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You Really Are What You Eat

When it comes to injuries such as muscle strains, ligament tears, nerve irritation, tendon tears, tendonitis, etc., most people would think about taking Advil, getting a cortisone shot, receiving physical therapy or chiropractic treatment, or even having surgery. All of those respective treatments are effective when provided to the appropriate conditions. The thing that most of us fail to recognize is the importance of diet in healing or preventing various injuries or conditions that occur to our muscles, tendons, and ligaments. There are three main dietary components in particular that can have a substantial influence on the recovery and prevention of injury. These three components are simple yet elusive: calcium/magnesium and zinc, hydration, and an anti-inflammatory diet.

Calcium and magnesium are essential minerals for all of our bodily systems. Calcium is required for all muscle contractions and nerve functions. Without calcium, it is difficult for our systems to function at their best, whether you are competing in a marathon or healing from a surgery. One area that calcium is helpful with is cramping of the leg muscles. Cramping can occur in the highly conditioned athlete or the deconditioned patient. Cramping is a sign of a deficiency. The myth of cramping is that it occurs from lost sodium. This is true if the conditions are right. A patient who is in poor physical condition might cramp during simple rehabilitation exercises. In this scenario, the likely culprit is a low reserve of calcium to assist in muscle contraction. How much calcium do we need? Here are daily doses for specific age categories: 9 to 18 years: 1300 mg, 19 to 50 years: 1000 mg, 50+ years: 1200 mg. Remember that these doses are for the general public. Athletes in training or a patient recovering from an injury that gets the "minimal" dose through their diet will still need to take a calcium supplement to make up for the calcium that is used for aggressive exercise or rehabilitation.

Our bodies have been estimated to be 60-75% water depending on the source that you read. Human systems need adequate hydration to function properly and heal appropriately. It astonishes me each day knowing how many people walk around "relatively dehydrated". For example, if your muscles are dehydrated, they are acting like that dried out sponge under your sink— you squeeze it and it crumbles. Adequately hydrated muscles act like that nice new sponge, absorbing nutrients and doing a great job for you. As a general rule, if you are not drinking at least half your body weight in ounces of water then you are "relatively dehydrated". You don't have to drink water specifically but following simple hydration rules can help improve your body's training and recovery systems. Drink fluids that are non-carbonated, caffeine free, and alcohol free. Limit fruit juices, as they are high in simple sugars. Sports drinks, such as Gatorade, should be diluted 50-50 with water. Diluting sports drinks improves absorption, reduces calories, and helps your budget! This formula, from the International Sports Medicine Institute, will help calculate your daily water intake: 1/2 ounce per pound of body weight if you're not active (eighty ounces a day if you weigh 160 pounds), and 2/3 ounce per pound if you're athletic (106 ounces a day, at 160 pounds).

The third item has been called "anti-inflammatory" nutrition. This eating approach consists of foods that produce anti-inflammatory compounds rather than pro-inflammatory compounds. The main idea of an anti-inflammatory diet is to avoid "bad" fats and to consume "good" fats while reducing the intake of processed foods (commercial white bread, etc.) and eating whole foods (fresh fruits and vegetables, etc.).

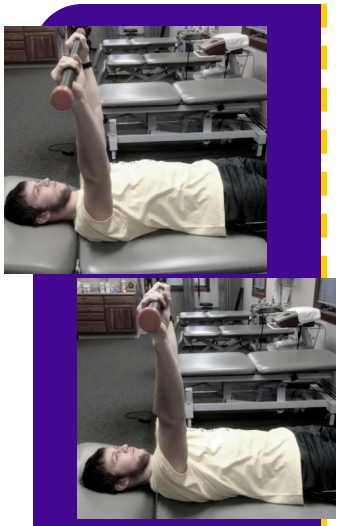
The "bad" fats are polyunsaturated and partially hydrogenated fats and oils. These fats are found in most processed foods, lead to the production of pro-inflammatory compounds and should be eliminated from the diet. Trans-fats, also fit into the "bad" fat category, are found in margarine and shortening and should also be avoided. Olive oil is a great alternative to margarine or shortening and contains omega-9 fatty acids, omega-9 fatty acids, which work with omega-3 essential fatty acids benefiting the body.

Good fats include omega-3 fatty acids, which are found mainly in cold-water fish. These include mackerel, salmon, sardines, anchovies and herring. Omega -3 fatty acids are also found in walnuts, Brazil nuts, almonds, pumpkin seeds and sunflower seeds. Additional foods possessing anti-inflammatory properties include fruits, vegetables and grains. Fruits and vegetables included most berries, kiwi, peaches, mango, cantaloupe, apples, carrots, squash, sweet potato, spinach, broccoli, cabbage and brussel sprouts. Grains include lentils, chickpeas, brown rice, wheat germ and non-instant oatmeal.

Competing athletes or patients have at their disposal progressive nutritional approaches that promote prevention and recovery. As always speak to your healthcare provider to make sure you can safely make these changes given your specific medical history. You really are what you eat so have a cup of cheer this holiday season!

Article by Dale Buchberger, DC, PT, CSCS

Exercise of the Month: Ceiling Reach



Ceiling reach: start and end position (top), reach position (bottom)

The ceiling reach exercise works your *serratus anterior* muscles, which work to bring your shoulder blades around the side of your ribcage. In today's technology-enhanced society, this tends to be the posture and, therefore, these muscles become weak, causing instability in the shoulder. This fairly simple exercise will help to strengthen this muscle group.

To start, lie on your back on the floor holding a sturdy stick (broomstick, dowel, bat, roll of wrapping paper, etc.) with your hands placed slightly wider than your hips or shoulders. Raise the stick until your arms are at a 90-degree angle to your body with your elbows fully extended. Reach your arms toward the ceiling by lifting your shoulder blades off the floor. Keeping your elbows fully extended, lower your shoulder blades back down to the table.

Start with one set of 10 repetitions two different times per day, or two sets of 10 repetitions (with a 30-60-second break in between sets) once a day. As it gets easier, increase your repetitions by 3-5 until you reach 30 repetitions. You should notice a difference in your posture as well as shoulder strength within 4-6 weeks. As always, if this causes any pain, seek the help of a health care professional.

There are three main dietary components that can have a substantial influence on the recovery and prevention of injury: calcium/magnesium and zinc, hydration, and an anti-inflammatory diet.

Active Release Technique Recertification

Not only did Tom Zirilli get recertified in Active Release Technique (ART) in September, but Maggie Whitehouse and Dale Buchberger got certified in October and November, respectively, as well. Maggie took a one-day course on nerve entrapments in Matthews, North Carolina, on October 15. Dale went to Minnesota from November 3-6 and took and helped instruct a 3-day refresher course on spine protocols. Carolyn Collier took a lower extremity course in Orlando, Florida, in June, making all Active Physical Therapy Solutions providers certified ART providers for the next 2 years.

What does being a certified Active Release Technique provider mean? It means we are all posted on the Active Release Technique website, so that anyone looking for an ART provider can find out how to contact us. It also means we are kept current with the most up-to-date protocols and information. For more information on ART, visit www.activerelease.com.

Flight Night at Prison City Pub and Brewery

What Have the Girls of APTS Been Up To?

On Wednesday, October 26, 2016, Carolyn Collier, Cara Cuthbert, Linda Schattinger, and Maggie Whitehouse attended the 107th Annual Cayuga County Chamber of Commerce Dinner entitled *Timeless Cayuga*. Then, three weeks later on Wednesday, November 16, 2016, the same four went to *Flight Night*, a United Way Fundraiser at the Prison City Pub and Brewery. Two dollars from each flight purchased—as well as a special menu burger purchased—that evening went toward the United Way of Cayuga County. It's always a good time to get out in the community to network or help a good cause. Look for us at—or invite us to!—the next community function!

Shoveling Made Simple

As the heart of the winter season approaches there will be several inches (or feet) of The White Stuff to shovel. With the added strain to your muscles and joints, this activity can cause a number of musculoskeletal injuries. Injuries to the lower back and shoulders are among the most common injuries that occur during snow shoveling. On the opposite end of the severity spectrum, heart related injuries (such as acute cardiac arrest or heart attack) can be common in the older populations. Knowing the most common snow shoveling injuries can help us prevent them from happening in the first place.

A comprehensive study published in the *American Journal of Emergency Medicine* found the following:

Overworking your muscles, falling, and being hit with the shovel were the most common reasons for getting hurt.

Muscle, ligament, tendon, and other soft tissue injuries were at the top of the list of snow shoveling mishaps. Among these mishaps, lower back injuries were some of the most common.

Other common snow shoveling injuries included cuts and broken bones. The arms and hands were the most likely body regions to sustain a fractured bone.

Heart-related problems made up only 7% of snow shoveling injuries. However, all deaths that occurred due to snow shoveling were the result of heart problems.

Adults over the age of 55 were 4.25 times more likely than younger people to have heart-related symptoms while shoveling.

The online resource *Spine Health* offers the following suggestions on their website for proper lifting techniques while shoveling:

Always face the load you want to lift while keeping your shoulders and hips square to the load.

Use a shovel that is lightweight and the proper length to minimize bending at the waist.

Bend at the hips, not the lower back or waist, and push the chest out, pointing forward. Then, bend your knees and lift with your thigh and hip muscles, keeping your back in an upright position.

Lift lighter loads more often rather than heavier loads less often. The average snow shovel load weighs approximately 20 pounds.

Walk to the area where you want to deposit the snow rather than throwing it. Keep the load as close to your body as possible until you are ready to drop it. Then drop the snow just in front of your feet.

When at all possible, try to push the snow towards its intended destination instead of lifting it.

Do not throw the snow over your shoulder or to the side because the twisting motion involved may lead to a lower back injury.

Don't shovel! Some people simply should not be shoveling snow. It is recommended that men *and* women over the age of 45, especially those who are not physically active on a regular basis or that have an existing history of a heart condition, should find someone else to do the shoveling.

If you have a large area to clear you may want to consider using a snow blower if you are able to operate one safely. Keep in mind that injuries can occur even when using a snow blower. Snow-blowing injuries tend to be more catastrophic, and for this reason, paying attention to the task at hand can help prevent them. Pushing a snow blower still requires effort, so exertional injuries are still common. Good body mechanics are needed to prevent back and shoulder injuries. Above all, please keep your hands out of the blower housing! If the blades get stuck do NOT try to unclog the snow with your hands. Even with the motor off, the blades have built up tension and when the snow is removed the tension is released quickly turning the blades and causing finger and hand injuries. If you have any of the physical limitations described, or if you fall into one of the at risk categories, it may be worthwhile to hire a professional to clear the snow. This option may cost you a few dollars on the front end but may end up saving you hundreds or thousands of dollars in medical bills in the long run.

Shoveling snow is not easy but by following these simple rules, you may be able to shovel your driveway and sidewalk without getting injured. Remember: never feel bad about asking for help! If you are struggling to get your snow cleared, play it safe and ask someone for a hand. Of the options provided, consider the one that is best for you and have a safe and healthy winter season.

Article by Dale Buchberger, DC, PT, CSCS

If you are struggling to get your snow cleared, play it safe and ask someone for a hand.

APTS Recipe Box: Paleo Gingerbread Cookies

Ingredients: 1 cup almond flour, 2 tbsp blackstrap molasses, 1 tsp ground cinnamon, 3 tbsp extra virgin coconut oil (melted), 1 tsp ground ginger, 1/4 tsp ground nutmeg, 1/2 tsp ground cloves, 1/2 tsp baking soda, 1/2 tsp baking powder, 1 1/2 tsp vanilla extract, 1/4 tsp fine grain sea salt.

Directions: Preheat oven to 350 F and place rack in the middle. Line a baking sheet with parchment paper, set aside. In a bowl, combine almond flour, spices, baking soda, baking powder, and salt. In another bowl, mix coconut oil, blackstrap molasses, and vanilla extract until well combined. Add wet ingredients to dry ingredients and mix well until a dough forms. (You might need to add a couple of tablespoons of almond flour if the dough is too wet or some water if it's too dry.) Scoop one tablespoon of mixture and drop onto the lined baking sheet, pressing down to form into cookie shapes. Bake for 9-10 minutes. Let cookies cool on the baking sheet (without touching!) for 15 minutes, then using a spatula, place cookies on a rack and let cool completely. Makes 10 cookies.

Source: www.theironyou.com/2013/12/paleo-gingerbread-cookies.html

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Get Well...Get Active...Be Active

Newsletter Edited by Carolyn B. Collier, PTA

At Active Physical Therapy Solutions, we utilize the most cutting edge treatment and management techniques available. Our goal is to deliver the best possible healthcare in a friendly, caring, and well-organized environment. Our staff is here to provide active solutions to achieving your personal goals!

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Nutrition 101: The Anti-Inflammatory Diet, Part 2

Last month, I gave you the background and foundation of the anti-inflammatory diet. This month, I will go into more detail on the 15 best anti-inflammatory foods you can add to your diet and why they are considered good for you.

Green leafy vegetables. Fruits and vegetables are rich in antioxidants* that restore cellular health, as well as anti-inflammatory flavonoids.

Bok choy. Also known as Chinese cabbage, bok choy is an excellent source of antioxidant vitamins and minerals.

Celery. Benefits of celery include both antioxidant and anti-inflammatory abilities that help improve blood pressure and cholesterol levels, as well as prevent heart disease. Celery seeds also help lower inflammation and fight bacterial infections.

Beets. The antioxidant betalain gives beets their signature color and is an excellent anti-inflammatory.

Broccoli. It's an antioxidant powerhouse with key vitamins, flavonoids, and carotenoids which work together to lower oxidative stress in the body and help battle both chronic inflammation and the risk of developing cancer.

Blueberries. Found in citrus, olive oil, and dark-colored berries, quercetin is a flavonoid (a beneficial substance or phytonutrient that's prevalent in fresh foods) that fights inflammation and even cancer. The presence of quercetin is one of the health benefits of blueberries. One study found that consuming more blueberries slowed cognitive decline and improved memory and motor function.

Pineapple. After being used for years as part of an anti-inflammatory protocol, bromelain—a digestive enzyme from pineapples—is observed to have immune-modulating abilities. Bromelain has been shown to stop blood platelets from sticking together or building up along the walls of blood vessels—both known causes of heart attacks or strokes. Pineapple is filled with phytonutrients that work as well as many medicines do to reduce symptoms of some of the most common illnesses and conditions we see today.

Salmon. It's an excellent source of essential fatty acids, especially omega-3s, which are some of the most potent anti-inflammatory substances. Research shows that omega-3s reduce inflammation and may help lower risk of chronic diseases such as heart disease, cancer, and arthritis. Omega-3s are some of the most potent anti-inflammatory substances, showing consistent relief of inflammation.

Bone broth. It contains minerals in forms that your body can easily absorb: calcium, magnesium, phosphorus, silicon, sulphur, and others. They contain chondroitin sulphates and glucosamine, compounds that reduce inflammation, arthritis, and joint pain. It also contains collagen and the amino acids proline and glycine that can help heal a leaky gut and the damaged cell walls of the inflamed gut.

Walnuts. The antioxidant and anti-inflammatory benefits of walnuts help protect you against metabolic syndrome, cardiovascular problems, and type 2 diabetes. Some phytonutrients found in walnuts are very rare in any foods, yet valuable. And they are also high in omega-3 fatty acids. Add them to green leafy salads drizzled with olive oil for a satisfying anti-inflammatory meal, or grab a handful for a snack.

Coconut oil. Lipids in coconut oil are full of strong anti-inflammatory compounds. In one study, the high levels of antioxidants present in virgin coconut oil reduced inflammation and healing arthritis more effectively than leading medications. It can be used for topical preparations as well as being excellent for sautéing anti-inflammatory vegetables.

Chia seeds. These offer both omega-3 and omega-6, which should be consumed in balance with one another. The ability of chia seeds to reverse inflammation, regulate cholesterol, and lower blood pressure make it extremely beneficial to consume for heart health.

Flaxseeds. An excellent source of omega-3s and phytonutrients, flaxseeds are also packed with antioxidants. Lignans are unique fiber-related polyphenols that provide us with antioxidant benefits for anti-aging, hormone balance, and cellular health. Polyphenols support the growth of probiotics in the gut and may also help eliminate yeast and candida in the body.

Turmeric. Its primary compound, curcumin, is its active anti-inflammatory component. A study found that curcumin is far more potent than aspirin and ibuprofen as an anti-inflammatory and anti-proliferative agent. Turmeric is highly effective at helping people manage rheumatoid arthritis.

Ginger. Used fresh, dried, or in supplement form and extracts, ginger is another immune modulator that helps reduce inflammation caused by overactive immune responses. Ayurvedic medicine has praised ginger's ability to boost the immune system before recorded history. It believes that because ginger is so effective at warming the body, it can help break down the accumulation of toxins in your organs. It is also known to cleanse the lymphatic system, our body's sewage system.

*The umbrella category of *antioxidants* includes a great deal of substances and, in general, they fight to repair the cell damage caused by inflammation.

Article by Carolyn Collier, PTA

Source: https://draxe.com/anti-inflammatory-foods/