

**“It’s All About the Climb”  
 and Rock Climbing Injuries**

Miley Cyrus put it correctly in her lyrics “The Climb,” “Ain’t about how fast I get there, it’s all about the climb.” This is the mentality of rock climbers, now spreading across the country to indoor climbing gyms. It wasn’t until recently when I had employed a rock climber, that I saw the intense addictive side to the individuals of this sport. Climbers push their bodies to the limit and don’t always listen to their bodies warning them of potential injuries. This can cause overuse problems and musculoskeletal disorders of many kinds because participants just don’t know when to rest their bodies. This article will address common injuries associated with this fun and challenging sport that is a test of mental toughness, physical strength, muscular and cardiovascular endurance, flexibility, and balance that uses almost every muscle group in the body.

Rock climbing with its repetitive high-torque movements during the ascent of a rock face or wall, often in steep overhanging positions, is associated with various upper limb injuries. Studies show that 75% of elite and recreational sport climbers will suffer upper extremity injuries. Overuse injuries are also much more prevalent than injuries occurring from a fall. The most common injuries involve the hand, fingers and wrist (approximately 60%), the other 40% will be equally divided between the elbow and the shoulder.

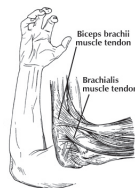


Injuries can occur due to various reasons. One article stated that the #1 reason for developing an overuse injury is improper warm up and cool down. Wow, this sounds familiar! This applies to many other activities and sports as well in order to reduce the risk of injuries. Other reasons may be inexperienced or undertrained climbers pulling on small pockets, dynos (jumping to a one or two hand hold grip with full body hanging unsupported), pushing the body too much without enough rest, etc. Some researchers concluded that injury risk seems more closely tied to how long a person has been climbing as opposed to experience levels or degree of difficulty of climbs performed. Others state the risks involved with climbing increase in proportion to the skill-level of the climber: the higher the skill-level, the more hours are required for training and on more difficult routes.

The following injuries have been described by rock climbers: medial epicondylitis, brachialis or biceps brachii tendonitis, ulnar collateral ligament sprain of the elbow, carpal tunnel syndrome, digital flexor tendon pulley sheath tears, interphalangeal

joint effusions, fixed flexion deformities of the IP joints, and collateral ligament tears of the IP joints. Most injuries will be tendonopathies secondary to strains, microtrauma or flexor retinacular irritation. Other problems reported by climbers include spinal syndromes, rotator cuff tendonitis/impingement syndrome, and hip rotator strains. 30% of upper extremity injuries will involve the proximal interphalangeal (PIP) region. These injuries are more serious and consist of varying degrees of flexor digitorum superficialis insertional strains, digital fibro-osseous sheath ruptures and PIP joint collateral ligament sprains.

The following are select illustrations of common injuries in rock climbing:



- Cubital Fossa Problems – due to pressure placed on the brachialis and biceps brachii muscles while pulling the body weight up. This can lead to inflammation and strain of the musculotendinous junction.

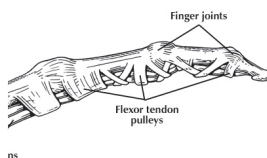


- Lateral Epicondylitis – inflammation/tendinitis of the wrist extensor tendons originating at the lateral epicondyle of the humerus.

- Finger Collateral Ligament Sprain – strain of the ligaments supporting the finger joints. This condition is usually caused by holds requiring support of a large percentage of body weight with one finger.



- Interphalangeal (IP) Joint Effusion – inflammation of the finger joint and a build-up of fluid in the joint capsule, which can lead to arthritis.



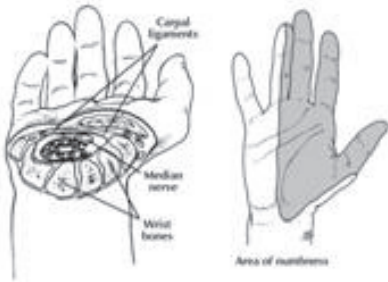
**About the Author: Gary D. Kassimir PT, MS, CHT**



Gary’s dream of KPT Ultimate Rehab began in 1997 when he opened the doors to Kassimir Physical Therapy. The practice continues to thrive and gain the respect and referrals of many local referring sources for providing top notch quality PT. Gary graduated in 1987 from Long Island University and treats general orthopedic, sports and hand rehab cases. In addition, he has been a Certified Hand Therapist for over 10 years. His day is made up of half clinical, and half administrative duties. Gary’s twin daughters Vicki and Ali will be attending the University of Maryland, College Park where he gets to re-live his TERP days. His daughter, Marisa, will begin high school in the fall. Sherri, his wife, continues to help with administrative duties at KPT. He enjoys basketball, fishing, poker, and handyman jobs.

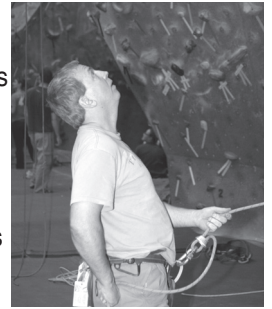


- Climber's Finger – tenosynovitis or damage to the flexor tendon pulleys that support the tendons crossing the finger joints. This inflammation is caused by trying to support your body weight with one or two fingers.
- Carpal Tunnel Syndrome – occurs in about 25% of climbers in which the median nerve at the wrist is compressed, causing pain, numbness and weakness.



Injuries from falling can occur as well. Exposure to high altitude can affect judgment and hand-eye coordination, or not paying close attention to your climbing or of those climbing with you. Fractures of the ankle and tibia are commonly seen and in some cases, the fall can cause severe injuries to the head, neck, and back, resulting in impairment or even death. Rock gyms are designed so that the falling distance is much shorter than you would encounter in most natural rock-climbing settings. However, the more difficult climbs and maneuvers that can be performed repetitively indoors place a big strain on soft tissues, which can be greater than the demands of outdoor climbing.

Although most rock-climbing injuries involve the hands and arms, another frequently reported problem, especially is a spinal syndrome known as “Belayer’s Neck.” The belayer, or person feeding the rope out to the lead climber, is responsible for stopping the lead person’s fall by means of friction devices attached to the rope. This necessitates long periods of hyperextension of the cervical spine, as the belayer usually positions himself underneath the lead climber. This prolonged posturing commonly triggers neck ache, headache or nerve compressions.



There are specific strategies for preventing rock climbing injuries and managing the rehabilitation to achieve safe return to sport. Staying injury free means warming up properly, stretching, working on balance, controlling climbing frequency no more than 4 times per week, resting the body, and not pushing it through pain. Climbers also need to protect the most important tool in climbing...the hands. Digital taping and buddy straps can be used for support and protection and of course appropriate physical therapy to rehabilitate injuries to reduce the time in getting back to the next climb. If reaching the top or how fast you go is not the point, then it must be “all about the climb” and staying healthy. At Kassimir Physical Therapy, our therapists are trained to specifically deal with all of the associated rock climbing injuries mentioned above. Climbers are urged to email Gary at [gkassimir@kptrehab.com](mailto:gkassimir@kptrehab.com) to discuss management of nagging injuries that have kept you on the ground and not on the climb.

### KPT News Flash:

KPT staff hopes everyone had a great and safe summer! We’ve had two new therapists join our team: Tami Grunitzki, DPT and Kelly Valentine, PTA. Our therapist of seven years Jennifer Bachtel is back after giving birth to her second child, Tyler Anthony, this June. KPT is excited to announce that our aquatic therapy location has moved to Brick Bodies Aquatic Center in Reisterstown. KPT sponsored the Arthritis Foundation Walk in May and the Race for our Kids at Sinai Hospital in June. Come stop by and see Gary’s recent paintings of sports figure.



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**KPT HANDPRINT Newsletter**

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