I'm not a bot



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The radial nerve is one of the major nerves of the wrist, and all the way to the tips of your fingers. The radial nerve provides important
information to your brain about the sensations experienced in the upper extremity and also delivers information to the muscles of the upper extremity about when to contract. Injury to the radial nerve can cause abnormal function of the upper extremity about when to contract.
deliver messages to and from the brain. Along the path of the nerve, an electrochemical impulse can travel to deliver messages to and from the central nervous system, consisting of the brain and the spinal cord. The peripheral nerves of the upper extremity
form from branches of nerves coming off of the spinal cord. These branches come together to form a structure called the median plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the brachial plexus which sits between the shoulder and the neck. Branches of the braches of the brachial plexus which sits between the shoulder and the neck. Branches of the braches 
nerve and the ulnar nerve. The radial nerve travels down the arm, past the elbow joint, into the forearm, and across the wrist all the way into the forearm to deliver messages to the muscles and to provide sensation back to the brain. There are two major
functions of the radial nerve. One of these function information from the back of the hand, forearm, and arm. The other major function of the radial nerve is to deliver messages to specific muscles about when to contract. The radial nerve is to deliver messages to specific muscles about when to contract.
provide sensation information to other parts of the upper extremity, but the radial nerve function will often experience symptoms of numbness or tingling in areas such as the back of the hand. The radial nerve provides information to the muscles of the
back of the arm and forearm about when to contract. Specifically, the triceps muscle in the back of the arm and the extensor muscles of the back of the forearm are the major muscle groups that are supplied by the radial nerve. People who have abnormal radial nerve function may experience weakness of these muscles and symptoms such as a wrist
drop. A wrist drop occurs when the muscles in the back of the forearm will not support the wrist, and people will, therefore, hold the wrist in a flexed posture. This symptom is often seen after severe injuries to the radial nerve. Verywell / Gary Ferster There are many types of associated conditions to the radial nerve including lacerations, contusions,
fractures, and more. A nerve laceration can occur when there is a penetrating injury through the skin that severs the nerve. This type of problem can occur when there is a penetrating injury. Nerve
contusions typically occur when there is a blunt force of trauma that causes abnormal function of the nerve. A nerve contusion can occur as a result of a sports injury or a variety of other conditions that cause direct pressure to a nerve. Broken bones of the upper extremity may lead to associated damage to the nerves that travel near the damaged
bone. The most common type of fracture associated with injury to the radial nerve are fractures of the humerus bone and can be injured when there is a fracture of the bone. Most radial nerve injuries associated with fractures will heal spontaneously and do not require surgical
intervention. A Saturday night palsy is the name given to the abnormal function of the radial nerve after sleeping in a position that causes direct pressure against the name Saturday night palsy is given because sometimes this occurs when an individual falls asleep with their arm draped over an armrest on a rigid chair. The name Saturday night palsy is the name saturday night palsy is given because sometimes this occurs
when people are intoxicated and fall asleep in awkward positions in a location other than their bed. Crutch palsy occurs when there is pressure on the radial nerve in the armpit as a result of using crutches improperly. In order to use crutches properly, you should be supporting your body weight through your hands, but many people will place
pressure in their armpit at the top of the crutch, which can cause irritation to the radial nerve in that location. Padding the crutches and using the crutches are irritation to the radial nerve, it is important to determine the location of the injury and the cause of the nerve damage. Since
nerve injuries often cause symptoms at locations other than where the nerve damage is taking place, this can sometimes be a complicated diagnosis. However, once the location of the nerve dysfunction is identified, efforts should be taken to prevent ongoing or further damage to the nerve. This may be as simple as avoiding pressure or padding the
area where the nerve irritation is taking place. In situations where the nerve, it may be necessary to consider surgical intervention to remove pressure on the nerve can be performed in a nonsurgical manner. Most
often, nerve irritation can be relieved with nonsurgical interventions although nerve function may take a long time to recover, and sometimes the effects of more significant nerve damage can be permanent. The radial nerve is one of the major nerves of the upper extremity that supplies information about sensations and delivers messages to the
muscles of the upper extremity. Abnormal function of the radial nerve can occur as a result of the injuries to the nerve damage is the first step in guiding appropriate treatment. Once the location of the nerve damage has been identified, steps can be taken to prevent ongoing or furthering of the damage to
the nerve. Frequently Asked Questions The radial nerve innervates the triceps muscle located on the upper arm's back side. As a result, the radial nerve tells these muscles when they should contract. The upper extremity major peripheral nerves include the radial nerve, median
nerve, and the ulnar nerve. These nerves form together into branches called the brachial plexus, which connects to the spinal cord to receive and deliver information to the brain. Have you ever felt pins and needles in your leg when you sit down in the same place for too long? This strange sensation is a sign of a mild nerve compression. While we are
awake, these compressions are easily resolved, as we can recognize the symptoms and adjust our body position accordingly. While we are asleep, however, we cannot always respond to these compressions, which can cause consequences during waking hours. We will be focusing on nighttime compression of the radial nerve, which may lead to a
condition called radial nerve palsy. What is the radial nerve and what does it do? The radial nerve is one of the three major nerves that sense feeling and controlled by the radial nerve allow you to straighten out your elbow
extend your wrist up as if getting ready to throw a dart, and even make a "thumbs up" sign. How can compression of the radial nerve affect me? Prolonged compression of the radial nerve affect
compression most often happens while sleeping with your head resting on your outstretched arm. If you sleep in a position that causes radial nerve compression, you may wake up experience "wrist drop". With wrist drop
your wrist becomes limp, and is unable to extend up. This can cause significant functional problems, making it difficult to lift even small items in your hand. Think of a nerve like a highway and nerve signals like cars. A healthy nerve (the highway) will allow nerve signals (the cars) to flow freely, allowing you to control your muscles. A nerve
compression is like traffic on that highway, meaning that nerve signals won't get to reach the muscles, causing weakness and a loss of muscle control. The radial nerve pain usually occurs when your palm is pressed against something and your wrist is bent back. It's typically a sharp
radiating, or burning pain. This usually occurs in the back of the hand, around the thumb, and in the middle and index fingers. Along its path to your fingertips, the radial nerve sends messages to muscles in your arm and hand to trigger movement. It receives
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radial tunnel syndrome, and requires surgical releaseCompressed by a growth, such as a tumor, that needs to be removedTorn and needs repair or reconstruction. This repair may involve a nerve graft, where a new nerve is added to the damaged nerve. It could also involve a nerve transfer, where another nerve is rerouted to the injured nerve. To
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that arm. Keep your elbow straight or bent less than 90 degrees. If on your side, put a pillow in front of you to support the arm and keep your wrist and fingers flat. Try sleeping on your back with your arms at your sides, possibly supported by pillows. Also, ask your healthcare provider if wearing a wrist or elbow splint at night might help alleviate your
pain. What is a radial nerve injury? SymptomsCausesDiagnosis TreatmentSummaryThe radial nerve injury can cause pain, weakness, and loss of function in the wrist, hand, and fingers. A common
term for this is radial nerve palsy. In this article, we will explain what the radial nerve is and why it is prone to injury. We will also look at the common causes, symptoms, and treatments for radial nerve in the upper arm. This nerve
controls the triceps muscle. It also helps extend the wrist and fingers and provides sensation in part of the hand. The radial nerve is close to the bone in the upper arm, so it is vulnerable to injury, especially if the arm breaks. There are varying degrees of nerve damage: Neurapraxia, a first-degree injury, is the least serious classification. Axonotmesis
refers to a second-, third-, or fourth-degree injury. Neurotmesis, a fifth-degree injury, is the most severe form of nerve damage. Injury to the radial nerve injury and resulting palsy include: painweakness in the wrist, hand, or fingersloss of function in the
PinterestSports injuries can result in radial nerve damage. The most common cause of radial nerve damage is a broken humerus, which is the bone that runs from a gunshot. Other causes of radial nerve injury include: a direct blow, such as
report any sensation of stretching, tingling, or pain. In some cases, the doctor may do other tests to determine the exact location and severity of the injury. These include: A nerve injury can slow or stop the transmission of electrical signals in the body. Measuring the speed and degree of these signals in the nerve can help with diagnosis. There are two
types of tests a doctor may use: electromyography and a nerve conduction study. Medical imaging techniques, such as X-rays, ultrasounds, and MRIs can help locate and assess the severity of the nerve damage. Share on PinterestWearing a sling will help protect the arm as it heals. The treatment options depend on the cause and severity of the
swelling, over-the-counter nonsteroidal anti-inflammatory drugs such as ibuprofen can help.Radial nerve palsy after a broken arm is very common. Up to 95 percent of people will make a full recovery without surgery. The doctor may recommend wearing a sling to keep the limb stable while it heals. If the break was severe, or if the problem does not
get better with rest and moderate treatment, a person may need surgery. Procedures a doctor may recommend include: This operation repairs the nerve damage is too severe, they may employ nerve grafting or transfers. These procedures involve using nerves from other
parts of the body to repair the damaged nerve. This operation involves replacing a nonworking tendon with a working one from elsewhere in the body. It is a common treatment for nerve injury. A person will usually wear a splint or cast for 1 or 2 months while the tendon heals. They will
also need physical therapy to help them recover. It can take up to 1 year to know if the operation was successful. If the damage is so extensive that a doctor cannot reconstruct the nerve, they may recommend a functional muscle transfer instead. This is a relatively new procedure to replace a nonworking muscle with a "donor muscle" from elsewhere
in the body.Radial nerve injuries can lead to radial nerve palsy, which can cause pain and a loss of function in the arm, wrist, hands, and fingers. The most common cause of radial nerve injury is a broken arm.Doctors usually recommend conservative methods, such as rest, but a person may also require surgery.Neurology / NeurosciencePain /
AnestheticsMedical News Today has strict sourcing guidelines and relies on peer-reviewed studies, academic research institutions, and medical journals and associations. We only use quality, credible sources to ensure content by reading our editorial
policy.Bumbasirevic, M., Palibrk, T., Lesic, A., & Atkinson, H. D. E. (2016, August 9). Radial nerve palsy. EFORT Open Reviews, 1(8), 286-294 testing. (2017, June) T. J., Bilal, M., Vetter, M., Iwanaga, J., Oskouian, R. J., & Tubbs, R. S. (2018, February 16). Injury of the radial nerve in the arm: A review. Cureus, 10(2) K. L., Martineau, P., & Allan, C.
(2015, January). Radial nerve injuries. The Journal of Hand Surgery, 40(1), 166-172 14)00626-1/fulltextNeal, S. L., & Fields, K. B. (2010, January 15). Peripheral nerve entrapment and injury in the upper extremity. American Family Physician, 81(2), 147-155 nerve and tendon transfers - overview. (n.d.) nerve palsy. (n.d.) transfer surgery. (n.d.) does a
radiologist do? (2017, April 1) Share — copy and redistribute the material in any medium or format for any purpose, even commercially. The licensor cannot revoke these freedoms as long as you follow the license terms. Attribution — You must give
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license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material. The radial nerve pain usually occurs when your palm is pressed against something and your wrist
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trigger movement. It receives sensory messages to send back to the spinal cord and brain allowing you to feel sensations. Depending on where the nerve damage occurs, sensory and motor (movement) symptoms can vary. This article discusses the different locations of radial nerve injuries and the symptoms you may have with each. It also covers how
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subspecialized in hand operations. If your radial nerve is damaged due to a fracture, you may be treated by an orthopedic surgeon (bone specialist). As part of your treatment, you may also see a physical therapist. Full recovery after radial tunnel release is expected to take between about six and eight months for most people. However, if the nerve has
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Unique IDD011826 RDF Unique Identifier Annotationdis = RADIAL NEUROPATHY; neopl = RADIAL NEUROPATHY (IM) + PERIPHERAL NERVE NEOPLASMS (IM) + histol type of neopl (IM) Scope NoteA major nerve of the upper extremity. In humans the fibers of the radial nerve originate in the lower cervical and upper thoracic spinal cord (usually
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the upper extremity. In humans the fibers of the radial nerve originate in the lower cervical and upper thoracic spinal cord (usually C5 to T1), travel via the posterior cord of the brachial plexus, and supply motor innervation to extensor muscles of the arm and cutaneous sensory fibers to extensor regions of the arm and hand. Terms Radial Nerve
Preferred Term Term UI T034898 Date01/01/1999 LexicalTag NON ThesaurusID NLM (1966) The radial nerve pain usually occurs when your palm is pressed against something and your wrist is bent back. It's typically a sharp, radiating, or burning pain. This usually occurs in the
back of the hand, around the thumb, and in the middle and index fingers. Often, the pain is accompanied by the inability to fully straighten your arm and hand to trigger movement. It receives sensory messages to send back to the spinal cord and brain
allowing you to feel sensations. Depending on where the nerve damage occurs, sensory and motor (movement) symptoms you may have with each. It also covers how these injuries usually happen, what the prognosis is, and how they are treated. Verywell,
something away. That's because the radial nerve is responsible for controlling the triceps muscles situated at the back of the arm. It may also be impossible to bend your wrist back, resulting in "wrist drop." Finger extensor muscles may also be weakened, making it difficult to fully open your hand. You may experience tingling and numbness from the
back of the arm to the hand. This can also be felt along the side and back of the thumb. From the axilla, the radial nerve travels down the arm and wraps around the humerus (the large bone between the shoulder and elbow). It's situated in a channel known as the spiral groove. The nerve can become compressed within this groove. Symptoms of a
spinal groove injury include the following: You have trouble bending your wrist back and straightening your fingers. You may notice weakening of the brachioradialis muscle in the spiral groove may happen with a humerus fracture in
the upper arm. It can also happen with a condition known as "Saturday night palsy." This is caused by falling asleep with an arm draped over the back of a chair. Just before the elbow, a section of the radial nerve branches off to the posterior interosseous nerve. This is responsible for straightening muscles below the elbow. Unlike other branches off to
the radial nerve, the posterior interosseous nerve has no sensory receptors and is purely responsible for muscle movement. As a result, injuries are characterized by muscle weakness but no abnormal sensation. Symptoms include the following: The inability to extend your fingers is often a tell-tale sign. An injury to this nerve can be very painful.
especially when the fingers are extended. The radial nerve passes the elbow and continues down to the back of the hand, where it serves a purely sensory function. At that point, the nerve is most susceptible to injury at the wrist. This could happen when the wrists are bound or handcuffs are worn too tightly. Symptoms include the following: The
pattern of numbness is usually worst from the wrist to the back of the thumb. It may also be accompanied by a "pins and needles" sensation or shooting pains up or down the back of the hand. When a radial nerve injury is diagnosed, treatment is usually conservative and includes: Wrist splints, or braces, which provide support to stabilize your wrists
and maintain function Pain management with nonsteroidal anti-inflammatory drugs (NSAIDs), like aspirin or Advil (ibuprofen) Physical therapy to help restore movement through exercises A nerve block when pain is severe. This uses an injection of local anesthetic near the nerve to lessen pain. Recovery time can range from a couple of weeks to six
months. If your pain and disability don't improve, your healthcare provider may order tests. These can include nerve conduction studies, which test for nerve damage, or electromyography (EMG), which looks at your muscles' electrical activity. You may need surgery if the nerve is: Entrapped, such as in radial tunnel syndrome, and requires surgical
releaseCompressed by a growth, such as a tumor, that needs to be removedTorn and needs repair or reconstruction. This repair may involve a nerve transfer, where another nerve is added to the damaged nerve. It could also involve a nerve transfer, where a new nerve is added to the damaged nerve. To treat a radial nerve injury, your doctor may
suggest a splint or over-the-counter pain medicine. In some cases, you may need physical therapy or a nerve block, an injection to lessen the pain. Surgery may be necessary if the nerve is entrapped, torn, or compressed by a growth. Radial nerve injuries can occur in different parts of the arm, causing different symptoms based on the location. They
can occur in areas from near the armpit (axilla) to around the wrist (superficial radial neuropathy). An injury near the armpit can cause arm weakness, particularly in the back of your arm. Injuries in the spinal groove can make it difficult to bend your wrist back or open your hand. Injuries to the posterior interosseous nerve can make it impossible to
extend your fingers. And an injury at the wrist can cause numbness through the thumb or pins-and-needles sensations in the hand. Treatment for radial nerve injuries can take a couple of weeks or up to six months to heal. Frequently Asked Questions
by an orthopedic surgeon (bone specialist). As part of your treatment, you may also see a physical therapist. Full recovery after radial tunnel release is expected to take between about six and eight months for most people. However, if the nerve has been extensively damaged before surgery, it can take longer than that. Yes, it is possible—but rare—for
injections to injure the radial nerve. Radial nerve damage has been reported following numerous procedures, including vein punctures and intramuscular injections. To avoid triggering your radial nerve pain when you're trying to sleep: Don't lie on the injured arm or sleep with your head on that arm. Keep your elbow straight or bent less than 90
degrees. If on your side, put a pillow in front of you to support the arm and keep your wrist and fingers flat. Try sleeping on your back with your arms at your sides, possibly supported by pillows. Also, ask your healthcare provider if wearing a wrist or elbow splint at night might help alleviate your pain. We include products we think are useful for our
readers. If you buy through links on this page, we may earn a small commission. Here's our processCausesSymptomsDiagnosisTreatmentPreventionRecovery time and outlookRadial nerve can lead to radial neuropathy, also called radial nerve palsy.
 The radial nerve runs down the underside of your arm and controls the movement of the triceps muscle, which is located at the back of the upper arm. The radial injury often causes numbness and tingling or burning pain. It can also be
painless. The condition may cause weakness or difficulty moving your wrist, hand, or fingers. In many cases, this condition will improve if the underlying cause is treated. Injury to the radial nerve has a variety of possible causes. These include: fracturing your humerus, a bone in the upper armsleeping with your upper arm in an awkward
position pressure from leaning your arm over the back of a chairusing crutches improperly falling on or receiving a blow to your armlong-term constriction of your wristThe most common causes of radial nerve injury are breaking your arm, overusing your arm, and sports and work accidents. Depending on the level of injury, you may experience a
complete laceration of the radial nerve. This occurs when the nerve is severed. It can cause symptoms that are similar to more minor injuries. A nerve laceration usually requires surgical repair. Certain actions, when repeated often enough, can lead to radial nerve damage. Movements that involve both grasping and swinging movements, such as
swinging a hammer, can lead to nerve damage over time. As the radial nerve moves back and forth over the bones of your wrist and forearm, there's potential for the nerve damage. Over time, the lead toxin can cause damage to the nervous
system as a whole. Certain health conditions that affect your whole body may damage one nerve. Kidney disease and diabetes may cause inflammation, fluid retention, and other symptoms that can, in turn, lead to nerve compression. This could affect the radial nerve or other nerves in your body. A radial nerve injury usually causes symptoms in the
back of your hand, near your thumb, and in your index and middle fingers. Symptoms may include a sharp or burning pain, as well as unusual sensations in your thumb and fingers. It's common to experience numbness, tingling, and trouble straightening your arm. You may also find that you can't extend or straighten your wrist and fingers. This is
called "wrist drop" or "finger drop," and it doesn't occur in all cases. If you think you've injured your radial nerve, your doctor will also do a physical exam. They will look at your affected arm, hand, and wrist, and compare it
to your healthy arm, hand, and wrist. They may ask you to extend and rotate your arm to see if the injury affects your range of motion. Your doctor may order tests to rule out other causes of your symptoms. For example, you may have
blood tests to check your blood sugar and vitamin levels, as well as your kidney and thyroid function. These tests check for signs of other conditions associated with nerve damage, such as diabetes, vitamin deficiencies, or diseases of the kidney and liver. A CT scan or MRI can also look for diseases within your head, neck, or shoulders that may result
in pressure on your radial nerve. Your doctor may also consider electromyography (EMG) and nerve conduction tests. An EMG measures the electrical activity in your nerves. These tests can help determine if you are experiencing a problem in your nerve or in
your muscle. They may also show whether the radial nerve is damaged. In very rare cases, your doctor may request a nerve biopsy. This involves taking a small sample of the nerve and examining it to determine what is causing the damage. The goal of treatment for radial nerve injury is to relieve symptoms while maintaining movement of your wrist
and hand. The best treatment depends on the underlying cause. In some cases, symptoms go away slowly on their own without intervention. Your doctor may prescribe medication or other therapies to help manage your symptoms. There are several different first-line treatment options available. These include: Some people choose transcutaneous
electrical nerve stimulation (TENS) to treat nerve damage. This therapy involves placing several adhesive electrodes on the skin near the affected area. The electrodes deliver a gentle electric current at varying speeds. Physical therapy to build and maintain muscle strength can help to heal and improve nerve function. Massage treatment is another
option. Massage can break up scar tissue and make the radial nerve more responsive. Analgesic or anti-inflammatory medication can help relieve pain, while still
allowing movement. It's also common to use a brace or splint to immobilize the nerve. This might not sound like the most convenient option, but it may prevent you from reinjuring the nerve while it's healing. Shop for braces and splintsLess traditional treatment methods, such as acupuncture and chiropractic adjustments, are also an option. Keep in
mind that evidence about whether some of these treatments work is mixed. Most people with a radial nerve is not torn or lacerated. But some cases ultimately require surgery. If your radial nerve is entrapped, surgery can relieve pressure on the nerve. If there is a mass, such as
a benign tumor, on your radial nerve, you may need surgery to remove it. The goal of surgery is to repair any damage to the nerve will not heal, tendon transfers can be performed to restore function to the extremity. After surgery, you will need to wear a brace or splint to allow the injury or tendon
transfer to heal. Your doctor will refer you to a physical therapist for rehabilitation to restore range of motion and strength. You can prevent most radial nerve injuries if you avoid putting prolonged pressure on your upper arm. Avoid behaviors that can lead to nerve damage, such as repetitive motions or remaining in cramped positions while sitting or
sleeping. If you work in an occupation that requires repetitive motions, take steps to protect yourself by taking breaks and switching between tasks that require different movements. The long-term prognosis for a radial nerve injury varies greatly depending on the cause and severity of the injury. In most cases, a full recovery is possible. First-line
treatment methods will generally heal most radial nerve injuries within 12 weeks. If your nerve damage is the result of an underlying medical condition, such as diabetes or alcoholism, talk to your doctor about how to manage your symptoms. People who are younger when the injury occurs and people who have additional nerve damage injuries tend
to recover the most quickly. If surgery is needed, a full recovery can take from six to eight months. Healthline has strict sourcing guidelines and relies on peer-reviewed studies, academic research institutions, and medical journals and associations. We only use quality, credible sources to ensure content accuracy and integrity. You can learn more
about how we ensure our content is accurate and current by reading our editorial policy. Mayo Clinic Staff. (2014, December 2), Peripheral neuropathy tunnel syndrome. (2015, January 29) J. K., & Konofaos, P. (2011, February). Radial nerve injuries and outcomes: our experience [Abstract]. Plastic Reconstructive Surgery, 127(2), 739-51 A.,
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