

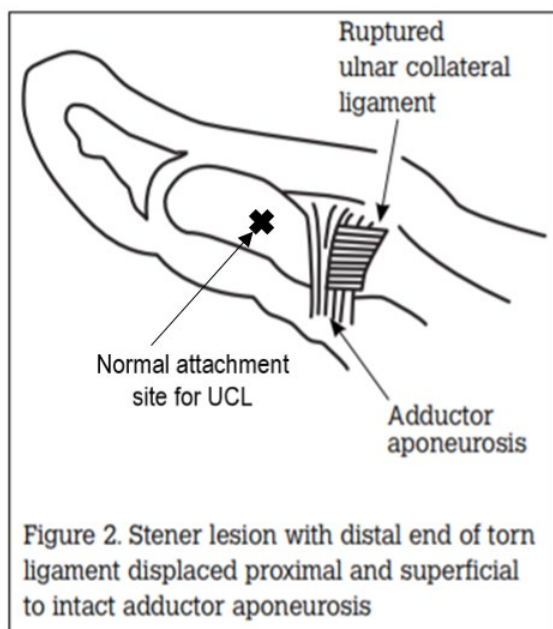
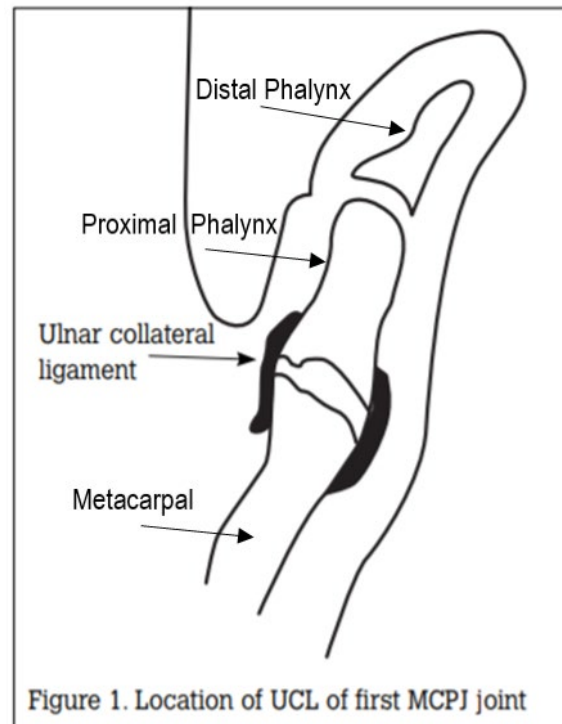
ASD FAST FACTS:

Could you have “Gamekeepers” or “Skier’s” Thumb?

Injury to the thumb ligaments can occur when the thumb is suddenly or repeatedly forced backwards and outwards (hyperextension and hyperabduction) eg. when a ball hits the tip of the thumb. Damage occurs to the ulnar collateral ligament (UCL) which stabilises the base of the thumb - the metacarpophalangeal or MCP joint (Figure 1).ⁱ Injury may result in ongoing pain, dysfunction and early osteoarthritis.

Chronic UCL injury is called “Gamekeepers thumb” dating back to 1955 where Scottish gamekeepers would strain their thumbs by repeatedly holding the necks of hunted animals.ⁱⁱ UCL injury results in abnormal increased sideways shifting of the thumb MCP joint (increased laxity) and eventual partial dislocation (subluxation).

Sudden UCL rupture is called “Skier’s thumb” as frequently seen in skiers who fall on an outstretched hand whilst gripping a ski pole, but also happens frequently in ball sports.



Sudden rupture can also pull off a bony fragment at the sites where the UCL attaches – an “avulsion” fracture.

It can also result in a Stener lesion where the ruptured UCL folds back and gets trapped under another accessory ligament of the thumb (the adductor aponeurosis). This prevents reattachment to its usual site and thus also prevents healing (Figure 2).ⁱⁱⁱ Stener lesions usually need surgery to be corrected.

Symptoms

Following sudden injury to the thumb you may notice swelling, bruising and tenderness on the inside of the thumb webspace (the ulnar side). Sometimes a lump can be felt with a Stener lesion. Your doctor will gently assess your range of thumb movements and make sure there is no evidence of nerve or blood vessel damage before considering an X-ray to rule out an avulsion fracture (Figure 3).

Once X-rays are clear, your doctor can assess thumb strength and look for increased laxity (with thumb bent at 30 degrees a sideways “valgus” force of more than 30 degrees laxity or 15 degrees compared to the normal side suggests UCL rupture).^{iv}

For suspected complete rupture or Stener lesion, or for a fracture, your doctor will need to refer you to a hand surgeon or arrange further imaging with an MRI.



Figure 3. Xray of avulsion fracture of UCL insertion thumb^{iv}

Management

For partial tears without a fracture or Stener lesion, conservative management by wearing a protective splint immobilises the thumb base and permits healing of the UCL. If injury is sudden and swelling is significant, a plaster half-cast is sometimes used for the first week until the swelling settles, then a custom-made thermoplastic splint can be used full-time for 4 weeks. The upper joint of the thumb (interphalangeal joint) should be left out of the splint and be allowed to bend normally.

Gentle exercises are recommended at 4 -6 weeks and are best supervised by a hand therapist (your splint is to be worn at all times except for during these hand therapy sessions). It is advised to wear the splint at 8 weeks for daily or work activities that involve lifting/carrying/repetitive hand use or manual labour. Return to sporting activity without restriction is generally not recommended until after 12 weeks to minimise chance of re-injury.

Avulsion fractures and Stener lesions require referral to a hand surgeon to discuss fracture fixation and/or reconstruction of the UCL, as immobilisation in this group has been shown to result in weak thumb grip and continuing pain. After surgery rehabilitation will usually follow the above conservative management plan.

Sources:

ⁱ Anderson, D. Skier's thumb. Australian Family Physician Aug 2010; Vol 39 No 8: 576

ⁱⁱ Campbell CS. Gamekeeper's thumb. J Bone Joint Surg Br 1955; 37: 148–149.

ⁱⁱⁱ Stener B. Displacement of the ruptured ulnar collateral ligament of the metacarpophalangeal joint of the thumb: a clinical and anatomic study. J Bone Joint Surg 1962; 44: 869–879

^{iv} Figure 3. Image supplied via Wikimedia Commons public domain. Author James Heilman, MD 2010 https://commons.wikimedia.org/wiki/File:Game_keepers.png