

Chronic or Overuse Soft Tissue Injuries

Because of the repetitive nature of many hand movements, as well as the excessive use of the hands in many sport and occupational activities, chronic inflammatory conditions of the wrist, hand, and fingers are common. These include ganglion cysts, tendinitis, and tenosynovitis. In addition, complications from unrecognized or untreated acute injuries can result in chronic and potentially disfiguring conditions such as contractures.

▶ Wrist Ganglion

A wrist ganglion, or synovial cyst, is characterized by herniation of synovial fluid through the joint capsule or synovial sheath of a tendon. Minor sprains and strains often precipitate a wrist ganglion and are thought to weaken the capsule or synovial sheath, allowing fluid to escape and accumulate. Signs and symptoms include an observable and palpable localized mass over the wrist (figure 9.15). The mass may or may not be painful and may or may not restrict ROM or impede function. Symptoms may be more related to the location of the cyst and the motions it may restrict.

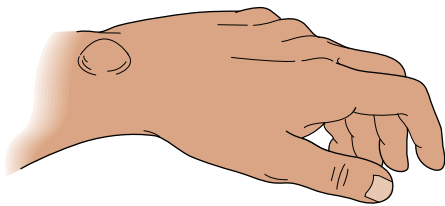


Figure 9.15 Wrist ganglion.

▶ Tendinitis and Tenosynovitis

Inflammation of the tendon or its surrounding synovial sheath is common in physically active people. Overuse or repetitive motion, direct trauma, and continual use following tendon injury are all common mechanisms of tendinitis and tenosynovitis. Signs and symptoms include point tenderness over the involved tendon, swelling, palpable crepitus,

pain with active and resistive motion, and pain with passive stretching of the tendon.

Bony Pathology

Fractures and dislocations of the wrist and hand are among the most common injuries in sport. The use of the hands for reaching, blocking, catching, and grabbing increases their vulnerability to injury during sport activities.

Traumatic Fractures

Traumatic fractures of the wrist and hand most often occur due to axial loading forces or falls on an outstretched hand. Other mechanisms include compression, torsion, and repetitive trauma.

▶ Distal Radioulnar Fractures

Fracture of the distal radius and ulna is typically caused by a fall on an outstretched hand with the wrist flexed or extended. Signs and symptoms include immediate wrist pain, rapid swelling, tenderness, and deformity. Loss of wrist and hand function may result both from an unwillingness to move the extremity because of pain and from restrictions caused by the displacement.

▶ Bennett's Fracture

A Bennett's fracture (figure 9.16), involving the base of the first metacarpal bone



Figure 9.16 Bennett's fracture with metacarpal displacement.