

Athletic Injuries^{of the} Wrist and Hand

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The human hand consists of 29 bones, 29 joints, 123 ligaments, 34 muscles and 48 nerves. Combine this fact with the desert lifestyle, synonymous with golf and tennis, and it is easy to understand why approximately 25 percent of all athletic injuries involve the wrist and hand. While fractures of the wrist and hand bones are relatively common, they make up a smaller percentage of "athletic injuries." More ubiquitous are problems we attribute to overuse. These problems typically involve tendons, the structures that attach muscle to bone; and, to a lesser degree, ligaments, the framework that connects bone to bone.

Inflammation of a tendon (tendinitis) and stretching or partial tearing of a ligament (sprain) can be quite painful and debilitating, leading to time away from the golf course or tennis court, thus impacting the quality of life. The good news is that the majority of these problems are amenable to minimally invasive treatment regimens, hence limiting athletic downtime. The key is recognizing the symptoms of some of these more common maladies so as to intervene in a timely manner and restore function as soon as possible.

DeQuervain's Tenosynovitis

DeQuervain's syndrome, or disease, is the most common tendon problem of the wrist in athletes. Patients present with pain over the thumb side of the wrist, usually one to two inches above the base of the thumb. Pain with motion of the thumb and/or wrist is typical. Swelling in this area is not uncommon, and in some cases, painful catching or popping in this area may be present. The pain results from two tendons rubbing against a tunnel that usually acts as a frictionless stabilizer.

Flexor Tenosynovitis

More commonly known as "trigger finger," this tendon problem usually results in one or more fingers painfully catching, or triggering, with flexion and extension. Swelling in the involved finger(s) is typical, and a painful palpable nodule in the palmar flexion crease is considered diagnostic. Like DeQuervain's syndrome, the culprit is a size disproportion between the tendon and its respective tunnel.

Intersection Syndrome

Common in racquet sports, intersection syndrome usually develops over the back of the wrist, about three to four inches before the wrist joint. It is attributable to the forceful, repetitive wrist flexion and extension that sports such as tennis require. It is these same movements that will produce pain. People will often feel a crunching or what is described as a squeaking sensation in this area. Impingement of two tendons at their intersection is thought to be the causative factor.

Extensor Carpi Ulnaris (ECU) Tenosynovitis

This is the second most common sports-related injury of the wrist. Pain with this

particular problem is localized to the small-finger side of the wrist. The pain is often exacerbated by extending and moving the wrist in the direction of the small finger. Pain over the ulna head, the bump on the left side of the wrist, is typical. Inflammation in the tunnel, where the tendon is stabilized over bone, is the source of the pain.

TFCC Injuries

The triangular fibrocartilage complex (TFCC) is made up of several structures in the wrist, designed primarily to stabilize the wrist while it rotates from palm up to palm down or vice versa. A common mechanism of injury is a "fat" golf shot. The pain is again located over the small-finger side of the wrist. Pain with rotation of the wrist and/or with moving the wrist in the direction of the small finger is common. This particular ligament is prone to wear and tear over time and

The hamate is one of eight carpal bones in the wrist and is unique in that it has a prominence, known as the hook or hamulus, that rises from the body of the bone. This hook is located at the base of the palm on the small-finger side of the hand and coincides with the butt of a golf club or tennis racquet when gripped. This predisposes the hook to fracture with a forceful swing of the club or racquet. Patients may feel a pop or exquisite pain in the area of the hook with the initial insult. Subsequent activity on the course or court often produces recurrent episodes of pain and limitation. Delayed diagnosis and treatment are common, averaging eight months from the initial injury, as individuals attribute the pain to a sprain or muscle pull.

Treatment

There is a popular misconception that as we age, aches and pains are to be

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this is predisposed to a sprain with an acute injury.

Carpal Tunnel Syndrome

Although not typically considered a sports injury, the pervasive nature of carpal tunnel syndrome warrants a brief discussion. Classically, patients experience numbness, tingling and/or pain in one or both hands. Pain is often worse at night and will frequently disrupt sleep. Positional symptoms are also common and may occur with activities such as driving, holding a book or newspaper, and talking on the phone. The source of this problem is a compressed or "squeezed" nerve in the carpal tunnel located in the wrist. Incidentally, the most common cause of this problem is inflammation of the tendons in the tunnel, thus increasing the pressure on the nerve.

Hamate Fractures

Fractures of the wrist and hand with contact sports are commonplace. However, one particular fracture of the wrist is worthy of discussion given the significance of golf and tennis here in the desert.

expected, and when they occur, tolerated. While it is true that overuse injuries are more prevalent as we age, aging, in and of itself, is not the cause nor the diagnosis. Many times, individuals will not seek medical attention for an overuse injury because they fear the treatment. Concerns over lengthy and perhaps painful treatments, coupled with the fear that they may have to give up the activities they enjoy, impede early diagnosis, treatment and restoration of full function. However, the majority of the conditions we discussed here can be treated with simple modalities. These include rest, modification, therapy and anti-inflammatories — oral, topical and injectable. In cases that are not amenable to these conservative therapies, a minimally invasive surgical procedure may be recommended. These procedures are typically done in an outpatient surgical center, rarely requiring general anesthesia. Comprehensive follow-up ensures a speedy recovery and an optimal outcome, guaranteeing a quick return to the golf course or the tennis court. ■