.

Many people believe that there are separate lower abdominal muscles. There are not. The rectus abdominis is one entire sheath of muscle. Exercises that target the lower section of the abdominal wall work the entire muscle, but tend to have a stronger contraction toward the lower section.

Below are common exercises for the rectus abdominis/core:



## Our Training Philosophy:

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

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**We're on the Web!**  
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Want to learn about something that has not been on previous newsletters? Send an email to:

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## Not All Personal Trainers Are Created Equal

With summer upon us the phone has been ringing off the hook here at the office. The two most common questions are 1) what are your prices? 2) What kind of machines do you have? Does anyone else see a problem with that? You have realized that help is needed achieving your goals, you seek out a 'professional' and I do use the term professional loosely, yet we all get stuck on cost and equipment. A 'professional' should not, in my opinion discuss price with you, how do I know what you need? Do you really know what you need? Do you know that machines do not work and actually encourage injury?

In the medical / scientific world we test and evaluate. If we can not test all we are doing is guessing, I personally do not like to guess, and I would assume that you would rather not pay for a guess. The unfortunate fact is that most 'professional' trainers never test, they sure get you money in a hurry though! One of my favorite gimmicks in the 'professional' fitness industry is the free sessions, you would not go see a Physician and expect someone that studied for so long to give their services away for free, what makes a 'professional' trainer any different?

So what does one look for? Start off with a degree, and please make sure it is in a related field (sports medicine, athletic training, nursing, exercise science, exercise physiology etc.). Now, let me also say that some of the best trainers I have seen and hired have no exercise based higher education, BUT they have ALL the certifications that matter. What I mean is that the few accredited certifications that actually teach safe, effective, scientific exercise they have taken.

- National Academy of Sports Medicine (NASM)
- National Strength and Conditioning Association (NSCA)
- American College of Sports Medicine (ACSM)

Ask the 'professional' trainer the last seminar they attended, the last scientific journal they read? There are hundreds of schools and certifications out there, most do not teach anything close to exercise science or personal training. I say this because daily I watch 'professional' trainers at the local chain gym destroy their eager clients. Daily I watch dangerous exercises taught to folks who have not been evaluated for injurious patterns, exercise that will cause injury. For the past 6 years I have interviewed and not hired 'professional' trainers who hold those other certifications, which I will not name. in the 'professional' trainers defense, they do not know that they do not know, it simply is not taught.

The bottom line is that prior to discussing price you need to be evaluated for:

### **-Posture-Flexibility-Balance-Range of Motion-Movement tests-Strength**

Then your personal goals are factored into a program that accounts for your schedule. After the tests I know what your body actually needs, you may not need 5 days a week, 2-3 days may be fine. You may be so physically imbalanced that massage is needed prior to beginning or a consultation needed with your physician. I can not design a program or know a cost until I know what your body needs, then and only then do we discuss price. A 'professional' trainer should have educated you during your fitness assessment so that you understand what you need, why and how the program is being designed specifically for you. Then we can talk price, frequency and duration.

So, what is the take home message? Do your home work, realize that all trainers are not created equal, anything free or gimmicky is probably a ploy, and if the trainer goes after your wallet first, keep searching.

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