

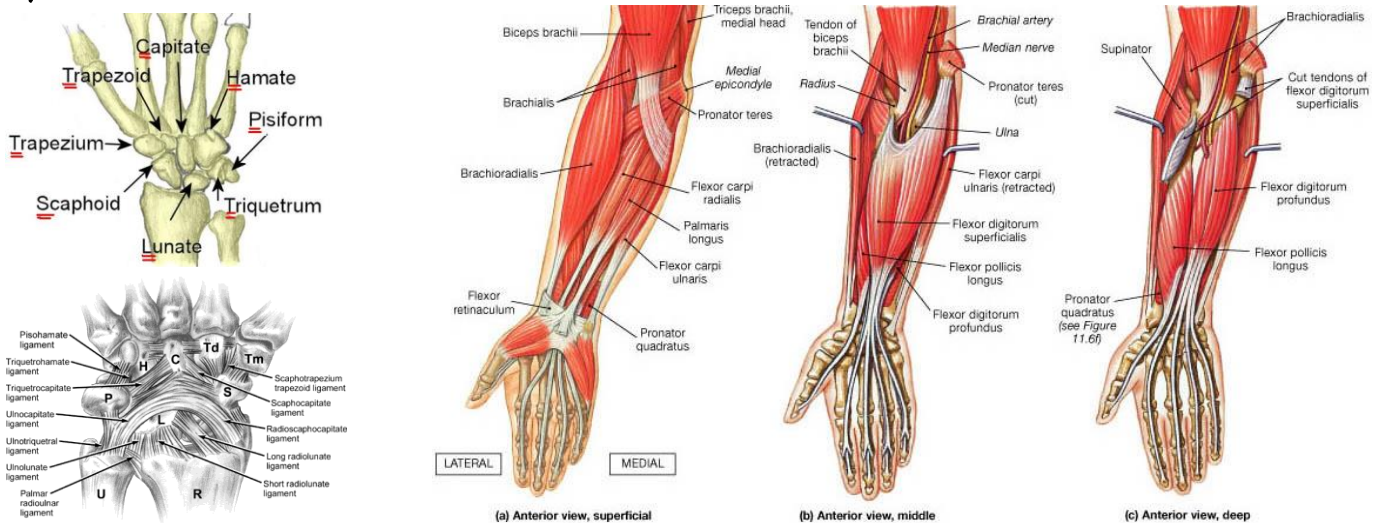
Wrist Pain? It May Not Be What You Thought!

By: Saurin Gandhi October 30, 2015

Introduction

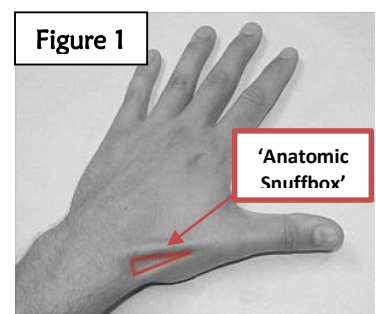
Due to its location and mechanism of action, the wrist joint is extremely vulnerable to injury, making it one of the most commonly injured joints in the body. Most patients present to primary care or sports medicine clinics although the more serious fractures or breaks should be taken to the emergency room. Depending on the context of the injury and the mechanism of injury, the wrist can be broken, fractured, or sprained. In addition, the muscles and soft tissue surrounding the joint can be irritated and/or inflamed. In order to classify injuries to the wrist, we subdivide them into acute (<2 weeks), subacute (2 weeks – 3 months), or chronic (>3 months). In this article we will go over the anatomy, diagnoses, and management of the more common wrist injuries. Other causes of wrist pain includes arthritis, immune diseases, bursitis, and gout.

Anatomy

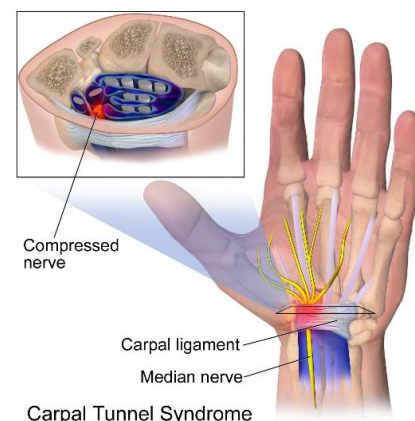
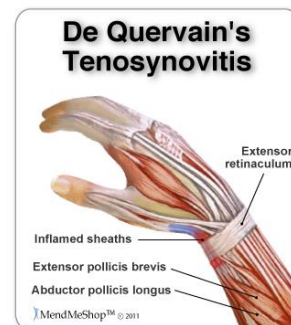


Different Types of Common Wrist Injuries

- Stress Fractures:** When repetitive activities overcomes the strength of bones, small fractures may occur causing pain with activity. This requires evaluation by a physician, imaging (including possible bone scan), casting, surgery, rest, and evaluation in regards to nutrition/diet. Rest the targeted joint from the repetitive activity until healed.
- Scaphoid (Wrist Bone) Fracture:** Scaphoid fractures are common following wrist trauma, often when a person falls on an outstretched hand. This is often misdiagnosed as just a wrist sprain. Scaphoid fractures are associated with a high risk of what is called avascular necrosis, which is when the blood supply to the bone is interrupted and the bone components die. These individuals may have pain moving the wrist with tenderness at the base of where the thumb meets the wrist. Examination often reveals tenderness in the region known as the 'anatomic snuffbox' (**Figure 1**). This injury needs to be evaluated by a physician and will require imaging (including possible CT scan) and may require surgery/casting. Returning to activity is not recommended until the wrist is immobilized and heals.
- Tendonitis:** Caused by repetitive motions, an individual may have tenderness over a tendon with swelling and inflammation. Treatment usually includes rest, ice, refraining from the repetitive motion, and return to activity is based on how the patient can tolerate the pain.



- **De Quervain's Tenosynovitis:** This is a tendonitis or tenosynovitis of the abductor pollicis longus and extensor pollicis brevis tendons at the styloid process of the radius. This is caused usually by repetitive motions/overuse. This can cause discomfort and pain on the radial side of the wrist with pinch grasping, or turning the hand towards the body while keeping the arm straight (Finkelstein's test).
- **Wrist Ligament Tear:** This injury can occur when there is twisting and pressure on the wrist. This causes pain with gripping and rotating the wrist. This injury requires evaluation by a physician, imaging (including possible MRI). Returning to activity is not recommended and prognosis is good if early treatment is initiated.
- **Ulnar Collateral Ligament Tear "Gamekeeper's/Skier's Thumb":** A torn ulnar collateral ligament causes instability of the metacarpal-phalangeal joint of the thumb with pain and weakness of the pincher grasp. This injury requires evaluation by a physician, imaging, and may need surgery/casting. With cast protection, withholding from activity is not required.
- **Carpal Tunnel Syndrome:** Carpal Tunnel Syndrome is a diagnosis made in people who have chronic wrist pain. It is caused by compression of the median nerve at the wrist. The median nerve runs from the forearm to the palm of the hand and controls some sensation and intrinsic muscles to help the fingers move. Thickening from irritated ligaments may cause compression of the median nerve causing burning, tingling, numbness, weakness, and pain gradually in the wrist and fingers, sometimes radiating up the arm. The typical presentation is a secretary typing all day every day. This condition should be evaluated by a physician and certain tests should be performed to confirm the diagnosis. Management and treatment may include conservative measures at first with anti-inflammatories, stretches, and alternative therapies. Surgery however is most commonly performed and is usually reserved for refractory Carpal Tunnel Syndrome lasting longer than 6 months.
- **Klenbock's Disease of the Lunate:** This disease involves the progressive collapse of the lunate through an unclear mechanism. Most common symptoms are wrist pain and mild swelling that progresses to persistent pain with crepitus, stiffness, and decreased range of motion. This causes difficulty with grasping. Diagnosis is made via imaging and may show increased bone density in initial stages but bony collapse in later stages. This condition should be properly evaluated early and referred to a surgeon.
- **Intersection Syndrome:** This is a condition that affects the dorsum of the forearm proximal to the wrist joint. Repetitive wrist extension may cause the associated pain, crepitus, redness, warmth at the sight. Often confused with De Quervain's tenosynovitis, the location helps to differentiate the conditions. De Quervain's is located more to the radial side while intersection syndrome occurs more on the dorsum of the forearm. Treatment includes rest, refraining from offending activities, bracing, and antiinflammatories. Injections of glucocorticoids may be beneficial.



Closing Remarks:

Wrist complaints can be multifactorial but usually the management is the same. They should be evaluated by a physician and proper imaging should be obtained to further classify the type of injury. History is an important aspect of diagnosis and the mechanism can lead to the proper diagnosis. Not all wrist pain is carpal tunnel and be wary that physician evaluation is essential!

Saurin Gandhi, DO Candidate
Creator of SGHealthyLiving

References:

- UpToDate
 - Evaluation of the adult with acute wrist pain
 - http://www.uptodate.com.mwu.idm.oclc.org/contents/evaluation-of-the-adult-with-acute-wrist-pain?source=search_result&search=wrist+pain&selectedTitle=2~43
 - Evaluation of the adult with subacute or chronic wrist pain
 - http://www.uptodate.com.mwu.idm.oclc.org/contents/evaluation-of-the-adult-with-subacute-or-chronic-wrist-pain?source=search_result&search=wrist+pain&selectedTitle=1~43c
- National Institute of Neurological Disorders and Stroke:
 - http://www.ninds.nih.gov/disorders/carpal_tunnel/detail_carpal_tunnel.htm
- Images
 - http://www.aidmycarpaltunnel.com/_img/De-Quervain's-Tenosynovitis.jpg
 - https://upload.wikimedia.org/wikipedia/commons/thumb/3/38/Carpal_Tunnel_Syndrome.png/330px-Carpal_Tunnel_Syndrome.png
 - http://4.bp.blogspot.com/-0AclLVnmLrQ/TilMLNVOell/AAAAAAAAACnU/LYOYvQAFsMw/s1600/carpal_bones.jpg
 - <https://s-media-cache-ak0.pinimg.com/originals/22/05/65/2205657fd30d0a6ad53ecb4aaa56140a.jpg>
 - <http://antranik.org/wp-content/uploads/2014/04/anterior-compartment-of-the-forearm.jpg>