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APTS Monthly



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Wrist Problem or Neck Problem?

Carpal tunnel syndrome is one of the most common nerve entrapments of the upper extremity. It occurs when the median nerve is compressed in the wrist. However, it is not uncommon for compression of the median nerve to occur in several different sites in the forearm. Over the course of time, the general population has come to accept that hand and wrist pain, numbness, or tingling adds up to carpal tunnel syndrome. In fact, hundreds of people each year have wrist decompression surgery in hopes of relieving these symptoms. The problem with this thought process is that there are many causes of numbness, tingling, and/or pain in the hands and fingers.

Symptoms specific to carpal tunnel syndrome most often occur in the thumb, index finger, middle finger, and half of the ring finger. If you have symptoms in your fingers but your little finger is fine, this may be a sign that you have carpal tunnel syndrome. There are two other peripheral nerves that supply the hand. The ulnar nerve supplies the little finger, while the radial nerve supplies the backside of the thumb, index and middle fingers. Nerve roots from the neck or cervical spine (C6, C7, C8) control a different pattern of sensation in the hand with some overlap. This is what makes the diagnosis of a cervical spine problem versus true carpal tunnel syndrome so challenging. It is also why it is so important to answer questions about your symptoms as specifically as possible. The diagnosis will sway one way or another based on the answers you provide.

Many people who have undergone surgery for carpal tunnel syndrome continue to experience hand, wrist,

and arm pain or tingling. There are some that get temporary relief but the problem recurs frequently with symptoms of higher intensity. Other patients develop symptoms similar to carpal tunnel syndrome following neck injury. They may not have had a wrist injury but still experience pain in the hand.

Since the body is a complex network of joints, nerves, ligaments, muscle, and fascia, it is possible that a symptom from one area of the body may be caused by a problem located in a different part of the body. This approach to healing is more holistic as opposed to the isolationist approach. Recent research demonstrates this to be the case in patients experiencing symptoms of carpal tunnel syndrome. Some studies indicate that it is not uncommon for symptoms of carpal tunnel syndrome may be caused by muscle stiffness in the neck and shoulders resulting in poor posture, tense muscles, nerve compression, and pain traveling down the arm and into the hand.

While we have created a technologically advanced society, these advancements have accelerated the aging process creating chronic postural distortions in even our youngest members. Previous articles in this column were focused on "iPosture" and the "effects of sitting". I would recommend that you read these to complete this articles content. In a given day, it is not uncommon for the majority of the population to go from a car to a desk and computer, back to a car, and finally to a La-Z-Boy.

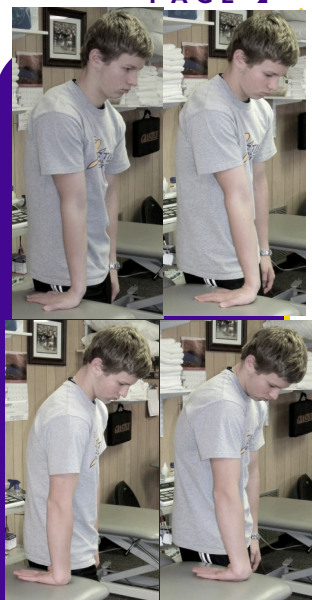
This lack of movement creates a domino effect, and most relevant to carpal tunnel syndrome is the rounding of the shoulders and forward head posture.

When the shoulders round and the head shifts forward, the muscles in the neck and shoulders compress the nerves that course from the neck to the hand. The hand requires a stable base at the neck and shoulders in order to function properly. Weakness caused by inactivity and poor posture ultimately causes the hand and forearm muscles to be overworked. This results in "double crush syndrome" or nerve compression in the neck and shoulders proximally while also causing compression distally in the hand and forearm. This results in tingling, pain or numbness in the hand, wrist and arm.

Before you accept a diagnosis of carpal tunnel syndrome, ask yourself some simple questions: Did anyone examine my neck? Was I given an explanation why my neck was not a cause of my hand symptoms? Should I get a second opinion? Does the diagnosis of carpal tunnel syndrome make sense? Were metabolic causes of carpal tunnel syndrome ruled out, such as diabetes, thyroid disease, and even pregnancy?

Generally speaking, there are many options for the treatment of patients experiencing carpal tunnel-like symptoms. Do your homework and work with healthcare providers that share your goals and expectations. As the patient, it is your right to choose a physical therapist with whom you feel most comfortable discussing all aspects of your care.

Article by Dale Buchberger,
DC, PT, CSCS



Wrist flexor stretch (top), wrist extensor stretch (bottom).

Exercise of the Month: Wrist Stretches

This month's exercise features two stretches for the wrist that will help prevent or relieve pain in the wrist, elbow, and forearm, especially for those people that perform a lot of repetitive motions with their hands. For each of these stretches, you'll want to find a table high enough to rest your hand on comfortably with your elbow straight. If you can't find one high enough, you can stack books on a table until you reach a comfortable height to perform the exercise.

The first stretch is for the

"bottom" (palm) side of the forearm. Stand with your palm on the table, fingers pointing behind you, and the elbow fully extended. You may already feel a stretch in this position. If not, keep your palm on the table and your elbow extended and lean back slightly to feel a stretch in the forearm.

The second stretch is for the "top" side of the forearm. Stand with the back of your hand on the table, fingers once again pointing behind you, and the elbow fully extended. Again,

you may already feel a stretch just by getting into this position. To increase the stretch, keep the back of your hand on the table, elbow extended, and wrist down, and then lean back slightly to feel more of a stretch in the forearm.

Hold each stretch for 30 seconds and perform one stretch three different times a day to keep your wrist, forearm, and elbow loose and less painful.

Muscle Cramping? It Could Be Your Meds

We hear it all the time in our office: "I've been getting leg cramps a lot lately. Why? And what can I do about them?" Muscle cramps can have many possible causes, including dehydration; poor blood circulation in the legs; overexertion of the leg muscles while exercising; insufficient stretching; exercising in the heat; muscle fatigue; pinched nerves in the neck or back; sitting for too long; standing on hard surfaces for too long; wearing uncomfortable shoes or shoes with elevated heels; diabetes; edema in the legs; or a vitamin deficiency, such as magnesium, calcium, and/or potassium. They could even be caused as a side effect of some drugs, including, but not limited to, diuretics

(used to treat high blood pressure, congestive heart failure, and edema); beta blockers (used to treat high blood pressure and abnormal heart rhythm); statins and fibrates (used to treat high cholesterol); beta-2 agonists (used to treat COPD); ACE inhibitors (used to treat high blood pressure and CHF); angiotensin II-receptor blockers (used to treat CAD or heart failure); antipsychotics; Aricept (used to treat Alzheimer's disease); Evista (an osteoporosis treatment); asthma medication; and Tasmar (used to treat Parkinson's disease).

The treatment of muscle cramps not brought on by medications is as simple as staying hydrated, eating foods high in magnesium and

calcium, stretching properly before exercise, taking a bath with Epsom salt, and icing or warming the muscle. In most cases, these self-care measures are sufficient. But if you continue to experience cramping frequently and for no apparent reason, you should talk to your doctor as they could be a sign of a medical problem that requires evaluation and treatment. If your cramps are medication-based, you should consult with your doctor about the possibility of adjusting the dosage of your medication or changing to another type of medication or treatment.

Article by Carolyn Collier, PTA

Muscle cramps can have many possible causes, including medication-related causes and non-medication-related causes.

Downtown Auburn Mile First Place Finisher Leon Atkins



The 39th Annual Downtown Auburn Mile sponsored by Active Physical Therapy Solutions was a success! We had a beautiful summer evening on Friday, August 26 for the race, with a total

head count of 315 finishers. Leon Atkins crossed the finish line first (left) with a time of 4:31.05! Wow, that's fast! Dr. Dale Buchberger participated this year, and crossed the finish line 130th with a time of 7:34.17, beating his goal

of under 9 minutes! A.T. Walley's did a fantastic job with the after party, as well. A huge thank you goes out to Laura Clary and the Auburn YMCA for organizing this event! We'll see you next year!

Carpal Tunnel Syndrome



Carpal tunnel syndrome (CTS) continues to be a label commonly given to anyone experiencing pain, numbness, and/or tingling in his or her hands. While carpal tunnel syndrome is one cause of hand symptoms, it is not the only cause; however, it continues to be the popular cause.

Carpal tunnel syndrome occurs when the median nerve, which runs from the shoulder through the forearm and into the hand, becomes compressed at the wrist. The median nerve controls sensations to the palm side of the thumb, first two fingers and half of the third finger (but not the little finger), as well as small muscles in the hand. We need to remember that just because a patient experiences "median nerve symptoms" doesn't mean he or she has CTS. The median nerve can become entrapped at one of six common places from the shoulder to the wrist.

The carpal tunnel itself is a narrow, rigid passageway of ligaments and bones at the crease of the hand. It houses the median nerve and finger flexor tendons. Sometimes, thickening from irritated tendons or other swelling narrows the tunnel compressing the median nerve. The result may be pain, weakness, or numbness in the hand and wrist, radiating into the fingers or up the arm.

Symptoms usually start gradually, with frequent burning, tingling, itching, or numbness in the palm of the hand and the fingers, especially the thumb and the index and middle fingers. Some patients state that their fingers feel useless and swollen, even though little or no swelling is visible. The symptoms start in one or both hands during the night, since many people sleep in a fetal position with their wrists and fingers flexed. A person with CTS may wake up needing to "shake out" the hand or wrist. As symptoms worsen, tingling occurs during the day. Decreased grip strength makes it difficult to form a fist, grasp small objects, or perform fine movements. In chronic cases, the muscles at the base of the thumb atrophy. Some people are unable to differentiate between hot and cold by touch.

Carpal tunnel syndrome is often the result of a combination of factors that compress the median nerve in the carpal tunnel, rather than a problem with the nerve itself. Contributing factors include trauma or injury to the wrist that cause swelling, such as sprain or fracture; mechanical problems in the wrist joint; work stress; repeated use of vibrating hand tools; fluid retention during pregnancy or menopause; or the development of a cyst or tumor in the canal. In some cases, no structural cause can be identified. In these cases, the cause is entrapment at another site along the path of the median nerve. Symptoms in all five fingers are not usually caused by a problem in the carpal tunnel and are more commonly associated with shoulder instability or thoracic outlet syndrome.

There is little clinical data to prove that repetitive computer work causes CTS. Repeated motions performed in the course of normal work or other daily activities can result in repetitive motion disorders such as bursitis and tendonitis. Women are three times more likely than men to develop CTS, perhaps because the carpal tunnel itself may

be smaller in women than in men. The dominant hand is usually affected first and produces the most severe pain. Carpal tunnel syndrome usually occurs in adults. Patients under the age of 40 are more likely to experience CTS symptoms due to inflammation of the tendon linings and repetitive compression of the nerve itself. Patients over the age of 40 are more likely to develop CTS symptoms from degenerative changes (arthritis) of the wrist joints and/or degenerative thickening of the flexor tendons in the carpal tunnel.

The risk of developing CTS is not confined to people in a single industry or occupation, but is common in assembly line workers - manufacturing, sewing, finishing, cleaning, and meat, poultry, or fish packing. In fact, CTS is three-times more common among assemblers than among data-entry personnel. A 2001 study by the Mayo Clinic found heavy computer use (up to 7 hours a day) did not increase the risk of developing CTS.

The non-surgical treatment of CTS involves manual therapy such as Active Release Techniques (ART) or Instrument Assisted Soft Tissue Mobilization (IASTM) applied along the entire course of the median nerve. Splints may be used at night for symptom relief allowing for uninterrupted sleep. Once the symptoms reduce, the brace should be abandoned as long term use of bracing increases the tightness that contributed to the problem in the first place. Patients over the age of 40 are more likely to require surgical release of the carpal tunnel to decompress the median nerve. Patients under the age of 40 are more likely to recover with physical therapy that includes the above-mentioned manual therapy techniques. If you are experiencing CTS symptoms, you may want to discuss manual therapy treatment as an alternative prior to pharmaceutical or surgical treatment.

Article by Dale Buchberger, DC, PT, CSCS

Just because a patient experiences median nerve symptoms doesn't mean that he or she has carpal tunnel syndrome.

APTS Recipe Box: Crockpot Sugar Detox Dessert Stuffed Apples

September is the perfect time for apple recipes! If you're on a sugar detox, you're allowed green apples in moderation. If you're not on a sugar detox, use whatever kind of apples you may pick from the orchard (or the grocery store). The best part about these dessert apples is that they turn into applesauce if you cook them long enough.

Ingredients: 4 green apples, cored, with bottom still in place; 1/2 cup coconut

cream concentrate or homemade coconut butter, melted; 1/4 cup sunbutter, unsweetened (or other nut butter); 2 tablespoons (or more!) cinnamon; pinch of nutmeg; pinch of salt; 3-4 tbsp unsweetened shredded coconut; 1 c water.

Instructions: Mix together coconut butter, sunbutter, cinnamon, nutmeg, and salt. Place your cored apples (with bottoms still in place) in the crockpot and pour water in the bottom. Use a spoon to scoop the

coconut and sunbutter mixture into each apple all the way to the top. Top off each apple with a bit more cinnamon and shredded coconut. Cook for 2-3 hours on low. The longer you cook it, the softer the apple will be.

These would even be delicious with nuts or dried fruit mixed in. Get creative!

Source: paleomg.com/crockpot-sugar-detox-dessert-stuffed-apples/



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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: Health Benefits of Apples

Other than being an easily portable, grab-and-go snack, here are 10 facts about apples that you might— or might not have—known:

Nutrition. Four grams of fiber and 95 calories per medium-sized apple makes them a filling snack. (Five grams of fiber are found in a large apple.) One medium apple counts as one serving of fruit, too. Apples also contain vitamin C, B-complex vitamins (such as riboflavin, thiamine, and B-6), phytonutrients, calcium, potassium, and phosphorus.

Weight loss. Some researchers believe that the antioxidants and pectin (a type of fiber) in apples plays a role. And since apples are high in fiber, they will help to fill you up without costing too many calories.

Heart health. Antioxidants found in apples helps prevent LDL cholesterol from oxidizing and inhibits inflammation. Apples are associated with a decreased risk of death from coronary artery disease and cardiovascular disease. Some other research suggests that apple eaters have a lower risk of having a thrombotic stroke. After just six months, one study showed that older women who ate apples everyday had 23% less “bad” cholesterol (LDL) and 4% more “good” cholesterol (HDL).

Protect against metabolic syndrome. Metabolic syndrome is a cluster of symptoms that



leads to heart disease and diabetes. Research has found that people who eat apples are less likely to have symptoms of metabolic syndrome, including lower levels of C-reactive protein, which is an inflammatory marker whose presence in the blood suggests an increased risk of heart disease or diabetes. Additionally, one study showed that people who eat 3 servings of apples a week had 7% lower risk of developing type 2 diabetes.

Exercise extender. Eating an apple before working out may boost your exercise endurance. An antioxidant called quercetin, a flavanoid, is found in apples and it aids endurance by making oxygen more available to the lungs. Quercetin can also help to boost and fortify the immune system.

Preventing dementia. A study found that including apples in your daily diet may protect neurons against oxidative stress-induced neurotoxicity and may play an important role in reducing the risk of neurodegenerative disorders such as Alzheimer’s disease.

Protect against cancer. The consumption of flavanol-rich apples could help decrease your risk of pancreatic cancer by 23%. Researchers at Cornell University have identified several compounds called triterpenoids that are found in the peel and have potent anti-growth activities against cancer cells in the colon, liver, and breast. Additionally, the National Cancer Institute has recommended consuming high amounts of fiber to help prevent colorectal cancer.

Neutralize irritable bowel syndrome. Whether you can’t go to the bathroom or you can’t stop, the fiber found in apples can pull water out of your colon to keep things moving along when you’re backed up or absorb excess water to slow things down. The fiber can also help prevent straining too much when going to the bathroom, therefore averting hemorrhoids.

An apple a day keeps the doctor away, but not the dentist. Because apples are fairly acidic, they can be up to four times more damaging to the teeth than carbonated drinks. Snacking on acidic foods throughout the day is most damaging, while eating them at meal times is much safer.

And, most importantly, apple seeds should not be consumed as they contain cyanide, a powerful poison!

Article by Carolyn Collier, PTA