

ACTIVE P.T. SOLUTIONS  
...BECAUSE LIFE  
SHOULD BE ACTIVE

# APTS Monthly



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MARCH 2019

## Office Hours:

Monday -

8:00am - 5:30pm

Tuesday -

8:00am - 7:00pm

Wednesday -

8:00am - 5:30pm

Thursday -

8:00am - 5:30pm

Friday -

8:00am - 4:00pm

## Location:

91 Columbus Street

Auburn, NY 13021

P: (315) 515-3117

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## Bone Spur vs. Calcium Deposit

It is not uncommon for patients and/or physicians to use the terms *bone spur* and *calcium deposit* interchangeably. Unfortunately, these are two very different things that often occur in different parts of the body. For example, you are more likely to see a bone spur in the foot and develop a calcium deposit in the shoulder or rotator cuff.

Bone spurs are bony extensions that form on bones, usually where tendons or ligaments attach. Bone spurs are usually smooth and found at the ends or edges of bones, particularly when two bones come together to form a joint. Common locations for bone spurs include the heels, knees, fingers, elbows, hips, shoulders, neck, and lower back. Bone spurs usually occur in response to a particular stress at the site of the spur. The body will lay down bone if a tendon, ligament, or tissue becomes tight and puts increased tension at the attachment site. This is why it is not uncommon to hear the term "traction spur". A heel spur in the foot is an example of a traction spur. If a joint becomes loose or unstable (such as the spine), the body will develop spurs in an attempt to create stability of the joint complex. Spurs are not necessarily the source of a person's pain. The pain is often coming from the muscle, tendon, nerve, or ligament around the spur. Some studies reveal that older people are more likely to display bone spurs; however, spurs can occur in young, athletically active people secondary to the athletic stress placed on the soft tissues attaching to the spur site. Bone spurs are commonly associated with the following conditions: osteoarthritis, spinal stenosis, spondylosis, or plantar fasciitis.

In comparison to traction bone spurs, calcium deposits are small, dense areas of calcium that can form after a bone or tissue is stressed or damaged. When an injury or stress occurs, calcium travels through the bloodstream to the injured

area to help repair damage. In some cases, the damaged area may receive more calcium than is needed. In other cases the microcirculation of the tissue is congested due to the injury. This will allow calcium to get into the tissue, but the exiting circulation is restricted and, therefore, the excess calcium cannot get out. This leads to the deposit. In an additional scenario, the tendon may experience chronic tears over a period of time and the body will deposit calcium to fill the tear. Calcium deposits usually start as a thick paste that will eventually harden if they go untreated.

Calcium deposits are most common in women above 40 years of age, the same group at the highest risk for osteoporosis. Calcium deposits can occur when your body doesn't receive enough dietary calcium. A calcium deficiency can cause your body to remove calcium from the bones and send it to other tissues where it's needed to assist with other bodily functions such as digestion, circulation, muscle contractions, nerve impulses, etc.

A sedentary lifestyle is another risk factor for calcium deposits. Regular exercise helps keep your bones strong and improves circulation, sending calcium to the places where it is needed the most rather than being deposited in soft tissues.

If a bone spur or calcium deposit is located inside a joint or deep in a tissue, there won't be any visible signs. Bone spurs that form close to the skin may look like small bumps or swellings under your skin. When a bone spur develops in your shoulder, you may find it difficult to move your arm normally because of pain or restricted range of motion. It is common to receive a diagnosis of "shoulder impingement". This illustrates the importance of having the painful area evaluated with X-rays to either rule in or rule out the presence of bone spurs or calcium deposits. Bone spurs that form in the

spine can result in compression of exiting spinal nerves, which may cause numbness or pain in your arms, legs or other areas of your body. If the spurs grow inward they can result in spinal stenosis or narrowing of the central spinal canal making it difficult to straighten up or limiting the distance someone can walk. If spurs develop in your knee, performing normal movements such as walking up and down stairs or getting in and out of the car can be painful. Heel spurs can make walking difficult every time your foot hits the ground. Spurs in the neck or cervical spine can compress arteries or veins, restricting the flow of blood to your brain or pressing on the trachea, making it hard to swallow.

Having a simple X-ray can tell us if you have a bone spur or a calcium deposit. In the end, a calcium deposit can be resolved with a specific physical therapy treatment plan. Bone spurs are less likely to be resolved without surgical removal.

Article by Dale Buchberger, DC, PT, CSCS

### Shoulder Calcific Tendinopathy



## Exercise of the Month: Calf Stretch



Calf stretches, basic (top) and more advanced (right)

The calf, or *gastrocnemius*, muscle runs along the back of the lower leg below the knee. This muscle helps point the toes (*plantarflex*) and it contracts during powerful, explosive movements like jumping, stair running, sprinting, or cycling. The calves are one of the most overused and overlooked muscle groups in the body and if you wear heels, run regularly, or both, stretching your calves is a must to prevent injury. Tight calf muscles contribute to Achilles tendonitis and plantar fasciitis, among other things.

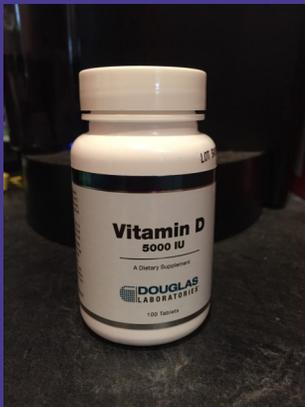
To start with the most basic calf stretch, you want to stand facing a

wall or a tall table. Put your symptomatic leg behind you with your knee straight and your heel flat on the floor. Keeping your knee straight and your heel in contact with the floor, lunge forward with the opposite leg until you feel a comfortable stretch in your calf. Hold this stretch for 30 seconds and perform one at a time, three different times a day.

For a more intense stretch, stand once again facing a wall and lean back to get as much of the ball of your foot on the wall as you can. Keeping your knee straight and your hips square to the wall, push your hips forward until you feel a

strong but comfortable stretch in your calf. Do not push into the wall with your foot—this should be a passive stretch. Hold time and frequency is the same as the previous stretch: 30 seconds at a time, 3 times per day.

If you experience intense calf pain accompanied by redness and/or swelling that comes on suddenly without cause, you should make an appointment with your primary care physician to rule out a blood clot. Any further calf problems can be evaluated by your physical therapist.



It is very important to ensure that your body has adequate levels of vitamin D, which helps prevent osteoporosis, heart disease, cancer, Alzheimer's Disease, stroke, high blood pressure, diabetes, and it may also slow the aging process.

## Getting Enough Vitamin D in the Winter

Because your body produces vitamin D via your skin after exposure to the sun, your levels can become dangerously low in the winter months. It is very important to ensure that your body has adequate levels of vitamin D, which helps prevent osteoporosis, heart disease, cancer, Alzheimer's Disease, stroke, high blood pressure, diabetes, and it may also slow the aging process. The best way to get vitamin D is naturally from the sun. Just 15 minutes of sun at mid-day in the summer is sufficient.

However, the winter months make this extremely difficult. Unfortunately there are only a few vitamin D food sources, as our bodies were really designed to get the vitamin D we need from the sun. Good food sources include fatty fish such as salmon, tuna, & mackerel; mushrooms; eggs; and vitamin D fortified foods, such as milk. As far as vitamin D supplements go, we don't really know if they are actually healthy for us or not. The recommended daily allowance of vitamin D is 600 IU/day.

For those who are vitamin D deficient, they may need higher amounts, up to 1,000 IU/day, until their vitamin D levels are in the normal range. It is important to ensure that we don't get "toxic" on vitamin D, and it's always much better if we can get them naturally rather than in a pill. So the best rule of thumb is (1) get 15 minutes of sun each day in the late spring, summer, and early fall, (2) eat two servings of a fatty fish each week from November to March, and (3) for those that are vegetarian or hate fish, drink 3 cups of a vitamin D fortified milk each day from November to March, as liquid vitamin D is better absorbed than the pill form.

## Tom Zirilli, PT, to Speak at the YMCA

Tom Zirilli, PT, is speaking at the Auburn YMCA on Wednesday, March 13, on the importance of warming up prior to exercise. This informative talk starts at 6:00 P.M. in the Little House area of the Y. It will only be one hour long, so

please come support out staff and learn why it is such a good idea to warm up before doing any exercise routine—something many of us fail to do on a regular basis!



# Plantar Fasciitis is a Real Heel Pain



Plantar fasciitis is considered the most common cause of heel pain. The plantar fascia is a thick band of tissue that connects the heel to the toes. The connection continues from the heel up the backside of the calf. The plantar fascia has a poor blood supply exposing it to chronic overuse conditions.

The primary symptom of plantar fasciitis is foot pain when taking the first steps after getting out of bed in the morning or after sitting for a long time. The stiffness and pain may reduce after taking a few steps, but your foot may hurt more as the day goes on. It may hurt the most when climbing stairs or with prolonged standing or running.

There are many contributing factors leading to plantar fasciitis. Most of us would like a nice neat cause and effect answer to the question, "What causes plantar fasciitis?" For instance, if you are a long distance runner, running endless miles alone won't cause plantar fasciitis. However, if you run endless miles with worn running shoes or fail to maintain Achilles tendon flexibility and hip strength then you may develop plantar fasciitis. As you can see, several factors need to be in place to develop the condition.

While there have been significant advances in shoe materials and technology, it is the structure of today's footwear that may be contributing to the development of plantar

fasciitis. Most forms of footwear have a built in "heel lift"; this means that the heel is higher than the toes. This chronic heel lift causes the calf to tighten and subsequently increases the forces on the plantar fascia. The heel lifts are effective at reducing pain because they shorten the tissue, but used chronically, they cause tightness. The end result can be plantar fasciitis. Why don't shoe manufacturers make shoes without a heel lift? They tried that in the 1970's and it failed. They were called "Earth shoes".

Most people didn't like Earth shoes because it made their legs hurt. Had most of us prepared ourselves to wear Earth shoes by stretching regularly we may have avoided that pain.

Patients with flat feet or high-arched feet will experience plantar fasciitis for two different reasons. A flat foot has too much motion, chronically stretching the tissue. A high-arched foot is very rigid and cannot absorb forces very well. Patients with flat feet actually have more treatment options than those with high-arched, rigid feet.

Weakness of the hips can cause the feet to flatten at a faster rate than the tissues can accept. This results in a rapid stretch on the plantar fascia, causing chronic micro-injuries to the tissue itself. If the weakness is left uncorrected, a stubborn case of plantar fasciitis may occur.

There are many different ways to manage and treat plantar fasciitis. Unfortunately, many of these treatments are focused on the area of the plantar fascia that is symptomatic and fail to account for the variety of contributing factors addressed above. Even the best treatment can fail if the stimulating factor is not addressed.

The most common "treatment" is the prescription of orthotic devices or shoe inserts. There are many different types of prescription and over the counter orthotics

that can help patients with flat feet. Patients with high arched rigid feet should see a podiatrist for custom orthotic shoe inserts. Remember that your new orthotic shoe insert should not be placed on top of the shoe's original insert; those must be removed first. It is also a good idea to get a new pair of shoes (athletic or otherwise) for your new inserts. An orthotic is most beneficial when combined with a flexibility program for the Achilles tendon and a strengthening program for the hips.

There are many other types of soft tissue treatments such as Active Release Technique® ([www.activerelease.com](http://www.activerelease.com)) or instrument assisted soft tissue mobilization ([www.sastm.com](http://www.sastm.com)) that address poor blood flow in the tissue or scar tissue build up. These techniques are valuable when combined with flexibility and eccentric type strengthening exercises. Extracorporeal Shock Wave Therapy (ESWT) is newer and has had some promising results with plantar fasciitis and heel spurs in particular. Also on the horizon is the platelet rich plasma, or PRP, injection. In many cases of stubborn plantar fasciitis, several or all of these options need to be combined with the appropriate exercise program in order to achieve the desired result.

Lastly, recognizing when your shoes have had enough and you simply need new or better shoes can be the difference between a quick recovery or falling into a chronic and lengthy problem. Shoes don't last as long as we think, and most shoes are the definition of planned obsolescence. In most cases, foot pain does not resolve on its own. Finding out the cause of the pain is the first step in making it go away.

**Article by Dale Buchberger,  
DC, PT, CSCS**

*Weakness of the hips can cause the feet to flatten at a faster rate than the tissues can accept. This results in a rapid stretch on the plantar fascia, causing chronic micro-injuries to the tissue itself.*

## APTS Recipe Box: Irish Soda Flat Bread

Irish soda flat bread with a soft center and a crisp crust is the perfect recipe for St. Patrick's Day.

**Ingredients:** 3-1/2 cup blanched almond flour; 1/2 cup arrowroot flour; 1 tsp baking soda; 1 cup almond milk (or non-dairy milk of choice); 1 whole egg at room temperature; 1 tbsp apple cider vinegar; 1/4 cup unsalted butter at room temperature; 1/2 cup unsweetened cashew butter; 2 tbsp raw honey; 1 cup raisins.

**Instructions:** Preheat oven to 400 degrees. In a large mixing bowl, combine the almond flour, arrowroot, baking soda, and salt. In a small bowl, whisk the egg with the milk and vinegar. Incorporate the butter, cashew butter, and honey into the flour mixture until combined. Pour the liquid ingredients into the batter and mix well. Fold in the raisins. Pour the batter in a large circle (or preferred shape) onto a lined baking sheet. Bake for 20 minutes. Reduce the heat to 375 degrees and bake

another 15-18 minutes until cooked through. Let the flat bread cool at least 10 minutes, slice, and enjoy!

Recipe yields one large, round flat bread.

**Source:** <https://www.primalpalate.com/paleo-recipe/irish-soda-flat-bread/>



### Active P.T. Solutions

91 Columbus Street  
Auburn, NY 13021

Phone: 315-515-3117

Fax: 315-515-3121

E-mail: [cara@activeptsolutions.com](mailto:cara@activeptsolutions.com)

website: [www.activeptsolutions.com](http://www.activeptsolutions.com)

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!**

**...BECAUSE LIFE SHOULD BE**

**ACTIVE!**

## Nutrition 101: Boost Energy with Raisins

Raisins contain more iron than many other types of fruits; while not as much as meat, shellfish, or spinach, they do provide some. A small box of raisins delivers about 5 percent of our daily needs. This works out well for vegetarians and vegans.

Iron is essential for making red blood cells and transporting oxygen throughout the body. It's a vital nutrient that we cannot live without. It also supports our immune system and brain function and it helps to maintain healthy skin, hair, and nails. Low iron is actually the most common nutritional deficiency in the United States.

Raisins contain "non-heme" iron, the type found in plants that requires multiple steps to absorb it. Since vitamin C nearly doubles the absorption of non-heme iron, it's a good idea to eat raisins with other vitamin C-rich foods.

Many athletes consume raisins for the rapid energy they provide. One small box of raisins (1.5 ounces) provides 130 calories, 34 grams of carbs, and 26

grams of sugar. According to several studies, raisins provide the same performance-enhancing benefits as sports chews or sport jelly beans—and for a lot less money!

Because raisins are dried grapes, it's natural to wonder how the health benefits of raisins compare to grapes. While both are full of antioxidants, raisins have about three times more than grapes, since the drying process concentrates many of these compounds. On the downside, raisins contain less vitamin C and resveratrol (a polyphenol that may benefit the heart) than grapes, since this same drying process compromises them.



Low in fat, sodium, and cholesterol, raisins are also a good source of potassium—which helps maintain a healthy heart—and fiber—which promotes regularity, rids the body of cholesterol and other toxins, and fills us up.

Lastly, sweet and sticky raisins may help fight—not cause—cavities. According to researchers at the USA Department of Food and Nutrition, raisins contain chemicals that suppress the growth of oral bacteria associated with cavities and gum disease.

**Tip:** Give the box or bag of raisins a good shake before buying. If the raisins rattle inside, it means they are dried out. Tightly sealed raisins will last about a month when stored in a cool, dark place and up to a year in the refrigerator. Dried up raisins can be revived by blanching them in boiling water for 10 minutes.

**Article by Carolyn Collier, PTA**