

## Notes from Editor

Summer is in full swing by now. Schools are finishing their years and then it is outside for fun in the sun.

It seems every summer is getting a little hotter than the previous years so beware. Make sure you and your kids drink plenty of fluids. Stay hydrated, stay active and make sure you slather on the sunscreen.

If you can, take your workout outdoors. Remember that your body is the ultimate resistance for training outdoors.

Enjoy the summer and stay strong.

Yours in Health,

Dave Radin  
Editor

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## Summer Lovin'....

Summer is coming. Are you ready? Ready for the beach? The fun? The sun? Family vacation? Of course the answer is yes. However, are you ready to get into your a bathing suit to soak up the rays of the sun? Are you ready to show the world the hard work you have put in to achieve a healthy, fit looking body?

If the answer is no, you had better get to work. A healthy fit body doesn't just come out of a bottle of **"Super Fat Burner Plus!"** with claims of quick weight loss to get you that beach body in just 2 weeks!! If you buy into the hype, I have a bridge to sell you.....What do you think would happen if I to invent a pill that actually gave you all the benefits of exercise without all the work? I would be the richest man on the planet!! Since there is no such thing, you had better start hitting the gym.

If you really want a healthy fit looking body, you already know the formula for success: The right nutrition at the right time in conjunction with the right amount of exercise. In other words:

**NUTRTION + EXERCISE = HEALTHY, FIT, BODY**

I have written previous intensity and the im-want the result, put in adapt to less than ap-self in the gym and re-the motions and you



Summer is here. Are you ready to show off your best healthy, fit body?

articles that describe exercise portance of it. Again, if you the effort. The body will not propriate stimuli. Push your-sults will show. Go through will be sadly disappointed.

Nutrition is probably a healthy lifestyle. out there and so many from, how do you know nutrition and weight in vs. calories out. You needs, you gain weight. and salads, how can I two ways. One, if you salad and chicken, you only need 2000 calories a day!!

the most confusing aspect of There is so much information different diets to choose where to start? Basically, loss is as simple as calories eat more than your body But Dave, all I eat is chicken still be gaining weight? Well, eat 3,000 calories worth of can still gain weight if you

The body cannot distinguish between healthy food and unhealthy food. The body only knows that it needs a certain amount of calories, Vitamins, and minerals. Anything else is either converted to waste or stored.

Bottom line, eat less, exercise more. Exercise with intent. Push yourself. Seek a qualified personal trainer and/or a nutritionist to give the direction you need for your summer lovin'.

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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

Which energy system of the body utilizes no oxygen to complete an activity?

- A. Aerobic
- B. Anaerobic
- C. ATP-PC
- D. Lactate Threshold

Answer on page 4.

## Hot Topics

### Many Running Injuries Attributed to Weak Hips

Statistics indicate that between 65% and 80% of all recreational and competitive runners experience some type of overuse injury annually. **Such injuries include patellofemoral knee pain, iliotibial band syndrome, shin splints, Achilles tendinopathy, plantar fasciitis, and stress fractures.** The vast majority of such injuries, ~80% affect the lower-leg, with nearly 40% occurring at the knee. **Unfortunately, science and medicine have yet to truly understand the mechanisms behind such injuries.**

Researchers recently reviewed the literature over a 28 year span from 1980 to 2008 and concluded that two mechanisms appear to underlie all lower-leg injuries. **First, a small number of studies implicated "atypical foot pronation mechanics."** Pronation, which occurs during the stance phase of gait as the foot flattens causing internal rotation of the tibia and femur, is essential to generating energy for the next stride. However, excessive or insufficient pronation leads to poor energy production and **consequently to excessive motion about the foot and knee.**

Second, and more prominent, **researchers uncovered a growing number of studies that suggest "inadequate hip muscle stabilization" leads to a majority of overuse injuries.** Because the hip muscles, specifically the gluteus medius, minimus and maximus stabilize the leg during gait, poor strength or conditioning of these muscles results in **excessive stress at and below the knee.**

Recent studies have shown that **improving hip muscle strength reduces the incidence of knee pain in runners.** With running season in full-swing throughout the country along with races every weekend there's not a better time to encourage runners to maintain their strength training programs.

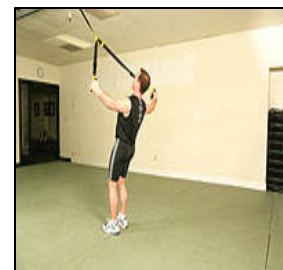
*Ferber, R., et al (2009) Suspected Mechanisms in the Cause of Overuse Running Injuries: A Clinical Review. Sports Health. May/June*  
[www.exercisetc.com](http://www.exercisetc.com)

### Exercise of the Month—Bodyweight Rear Shoulder Flye Preparation

- Grasp handles with palms facing each other, arms straight

#### Movement

- Maintain abdominal brace throughout exercise
- Pull from elbows and open arms to sides
- Pinch shoulder blades together.
- Slowly lower and repeat



**FACTOID**

**Percent of children** ages 10-17 classified as obese in NC is **19%**. The national average is 16%

## Trainer Spotlight

*Johnnie Jones, RD,  
LDN, MHS,  
Registered Dietician  
& Dietary Counselor*

A graduate of Western Carolina University, Johnnie holds a BS in Exercise Science and Fitness Management as well as Master of Health Sciences in Nutrition. As a graduate student, Johnnie's vast knowledge of Sports Nutrition was put to use by teaching classes to Collegiate Athletes as part of his published research project "Nutrition Knowledge of the Collegiate Female Athlete". Johnnie's experience also includes work as a clinical dietitian at Carolinas Medical Center, where practiced Dietetics to the vast patient population. So, whether you're facing a challenging weight loss goal, need counseling on therapeutic nutrition (Diabetes, Heart Disease, Osteoporosis, etc) or want to know how to eat for optimal sports performance Johnnie has the education and experience to help you meet your goals.

## Is Your Back at the Top of Its Game?

A 2006 study by researchers from the Royal National Orthopedic Hospital looked at the spines of 33 elite adolescent tennis players, male and female, who trained at the National Tennis Centre, the club of choice for Britain's most promising young prospects. None of the players had reported back pain. But as it turns out their backs were a mess.

Twenty-eight of the teenagers, a whopping 85 percent, were found to have serious spinal abnormalities that ranged from cysts to fractures. Twenty-three had early-stage joint disease while 13 had herniated discs or desiccated, shriveled discs. These kids the next generation of British tennis pros, had backs 60 years older than they were. "Tennis requires more frequent, repetitive and rapid rotation from the lumbar spine than other sports," the authors wrote. "Playing it is particularly detrimental "during the growth spurt." I tend to disagree with this statement, take a closer look at the training protocols of these youngsters and we'll see where the problem lies.

As the authors of the British study point, those young tennis players were strong. But they were strong only in terms of their "tennis muscles", particularly those in the shoulders. Compared with their counterparts in other national junior programs, British players spend little time in the weight room and spend little time stretching or cross-training. Instead they hit and hit and hit, and rotate and torque and rotate and torque. They become faster and sharper as their backs insidiously break down.

Many of us know from firsthand experience, back problems don't afflict just teenage tennis players. According to various studies, at least a third of all competitive football players will hurt their lower backs during play, so will one third of gymnasts and 25 percent of serious rowers. About 40 percent of divers will develop a spinal stress fracture, and many cyclists will experience constant, nagging back pain while riding.

The worst sport, however, is golf. Ninety percent of injuries to professional golfers involve the lower back and the neck, and nearly 80 percent of pros will miss at least one tournament because of back pain. As many folks can testify, back pain is not limited to the athlete. Other than the common cold back pain is the most common complaint seen in US doctors' offices today. So what can you do to preserve and protect your spine?

To build a better back, you need a solid core. "The core" is a buzz word for an area of the body that is constantly referred to but few people can accurately locate. It's not just the abdominals, as many people think, the core consists of all the muscles that move and stabilize the spine.

As Vijay Vad, a sports medicine specialist at the Hospital for Special Surgery in New York City and a back-care adviser to the professional men's tennis circuit and the PGA Tour says, "from your knees to your nipples. That's the core." Aside from core strength, muscle endurance is a major key to back health. You have to have enough muscular endurance to maintain spinal stability throughout the entire length of an activity. Whether its 18 holes of golf, three sets of tennis, four quarters of football, a long bike ride, or a long day of work for that matter; if your core can't keep up, your back will let you know.

**Quiz Answer:****B Anaerobic**

Anaerobic mean "without oxygen". Any activity that is less than 2 minutes in length is deemed anaerobic. These include: football, tennis, wrestling, basketball, baseball, etc.

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**Chef's Corner...****Flounder with Lemon Sauce**

This recipe serves: 4

Ingredients

For the lemon sauce:

3 large lemons

1/4 cup sugar

1/4 cup water

For the flounder:

4 6-ounce flounder fillets

1 teaspoon kosher salt

1/4 teaspoon freshly ground black pepper

1 1/2 tablespoons olive oil

Cooking Instructions

For the lemon sauce:

1. Bring the sugar and water to a boil. Remove from the heat and cool.
2. Juice the lemons and strain. Add half of the sugar syrup to the lemon juice. Add more sugar syrup until a pleasant balance of sweetness and tartness is reached. Cool to room temperature.

For the flounder:

1. Season the flounder fillets with salt and pepper, then drizzle with olive oil.
2. Place a sauté pan large enough to accommodate all the fillets over medium-high heat. Add the flounder and lower the heat to medium. Cook until well-browned on one side, about 3 minutes. Turn the fillets over and cook 1 more minute.
3. Serve the flounder topped with the lemon sauce.

**Serving Size:** 1 fillet with 2 tablespoons of sauce

Nutrition Information

Calories	260	Carbs	16 g
Fat	7 g	Fiber	1 g
Protein	32 g	Saturated Fat	1 g
Sodium	495 mg		

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



**Did you know?**

That the **average percentage** of adults in the United States who were classified as **obese** in 2007 is a staggering **60%**

[www.statehealthfacts.org](http://www.statehealthfacts.org)

Want more information on a fitness topic that has not been covered? Send an email to: [dave@ncprecisionfitness.com](mailto:dave@ncprecisionfitness.com)

**Muscle Anatomy**

**Muscle:** Rectus Femoris

**Origin:** Lateral intermuscular septum & gluteal tuberosity.

**Insertion:** Patella; medial patellar retinaculum.

**Eccentric Action:** decelerate knee flexion, adduction and internal heel strike; rectus decelerates hip extensors and knee flexion.

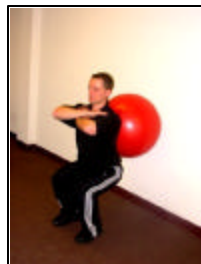
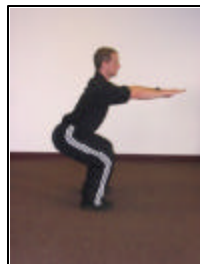
**Isometric:** Dynamic stability for knee during movement.

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

The rectus femoris is part of a group of muscles that make up the quadriceps (**Vastus Medialis, Vastus Lateralis, Rectus Femoris, and Vastus Intermedius**).

Any activity involving the legs typically involves the quadriceps. The common problem with most people is flexibility and over strengthening of these muscles, resulting in knee pain. When the quads are tight, they pull on the knee causing mis-alignment of the knee cap.

Common exercises for the quads are shown below:



## **Our Training Philosophy:**

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

#### **Precision Fitness**

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#### **We're on the Web!**

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

Flexibility is another key component, a 2004 study of 42 professional golfers and found that those with the smallest range of motion in their lead hip and lower back had the highest frequency of back pain. A lack of flexibility in the hips and hamstrings create increased load on the lower back. A good stretching program, help improve flexibility and help maintain a healthy back.

It is important to note that flexibility without strength and stability can leave the spine prone to injury. So it is imperative that your training program is well balanced and contains core strength, endurance and flexibility training.

Here a couple core exercises you can add to your routines to help keep you back at the top of its game.

**The Abdominal Brace** - This is the prerequisite to all exercises. Start by practicing the brace on the floor as described below. Once comfortable with the movement practice the brace throughout the day while sitting, standing driving, etc. The abdominal brace is the key to spinal stability and should become second nature.

#### **Preparation**

Lay in the supine position with your hands behind your head and feet flat.

#### **Movement**

Brace your abdominals by pulling your belly button towards your spine and then gently flexing your outer abdominals as if you were pushing them towards your feet. Return to a relaxed position and repeat.

#### **Tips**

Try to relax the rest of your body while bracing your abdominals and continue to breathe throughout the brace.

#### **The Plank**

##### **Preparation**

Position yourself face down (prone) on your knees and forearms. Keep your feet off the floor.

##### **Movement**

Brace your abdominals and hold retract the cervical spine and contract you glutes. Keeping your knees on the floor, raise your torso up off the floor. Maintain the modified plank position for as 30 seconds or until you can no longer maintain an abdominal and gluteal contraction. Relax and repeat 3 - 4 times

##### **Tips**

If you fail to maintain the abdominal brace and gluteal contraction you will feel pressure in the lower back. Don't let this happen

Progress to performing the plank on your toes.

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