

Notes from Editor

Greetings and Happy Holidays!! This is the time of year to focus on family and friends as the holidays approach.

Check out Page 3 for Bill Scibetta's article for strategies on maintaining exercise and health eating during the holidays.

We have a new section dedicated to educating you on what muscles do and what exercises to improve their function.

Want to learn about something that has not been discussed already in previous newsletters? Please send me a email.

Dave Radin—Editor

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Commit to the Fitness Lifestyle...and the Intensity

The decision to improve your health is a big one that many people do not fully understand. Engaging in a fitness program is a little bit more involved than just showing up to the gym and "going through the motions."

Changing your health status, whether it is weight loss, improving your cardiovascular endurance, or performance enhancement, requires a commitment. I don't mean just a financial commitment either. Time and energy are also required. I will discuss these two aspects a little later on.

Many people start a fitness program and stop after a few weeks because they are not ready to commit to the intensity needed to reach their goals. If you need some proof of the intensity needed to be successful, watch the TV Show *The Biggest Loser*. The people on that show are pushing themselves to take control of their lives and their health. As a trainer, I do not agree with everything that they do, but the lessons learned are important. Intensity is the key. Michael Jordan didn't become the best basketball player in the history of the game by taking it easy during his workouts and neither should you.

Back to the two of the key commitment elements for being successful: **time and energy**. Time means how many days per week and how long each exercise routine lasts. Daily exercise should be the ultimate goal. However, job, family, and other commitments take you away to other important aspects of your life. Once you begin, you have to stay strong to the reason you wanted to begin to the exercise. If you say 3-5 times/week is attainable, and allowing others distractions to take your time elsewhere will get you nowhere!!



Changing your lifestyle requires a total commitment of time and energy.

Energy means how hard (intensity) you need to perform your exercises. Most people do not exercise intense enough to reach their goals. Frustration leads to the departure of exercise. Understand this, you want to lose weight, **burn the calories!!** Want to run a 5K at a personal record pace, **RUN FASTER!** Here is a good guideline for all to follow: exercise at a pace that is challenging enough to cause you to sweat. You should be able to hold a conversation, but not easily!! Don't be afraid to push yourself. Your body will adapt and become stronger and more fit as a result. If you don't push yourself, don't be surprised is nothing changes.

Remember the choice to change your lifestyle and become more fit is yours. Make the most of it and put for the time and energy needed to reach your goals.

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

True or False?

Exercise is okay if you have a cold?

answer can be found on page 4

Hot Topics

Exercise Decreases Abdominal Fat Cell Size

Exercise has been known to positively impact the waist-to-hip ratio when combined with a hypocaloric diet. **Continued research in this area is vital because of the link between abdominal obesity and mortality from heart disease and diabetes.** Researchers at Wake Forest University Medical School recently reported that diet when accompanied by aerobic-type exercise preferentially decreases abdominal adipocyte size. **The researchers speculate that hormonal factors cause fat cells in the abdomen and hip areas to have different metabolic responses to diet and exercise.** These hormonal factors are not completely understood. Researchers studied 45 obese, middle-aged **women who were randomly assigned to one of three groups:** reduced calorie diet only; reduced calorie diet plus low intensity aerobic exercise; and a third that dieted and participated in high intensity aerobic exercise. Both exercise programs consisted of walking three times per week. **Pre- and post-measurements included body composition analysis and adipose tissue biopsies in both abdominal and gluteal regions.**

As expected all three groups **reduced body weight and improved body fat percentage after the 20-week intervention.** All three groups experienced a similar reduction in gluteal adipocyte size, whereas the women in both exercise groups reduced the size of their abdominal fat cells by approximately 18%. **The diet only group did not show any change.** This study supports the importance of regular exercise independent of weight loss expectations. **Regardless of whether people lose significant amounts of body weight the reduction in abdominal fat cell size might still benefit their health.**

You, T. (2006) Addition of aerobic exercise to dietary weight loss preferentially reduces abdominal adipocyte size. International Journal of Obesity. 30, 1211-1216.

www.exercisetc.com

Exercise of the Month— Lunges

Preparation:

- Stand in a staggered stance with knees aligned over 2nd and 3rd toe.
- Place your hands on your hips.

Movement:

- Engage inner abdominals and pelvic floor muscles to assure spinal stabilization.
- Lower into the lunge position. (Sagittal Plane)
- Return to the start position and repeat.



FACTOID

The immune system is made of white blood cells that defend our body from harmful viruses and bacteria. Below are the 4 types of WBC:

- **Helper T Cells**— act as lookout and send signals to B Cells
- **B Cells**— make antibodies to smother invaders
- **Killer T Cells**—kill invaders once signal is received from Helper Cells
- **Phagocytes**— create chemicals to kill and “eat away” the invading cells

Trainer Spotlight



*Bryan Fass, ATCL, CSCS
Director of Training*

Bryan, a licensed Athletic Trainer and Certified Strength and Conditioning Specialist, brings over ten years of clinical rehabilitation and sports medicine experience. 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.

Enjoy the Holidays without the Worry or the Pounds!

The holiday season is a time full of joy, cheer, parties, and family gatherings. However, for many people, it is also a time filled with anxiety, stress, and weight gain. Unfortunately, many people often use the busy holiday season as an excuse to reduce exercise or put off starting a new program. Often these people have the intention of coming back with a vengeance after the New Year. “The New Year is just around the corner and I’m going to lose weight and get in shape”; this trusty New Year’s resolution declaration is also conveniently used to justify holiday overindulgence. Researchers at the National Institute of Child Health and Human Development (NICHD) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) have shown that for most people weight gained during the holidays is not lost and accumulates on a yearly basis. Maintaining a regular exercise program throughout the holiday season provides benefits on many different levels.

According to The National Mental Health Association, (NMHA) tension caused by shopping, parties, family reunions, and house guests can illicit stress responses such as: headaches, excessive drinking, difficulty sleeping, and the ever-popular over-eating. Exercise has been shown to be a tremendous tool to manage stress. Managing stress with exercise can also help control cravings for those comfort foods that adorn the holiday tables. Regular exercise also increases metabolism, thus reducing the detrimental effect of an occasional extra cookie or glass of eggnog. Experts at NMHA claim, even more people experience post-holiday let down after the New Year than suffer holiday anxiety. With this comes lack of motivation and comfort eating. Its no wonder those New Year’s resolutions are rarely successful.

Parties, large meals and extra calories are almost unavoidable during the holiday season. Weight maintenance rather than weight loss through the holidays is a much healthier goal. Exercising regularly and enjoying the few extra calories will break the vicious cycle of guilt, feelings of failure, and more eating. Getting a head start on exercise prior to January 1st will give you a healthier and happier holiday season as well as make those New Year’s resolution goals far more attainable.

Healthy Holiday Tips:

1. Focus on weight maintenance not weight loss - Parties, large meals and extra calories are almost unavoidable during the holiday season. If you are currently overweight and want to lose weight, this is not the time to do it; setting difficult or unrealistic goals can lead to a vicious cycle of guilt, feelings of failure, and more eating.
2. Get moving – Regular exercise will increase metabolism and allow you to enjoy a few extra calories without putting on the pounds. Exercise will give you energy and the mental strength to deal with the mad rush of holiday shopping, the holiday travel or holiday visitors and the party hopping.
3. Get Plenty of Sleep – Lack of sleep impairs our ability to handle stress (which there is usually no shortage of during the holidays). Chronic sleep loss can also affect various components of metabolism that influence hunger and weight gain.
4. Substitute healthy recipes - Use applesauce in place of oil; use egg whites in place of whole eggs; try plain nonfat yogurt in place of sour cream. Magazines and healthy cooking cook books are full of reduced calorie and reduced fat holiday recipes that taste great.
5. Don't go to parties hungry – Going to a party on an empty stomach is a recipe for disaster. Starting your day with a healthy breakfast and eating sensibly throughout the day should help you control your appetite and avoid over-indulging on the typically high fat and high calorie holiday fare.
6. Eat slowly - Make one plate of the foods you really want. It takes about twenty minutes for your brain to register that your stomach is full. Take your time to enjoy the taste of every bite, and you will realize you don't need to go back for seconds.
7. Limit alcoholic beverages - Liquors, wines and mixed drinks can contain 150-450 calories per glass whereas, water and diet sodas are calorie-free. If you choose to drink, try light wines and light beers, and use non-alcoholic mixers such as water and diet soda. Limit yourself to one to two drinks.
8. Get rid of leftovers – Some foods are more fattening than others, however, no food will make you gain weight unless you eat too much of it. Often we eat beyond our body’s physical hunger simply because food is there.
9. Keep it in perspective – It takes days of overeating to gain weight; one day won't make or break your eating plan. Nothing is more destructive to a healthy eating plan than the negative feelings of failure and guilt. If you over-indulge at a holiday meal or party, don't beat yourself up; simply return to your sensible healthy diet the next day.

authored by bill scibetta

What's That???

You use **14 muscles to smile** and **43 muscles to frown!**

Quiz Answer:

True.

Exercising increases respiration and mucus production as well as all other metabolic processes in the body. Keep exercise in moderation

Good rule of thumb: if the sickness is in the head, mild exertion is probably okay. If the sickness is in the chest, stay in bed!!

Chef's Corner...**Grilled Turkey Cutlets with Raspberry-Lime Glaze**

This recipe serves: 4

Ingredients**For the raspberry glaze:**

2 tablespoons red wine vinegar
2 tablespoons sugar
1/2 cup raspberry jam or preserves
1 teaspoon lime zest
salt to taste
white pepper to taste

For the grilled turkey:

4 turkey cutlets, 4 to 6 oz. each
1 tablespoon olive oil
salt and pepper

Cooking Instructions**For the raspberry glaze:**

1. In a small saucepan, heat the vinegar and sugar over medium heat until the mixture boils and the sugar dissolves. Add the raspberry jam or preserves, lime zest and bring it to a boil. Remove from heat.
2. Season with salt and pepper to taste.

For the grilled turkey:

3. Preheat the grill to medium-high.
4. Sprinkle the turkey cutlets with salt and pepper and drizzle with olive oil.
5. Place the turkey on the grill and cook until the juices run clear, about 6 minutes per side .
6. Place the turkey cutlets on a serving platter and brush them with the raspberry-lime glaze.

Serving Size: 1 turkey cutlet

Nutrition Information

Number of Servings: 4

Per Serving			
Calories	283	Carbohydrate	33 g
Fat	4 g	Fiber	0 g
Protein	28 g	Saturated Fat	1 g
Sodium	222 mg		



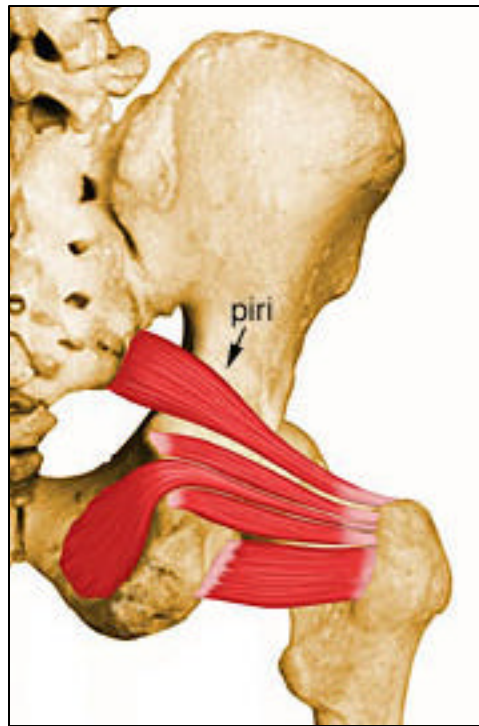
Muscle Definitions

Eccentric—muscle tension causing lengthening while still contracting. Muscle is stronger during eccentric phase.

Concentric—muscle tension causing shortening of muscle while being contracted.

Isometric— muscle tension causes no movement of limbs (e.g. pushing against wall).

Muscle Anatomy



Muscle: Piriformis

Origin: Anterior surface of sacrum (S₂-S₄).

Insertion: Superior aspect of greater trochanter

Eccentric Action: Decelerate hip internal rotation.

Isometric Action: Major pelvo-femoral stabilizing mechanism

Concentric Action: External hip rotation plus assists in hip extension during functional movement.

The Piriformis is a common culprit of sciatica pain. The sciatic nerve passes through the sacrum, underneath and sometimes through the Piriformis and

down the leg. Tension or tightness in the Piriformis can cause a "pain in the butt" feeling and/or tingling down the leg.

The Piriformis can cause a lot of problems with core strength. When the piriformis is tight, it causes the hips to externally rotate. As a result of excess hip rotation, the lower back becomes extended (increased lordosis). As the lower back becomes extended, the hip flexors become tight weakening the glutes and deep abdominal stabilizers.

Strategies to improve Piriformis function are to use a foam roll (see figure 1) and stretch (figure 2) to improve range of motion. Foam Roll is done by finding a tender spot and holding until the tenderness is reduced by at least 50%. Hold the stretch for at least 20 seconds.

Figure 1



Figure 2



Our Training Philosophy:

**"M.P.E.
TRAINING"
MAXIMUM
PHYSICAL EF-
FICIENCY**

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Preventing Health Club Emergencies



How many times have you been in the local gym and seen someone pull out of an exercise hurt, limp off the treadmill or go through such a horrific workout that they are out of the gym for a week. Ever wonder why the people advertising inside the gym are doctors and chiropractors? The odds are stacked against you, it is very likely that you will have an injury while exercising.

Probably the most common and preventable emergency is hypoglycemia or low blood sugar. Many folks trying to loose weight go under the false assumption that to loose weight one is not allowed to eat. Add intense exercise into the mix and it's likely that a hypoglycemic event may occur. Unfortunately the best way to assess a hypoglycemic emergency is to test blood sugar through a finger prick. This is not feasible in the typical health club setting. Knowing the clients medical history, last meal, supplements used is helpful in ascertaining if their sugar is low. Near-syncope or fainting, pale sweaty skin, dizzy, disoriented, nauseous are some of the signs and symptoms you may see. If you are a trainer, please monitor your client, know what they had pre-workout. Keep a few bottles of sport drink stashed away for those occasions when your client is about to hit the wall.

The number one musculoskeletal injury in the gym is spinal, specifically lumbar. As I stated earlier, please read my other articles to understand the injury mechanisms and improper exercises that can injure and or aggravate existing lower back pain. If you are training and experience any type of pain in the lower back STOP. Pain radiating down the leg, no matter how far down can be a sign of disk or nerve root injury. At no point should you attempt to work through or work out the pain. Stop and seek medical attention.

Anyone starting a fitness program at home on their own or in a fitness facility should be evaluated by their family doctor. Every machine in the gym states this, but why. Many people go about their day unaware of a few scary medical conditions. Hypertension (high blood pressure) and cardiac arrhythmia (irregular heart beats). Both conditions are generally considered silent, but they can cause strokes, heart attacks, aneurysms, breathing problems and circulatory issues.

Heat illness can be both tricky and scary. It can have similar signs and symptoms of hypoglycemia, can occur without warning and be deadly if not detected and appropriate steps taken. Please realize that indoor pools, saunas, steam rooms, and outdoor activities in the heat can all be a source of heat illness. The number one treatment is prevention, limit intensity and duration of exercise in high heat and humidity. The very young and very old are more susceptible. If heat illness is suspected remove them from the heat ASAP and apply cold packs or ice to the axilla (arm pits), inner thighs, behind the knees and or behind the lower neck. Arteries are close to the skin in these areas and can rapidly cool the body. Please remember to wrap the ice in a towel to prevent ice burns to the skin.

When in doubt call 911, speaking as a paramedic I would much rather show up and decide that we are not needed than to be called when it is too late. Remember to have and practice an emergency action plan, know your role in that plan and never panic.

authored by bryan fass