



News That's Fit To Print

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Notes from Editor

The New Year is already in full swing and the big question is, Who are you doing? For those of you who have already dropped off, read the article, **Comforting Fitness** (page 1) and **Get Fit, Not Hurt** (page 3) for tips to get back into full gear.

The first month is critical to your overall success. Stay strong, stay focused and do not let minor setbacks stop you from reaching your goals.

Of course if you need help along the way, ask someone! We are always here to help. Have a question? Email me: dave@ncprecisionfitness.com

All the best,

Dave Radin
Editor

Inside this issue:

Comforting Fitness	1
<i>Hot Topics</i>	2
<i>Get Fit, Not Hurt</i>	3
Chef Corner	4
Muscle of the Month	5
<i>Exercise of the Month</i>	6

Comforting Fitness

Making the decision to change your unhealthy lifestyle to a more active and healthy lifestyle is an overwhelming thought to most people. Why? Let's think about it for a second.

Most people get stuck in a routine and the thought of change is scary. Exercise involves a great change in your overall routine. You need to join a gym or buy exercise equipment, schedule additional time away from home or work, pack extra clothes to change into, and drive to gym. I am sure there are a few more issues involved, but you get the idea. Now add in any fear or apprehension of exercise and you can see why people get back into their old routine not long after New Year's.

So what is holding them back? Their own comfort zone. There is a great book about change, and how to handle it, called, **"Who Moved My Cheese?"** by Spencer Johnson. **Who Moved My Cheese?** is the story of four characters living in a "Maze" who face unexpected change when they discover their "Cheese" has disappeared. Sniff and Scurry, who are mice, and Hem and Haw, little people the size of mice, each adapt to change in their "Maze" differently. I highly recommend this book and it is a quick read, a little over an hour to read.

The ability to adapt to change is scary but can be empowering at the same time. You see this in the TV Reality Show "The Biggest Loser." The contestants are given physical challenges for immunity before the weigh-in. Usually one of the contestants on the show doesn't think that they can even do it but they try it and are surprised to learn something new about themselves.

As kids we took risks all the time from learning to ride bikes, learning to swim, make new friends, learn a new sport, etc. As kids probably didn't hem and haw and the thought of riding a bike, because we knew it gave us freedom to ride around the neighborhood with our friends. Sure we feel off the bike, but the key is, we got back on the bike and kept trying.

Most people don't get back on the proverbial bike when it comes to exercise. The fall off and say, "Okay, that didn't work, I don't need to do this anyway." Does this sound at all familiar? If so, how are you ever going to be successful at weight loss or whatever your fitness goal is if you stop after falling off the first time?

Committing to exercise is without a doubt a big change in one's comfort zone but it is doable. One final thought, What would you do if you were not afraid?

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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

The amount of force exerted during muscular contraction is dependent on how many factors?

- A. 1
- B. 2
- C. 3
- D. 4

Answer on page 4.

Hot Topics

Fire Up Those Glutes

Over the past few years, industry leaders have emphasized preparatory activation of the gluteal muscles **to enhance both injury prevention and training effects**. Awareness was heightened as a result of research which determined poor gluteal recruitment subsequent to lower extremity injury, and from the teachings of the late Vladimir Janda who suggested the gluteus maximus is reciprocally inhibited by a tight psoas as is found in the anterior pelvic posture distortion. **Although this is not revolutionary information, it has yet to be integrated into the fitness culture** on a broad scale as pieces of the puzzle are still coming together. For example, researchers have yet to determine the most effective movements and loading characteristics through which to optimize glute muscle recruitment. **The most recent study looked at the effectiveness of closed-chain exercise in recruiting gluteus medius (GM)**

Researchers from the **Mayo Clinic** measured EMG in the GM in five closed-chain weight-bearing exercises to determine which is most effective. **The GM is both an abductor and adductor of the hip, giving it a primary role in stabilization when standing on one leg. Recent evidence links poor GM function to ACL injuries, IT Band syndromes, and patellofemoral pain, the most common form of chronic knee pain in adults.**

Twenty healthy young men and women with no history of lower extremity injury participated in the study. Researcher collected EMG readings from the GM during 5 activities: **bilateral standing, single leg standing on a stable base and on an Airex pad, and a single leg squat both on stable footing and on the Airex pad.**

As expected **there was greater GM activity when the individual moved from a bilateral to single leg stance**. However, the EMG recordings for both squatting and standing on the stable and unstable surfaces were similar. Although the authors reported a trend towards greater activation on the Airex pad it may not be appropriate to speculate that an unstable surface is any better than a properly loaded single leg squat to improve hip stability. **Regardless, this is the first study to report the GM EMG during dynamic functional movement patterns.**

Previous studies have determined isometric closed-chain activities to be more effective in activating GM when compared to open-chain exercises (i.e. side lying leg lifts, or standing hip abduction). **Based on this information, fitness professionals should include more single leg exercises if they wish to improve hip stability.**

Krause, D.A., et al (2009) Electromyographic Analysis of the Gluteus Medius in Five Weight-Bearing Exercises. Journal of Strength & Conditioning Research. 23(9): 2689-2694.

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FACTOID

Without proper **levels of flexibility**, the brain and body will **compensate** by using alternate movement patterns.

Trainer Spotlight

Travis Kurtz, BS, NASM-CPT
A Northern Ohio native, Travis relocated to the Lake Norman area after majoring in Physical Education at the University of Toledo. A member of the Precision Fitness Team since 2005 Travis's an energetic and positive approach to fitness and performance has helped clients of all ages look better, feel better, and play better. As a National Academy of Sports Medicine Certified Personal Trainer Travis looks forward to continuing his service to the Lake Norman community.

Get Fit, Not Hurt!

With the New Year's resolutions well underway there are undoubtedly many folks out there that are feeling the pain of starting a new exercise program. In my experience as a health and fitness professional there are three types of exercise induced pain that I commonly see. One of these types, which is more of a discomfort than pain, is acceptable. The other two types of pain are not acceptable and will stop your progress dead in its tracks.

The first type of pain is really more of a discomfort and is acceptable when starting a new program. This cause of pain is what is known as "delayed onset muscle soreness" or DOMS. Delayed onset muscle soreness is thought to be a result of microscopic tearing of the muscle fibers and the amount of soreness is typically directly correlated to the amount or intensity of new exercise. Although some level of DOMS should be expected and acceptable if the muscle pain is severe and lasts for more than a few days after the workout then chances are you're overtraining.

The next type of pain that I commonly see is "over use" or "cumulative" injury. There are few reasons for this type of pain. One reason may be over-training. Working the muscles too hard and too often doesn't allow adequate muscle recovery and creates what is called the cumulative injury cycle. During this process the inflammatory response is initiated. Scar tissue and muscle adhesions are produced in order to repair and strengthen the damaged muscle. This scar tissue does not stretch and is considered "non-functional" tissue. As you continue to exercise, these tissues which are expected to stretch and slide become bound down. This creates increased tension on the muscle and joints and increased inflammation and further injury.

Now, in many cases this cumulative injury cycle is initiated long before the start of a new exercise program. Repetitive stress caused by poor posture (i.e. sitting slouched for hours upon hours in front of a computer) or by repetitive motions like swinging a golf club or tennis racket, or throwing a baseball can create the same cumulative injury cycle. Often these folks with this repetitive stress are aware of occasional muscle aches or stiffness (i.e. low back, neck or joint pain). However, when the activity demands of these already stressed muscles are increased, this pain can intensify and even cause real and permanent damage to the musculoskeletal system. This type of pain can often be avoided by avoiding "toos"; too much, too soon, or too hard. I'll add another "too" to that list... Too little information. A consultation with a qualified fitness professional is a great way to insure that you are getting started the right way. If you are going into an exercise program already suffering everyday aches, pains, or stiffness then a consult with a qualified professional is a must.

The third type of pain is the emotional pain caused the failure of progress. Having battled obesity as a child and teenager, believe me I know the pain of failure. Trying diet after diet, exercise program after exercise program and seeing no progress. In order to avoid this type of pain you need three things.

1. The right information
2. The right expectations and
3. The right motivation.

The right information is out there and it's easy to find. Whether it's a qualified fitness professional or a good book on exercise and nutrition there are plenty of good resources out there. Just do your research and use common sense if you're looking for a trainer make sure you know their credentials. If you're looking for a book or program to follow on your own, just remember if sounds gimmicky or too good to be true, then...it is a gimmick and too good to be true.

Having the right expectations is critical. Setting good realistic goals is often the difference between staying the course and reaching your goals and quitting in disgust. Set up short term attainable goals and build on the success of reaching those goals.

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Quiz Answer:

C. 3

The amount of force exerted is dependent on the:

1. # of motor units
2. Muscle length
3. Neural stimulation of motor units

Check out the latest books written by the pro's at Precision Fitness: (click on picture)



Chef's Corner...

Quick Roast Chicken & Root Vegetables

This recipe serves: 4

Ingredients

- 1 pound turnips, peeled and cut into 1/2-inch chunks
- 1 pound baby potatoes, quartered
- 2 tablespoons extra-virgin olive oil, divided
- 1 tablespoon chopped fresh marjoram or 1 teaspoon dried
- 3/4 teaspoon salt, divided
- 1/2 teaspoon freshly ground pepper, divided
- 1/4 cup all-purpose flour
- 1 cup reduced-sodium chicken broth
- 2 bone-in chicken breasts (12 ounces each), skin and fat removed, cut in half crosswise
- 1 large shallot, chopped
- 1 tablespoon Dijon mustard
- 2 teaspoons red- or white-wine vinegar



Cooking Instructions

1. Preheat oven to 500°F.
 2. Toss turnips, potatoes, 1 tablespoon oil, marjoram, 1/2 teaspoon salt and 1/4 teaspoon pepper together in a medium bowl. Spread in an even layer on a large baking sheet. Roast for 15 minutes.
 3. Meanwhile, place flour in a shallow dish. Transfer 2 teaspoons of the flour to a small bowl and whisk in broth; set aside. Season chicken with the remaining 1/4 teaspoon salt and 1/4 teaspoon pepper. Dredge the chicken in the flour, shaking off excess. (Discard any leftover flour.)
 4. Heat the remaining 1 tablespoon oil in a large skillet over medium heat. Add the chicken, skinned-side down, and cook until well browned on the bottom, about 5 minutes. Remove from the heat.
 5. After the vegetables have been roasting for 15 minutes, stir them and place one piece of chicken, skinned-side up, in each corner of the baking sheet. (Set the skillet aside.) Return the vegetables and chicken to the oven and roast until the chicken is cooked through and the vegetables are tender, about 20 minutes more.
- When the chicken and vegetables have about 10 minutes left, return the skillet to medium heat. Add shallot and cook, stirring, until fragrant, about 1 minute. Whisk the reserved broth mixture again, add to the pan and bring to a boil. Cook, stirring occasionally, until reduced by about half, about 8 minutes. Stir in mustard and vinegar. Serve the chicken and vegetables with the sauce.

Nutrition Information

Serving Size: 6 ounces of chicken plus vegetables

Number of Servings: 4

Calories	333	Carbs	29g
Fat	10g	Fiber	4g
Protein	31g	Saturated Fat	2g
Sodium	770mg		

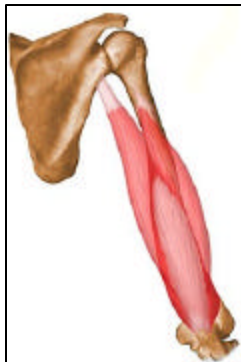
Did you know?

In the **initial training** phases, the body is developing appropriate **neuromuscular movement patterns** before muscular strength.

Want more information on a fitness topic that has not been covered? Send an email to:

dave@ncprecisionfitness.com

Muscle Anatomy



Muscle: Triceps

Origin: Posterior aspect of humerus (upper arm)

Insertion: Olecranon process of ulna

Eccentric Action: decelerate shoulder flexion and elbow flexion

Isometric Action: Stabilize gleno-humeral joint during movement

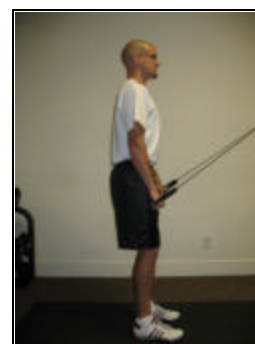
Concentric Action: elbow extension and assist in shoulder extension.

The triceps make up more than 2/3 of your upper arm muscle mass. When properly developed, the tricep forms a "horseshoe" shape when contracted.

Below are exercises to strengthen the triceps:



Stability Ball Skull Crushers



Tricep Pushdown

Our Training Philosophy:

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

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

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Exercise of the Month Stability Ball Chest Press

Preparation

- Lie supine on stability ball with arms straight, wrists over elbows, and palms facing forward.

Movement

- Engage your inner abdominals and pelvic floor muscles to assure spinal stabilization.
- Press arms toward ceiling until arms are straight..
- Return to the start position and repeat.

Tips

- Avoid locking when at full extension.

