

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

APTS Monthly



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Why Do Our Shoulders Hurt?

The shoulder is a remarkable mechanical invention. It is designed to allow for incredible range of motion while still maintaining its structure and stability. It is a "ball and socket" joint. The ball is the top of the upper arm, or humerus, and the socket being the lateral edge of the scapula or shoulder blade. The joint is held together by the joint capsule and supported by thickened regions of the capsule or ligaments. An ovoid ring of cartilage called the *labrum* deepens the socket. This is supported by four dynamic structures called the *rotator cuff muscles* (although incorrect, it is not uncommon for them to be referred to as the roto-cup or rotor-cup). The last layer is the outermost layer of muscles that actually move the shoulder.

Because of this precarious balance of range and stability, it has been said that the shoulder needs to be loose enough to function but tight enough to stay together. This is not only a problem in athletes that participate in "shoulder dominant" sports; it is also problematic for the general population. The general population is probably at more risk of injury to the shoulder because less focus is placed on maintaining strength and flexibility as a matter of routine. While aging is inevitable and trauma unexpected, slowing the aging process and improving the ability to withstand the forces of trauma is a choice. However, it is difficult to make the choice if we don't have the information.

Trauma is relatively easy to explain. If we fall on an outstretched arm, several things can happen. The shoulder joint can dislocate, meaning the ball has come out of the socket and has to be put back in by a medical provider. The ball can "sublux", meaning the ball slipped out and went back in by itself. During the course of the dislocation or subluxation, the bone or cartilage can fracture or tear. It is not unusual to experience a rotator cuff tear during one of these injuries. And, like it or not,

the older we get, the more susceptible we are to a rotator cuff tear. After an injury such as these, the faster you get to a medical provider and have them evaluate your injury, the more efficient your diagnosis and treatment will be. If the injury did not cause a tear or fracture,



there is a good chance that surgery can be avoided. Unfortunately, if a tear has occurred, surgery may be the most efficient route to a satisfactory recovery.

There are a large number of disorders that can occur in the shoulder that are not traumatic in origin. These can be age-related, athletically-related, genetically predisposed, and some can be the result of overuse activities. Age related disorders are usually degenerative in nature. Common terms are bone spurs or arthritis. The problem with "arthritis" is that it is rare for any two cases to present the same. Just because your neighbor or your Aunt Betty had "arthritis" it doesn't mean you have the "same" problem. No offense to Aunt Betty, but I don't recommend taking medical advice from her unless she is a retired orthopedic surgeon. Bone spurs due to arthritis can manifest in different areas with a variety of outcomes. If the

top part of the joint, or acromioclavicular joint, becomes arthritic it can result in impingement syndrome and eventually lead to a rotator cuff tear. These are the tears that occur when "I don't know how it happened". Basically the spurring acts like sandpaper and gradually wears the tendon down like a hole in the knees of your jeans. Tendons can age without spurring. This is called tendinosis and occurs from either disuse or overuse. Poor diet will also contribute to tendinosis. Tendinosis must be treated more aggressively than tendonitis.

Younger individuals and athletes that participate in repetitive overhand sports such as swimming, baseball, tennis, etc., may experience impingement syndrome secondary to very subtle instability. This instability is the result of the joint capsule being loose and the rotator cuff and scapular muscles not being strong enough to position and/or support the shoulder joint for optimal stability. Many younger individuals and their parents may not be aware of available shoulder maintenance programs that can help to prevent injuries in these young athletes. Fortunately many of these sport-related injuries are treatable through comprehensive rehabilitation programs. The bad news is that many athletes don't find out about the programs until they have been injured.

The shoulder is the most complex joint in the body. If your shoulders begin to limit your activity or—worse yet—give you trouble sleeping, it is time to have a professional look at them and provide you with a skilled opinion. Just because Aunt Betty makes a mean cookie doesn't mean you should get your medical advice from her.

Article by Dale Buchberger,
DC, PT, CSCS



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

Exercise of the Month: Ceiling Reach

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 assumed 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. Do not perform if your pain level reaches a 5/10 or more. As with any exercise, if this causes any kind of discomfort, seek the help of a health care professional.

Because of its precarious balance of range and stability, it has been said that the shoulder needs to be loose enough to function but tight enough to stay together. This can be problematic for anyone!

Healthy New Year!

Learn how you can live a safer and healthier life. Protect yourself from injury or disease by wearing a helmet, sunscreen, or insect repellent when necessary. *Make an appointment for a check-up, vaccination, or screening. Regular health exams and tests can help find problems before they start. They can also help find problems early, when your chances for treatment and cure are better.* Wash your hands often with soap and water to prevent the spread of infection and illness.

Healthy you. Make healthy food choices. A healthy eating plan emphasizes fruits, vegetables, whole grains, and

fat-free or low-fat milk and milk products, includes lean meats, poultry, fish, beans, eggs, and nuts, and is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars. *Be active to improve overall health. Try simple things such as taking the stairs instead of the elevator. Consider mall walking if the weather is cold or icy. Be active for at least 2 1/2 hours a week! Be smokefree in 2018. If you are ready to quit, call 1-800-QUIT-NOW for free resources. Get enough sleep. Insufficient sleep is associated with a number of chronic diseases and conditions, such as diabetes, cardiovascular disease, obesity, and depression.*

Healthy family. Reduce auto-related injuries by using seat belts, child safety seat, and booster seats that are appropriate for your child's age and weight. *Learn positive parenting tips to keep teens safe on the road. Lower the risk of foodborne illness as you prepare meals for your family. Gather and share family health history. Get pets vaccinated and keep pets healthy. Take your pet to its veterinarian regularly and practice good hygiene around your pets so they don't unintentionally pass germs to you.*

Source: <https://www.cdc.gov/features/healthynewyear/index.html>

Three Years on Columbus Street!

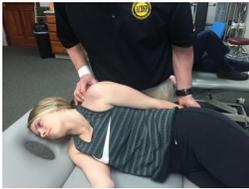
Active Physical Therapy Solutions has been at home on 91 Columbus Street for three years on January 5, 2018! Our new location has served us well the past three years and we have been busy! Thanks to all of you for your patronage, support, and referrals! We look forward to serving this

community for years to come. Please let us know if we can be of service to you in any way in 2018, whether it be physical therapy or chiropractic care, speaking or community service events, or student shadowing!

APTS donated a large number of items to the Calvary Food Pantry this Christmas and they were very grateful for all of the donations. Thank you to all of those who contributed!



What Causes Shoulder Pain?



Shoulder pain will affect as many as 70% of the population at some point in

their life, and approximately 40-50% of which will persist and last longer than one-year. The most common causes of shoulder pain in primary care are reported to be rotator cuff disorders, acromioclavicular joint disease, and glenohumeral joint disorders. The uniqueness of the shoulder joint complex is what results in the majority of shoulder disorders when they are not well maintained, primarily the balance of range of motion with the necessary strength required to keep the joint structure stable.

Because of the vast interaction of tendons and ligaments that maintain the stability and function of the shoulder complex, there are many causes of shoulder pain. While the rotator cuff is a commonly affected collection of tendons and muscles in the shoulder, it is not the only thing that can generate pain in the shoulder. Not only are there a variety of tissues that can be damaged or injured, but various tissues can be specifically affected by age.

The joint formed where the collarbone or clavicle meets the top of the shoulder blade or scapula is called the *acromioclavicular joint*. This joint can be injured through traumatic events such as falling off of a bicycle or slipping and falling on the tip of your shoulder. The acromioclavicular joint can become degenerated or arthritic through overuse mechanisms such as bench-pressing heavy weights or

performing overhead activities for a long period of time. According to one study, 93% of people over the age of 30 will have degenerative changes in the acromioclavicular joint.

The rotator cuff is probably the most commonly affected group of tendons in the shoulder. Like the acromioclavicular joint, it can be affected by overuse problems and traumatic problems. If you fall with your arm outstretched and you are over the age of 30, there is a good chance that you will tear the supraspinatus portion of the rotator cuff. If you are over the age of 60, there is a good chance that you will also tear the subscapularis portion of the rotator cuff. Younger individuals can experience impingement syndromes that cause compression of the rotator cuff. If gone untreated the increasing rotator cuff weakness associated with the impingement can eventually lead to a tear of the rotator cuff.

The shoulder joint is a ball and socket joint much like the hip joint. Because the shoulder joint has more mobility than the hip joint, the socket is shallow. In order to improve the structural stability of the joint, the socket has a ring of cartilage around it called the *labrum* that increases the depth of the socket. Unfortunately this ring of cartilage can be a source of pain. The labrum is commonly torn when someone falls on an out stretched arm, dislocates their shoulder, or is involved in repetitive overhand activities such as throwing a baseball or lifting heavy weights. There are many classifications of labrum tears and many but not all of these may require surgical repair.

The ligaments that attach the ball to the socket in the shoulder joint can also

develop or acquire their own set of specific disorders. The main job of the ligaments or capsule are to hold the ball and socket together at extremes of range of motion. Unfortunately both genetics and activities may result in the capsule becoming too loose. This is known as *instability*. There are many grades of instability. The lowest grade results in a painful shoulder usually in a younger individual. The highest grade would result in recurrent spontaneous dislocations of the shoulder. Sometimes a rigorous strengthening program of the various shoulder muscles can remedy the instability. In more severe cases, surgical tightening is required. The other perspective on the capsule is when it becomes too tight. A severely tightened capsule is known as a *frozen shoulder* or *adhesive capsulitis*. This is very common in patients with Type-1 and Type-2 diabetes and usually occurs without any known mechanism. Some patients that experience a tight shoulder capsule after surgery or an injury are in for a complex road of physical therapy. The protocol for recovery from a tight shoulder must be adhered to until recovery. Failure to follow the protocol or the advice of the medical team is a sure path to a prolonged recovery. Large gaps in treatment will result in setbacks and a large degree of frustration on the part of the patient and the members of the medical team.

The shoulder is the most complex joint in the body. If your shoulders limit your activity or disrupt your sleeping habits, it is time to get a professional opinion. Freelancing your treatment with the Internet and various fitness magazines as your resource is a recipe for disaster and frustration.

Article by Dale Buchberger, DC, PT, CSCS

Because of the vast interaction of tendons and ligaments that maintain the stability and function of the shoulder complex, there are many causes of shoulder pain.

APTS Recipe Box: Kimchi

Kimchi is a very spicy and pungent Korean fermented combination of Napa cabbage and radishes. Other vegetables, like cucumbers, are often used. It was one of Dr. Buchberger's favorite foods while in South Korea in 2015!

Ingredients: 2 heads Napa cabbage; 2 Daikon radishes, peeled and sliced; 5 carrots, peeled and sliced; 1 bunch scallions, sliced; a 2-inch piece of fresh ginger, minced; 16 garlic cloves, chopped; 1/4 cup fish sauce; 1/2 cup chili paste, to taste; 1 1/4 cups sea salt.

Instructions: Wash the cabbage leaves and let them soak overnight in a brine of 1 cup sea salt and 1 gallon water. Once soaked, discard soaking liquid and combine the cabbage with the radishes, carrots, scallions, ginger, garlic, fish sauce, and chili paste. Add the remaining 1/4 cup sea salt to the mixture and combine well. Place the mixture little by little into a fermentation jar, pounding it vigorously to release the juices. Make sure the extracted water covers it entirely. If not, create a brine of 2 tsp of sea salt to 4 cups water and add it to the mixture. Press the mixture and keep it under the brine

by placing a plate or lid weighted down by a rock or jug of water. Cover with a clean towel if needed to keep out fruit flies. Place the fermentation jar in a warm spot in your kitchen and allow the kimchi to ferment for 5-7 days. Check on it from time to time to be sure the brine covers the mixture and remove any mold that may form on the surface. A good way to know if it's ready is simply to taste it and be satisfied with the way it tastes!

Source: <https://paleoleap.com/fermented-food-recipes/#s3>



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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!**

...BECAUSE LIFE SHOULD BE

ACTIVE!

Nutrition 101: Six Resolutions for a Healthy New Year

Have you made your nutrition resolutions? Will you try a month-long cleanse or a vegan diet? Do you want to test out a gluten free diet or just try to lose weight? Maybe learn to fuel while training for your first marathon? Here are a few resolutions that all carry worthwhile nutritional benefits:

- ◆ **Avoid Aspartame and other synthetic sugars.** Aspartame is an artificial sweetener used as a sugar substitute in some foods and drinks. It is known by the brand name NutraSweet. Its negative side effects include Methanol (wood alcohol) which is a dangerous neurotoxin and a known carcinogen. Synthetic sugars contribute to acidity, a condition that leads to inflammation and the creation of fat cells to store the extra acid. So, ironically enough, consuming aspartame regularly could actually make you gain weight.
- ◆ **Avoid refined sugar.** White, refined sugar weakens the immune system by stealing your white blood cell's ability to destroy bacteria. It can also encourage addiction to eating foods devoid of



vitamins, minerals, and fiber.

- ◆ **Eat more greens and veggies.** This boosts your intake of antioxidants, B vitamins, calcium, magnesium, zinc, and omega-3s. Include a daily serving of greens, a daily serving of colored veggies (can include bright-colored berries), and a daily serving of sulfur-producing vegetables, such as cabbage, broccoli, turnips, onions, and garlic.
- ◆ **Eat more fermented foods.** The healthy bacteria in fermented foods like sauerkraut and kimchi can speed up your digestion and assimilation of nutrients. These foods also help to reduce sweet cravings, and, when you do indulge, fermented foods help digest the sugars.
- ◆ **Log your food intake.** Write down what you eat every day and when you eat it. The timing of your food intake affects how you feel and tracking what you eat is a helpful sports performance tool.
- ◆ **Make your own power bars and gels.** The nutritional value of processed energy bars is often the equivalent of candy bars. Homemade bars and gels with nutrient-dense calories are less expensive



and easy to make.

Here is an energy bar recipe to try:

In a blender or food processor blend 8 medjool dates or 10-12 pitted dates (soaking them overnight makes them easier to blend); 4 tbsp agave, maple syrup, or honey; 4 tbsp chia seeds (high in protein, fiber, omega-3s, and calcium); 4 tbsp coconut oil; 2 tbsp lemon zest; 2 tbsp lime zest; 2 tsp dulce (seaweed) flakes, snipped into tiny pieces; and a couple pinches of sea salt.

The mixture can be stiff so you'll have to stop the blender and scrape it several times. Shape your gel into tablespoon-sized balls and store in the refrigerator or freezer to have ready to take with you as you head out the door for your next workout!

Challenge yourself with at least one of these nutritional resolutions. You never know what rewards await you in the new year!

Source: <https://www.active.com/nutrition/articles/6-nutritional-resolutions-for-a-healthy-new-year?page=1>