

A mallet finger is a deformity of the finger. It occurs when the tendon that straightens the finger (the extensor tendon) is damaged at the fingertip.

This can commonly happen when an object (like a ball) strikes the tip of the finger or thumb. It can also happen when forceful bending of the fingertip occurs. This force tears the tendon at the back of the finger (the tendon that straightens the finger) (see Figures 1 and 2). The force of the blow may even cause a piece of bone to break off (fracture) along with the tendon (see Figure 3). As a result, the tip of the finger or thumb no longer straightens. This condition is sometimes referred to as “baseball finger.”



Figure 1: Example of mallet finger with drooping of tip

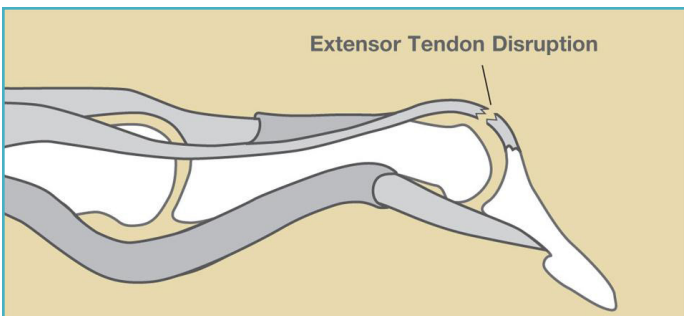


Figure 2: Example of mallet finger with drooping of tip



Figure 3: A broken finger, where a piece of the bone has been broken off

Signs and Symptoms

In a mallet finger, the fingertip droops, and it cannot straighten on its own. The finger is commonly thought to be jammed. The finger may be painful, swollen or bruised. Occasionally, blood collects beneath the nail. The nail can even become detached from beneath the skin fold at the base of the nail.

Diagnosis

Medical attention should be sought within the first few days after injury. It is especially important to seek immediate attention if there is blood beneath the nail or if the nail is detached. This may be a sign of a nail bed injury or an open (compound) fracture. If a mallet finger is not treated promptly, then the finger may not function properly and may cause pain.

In children, your doctor must carefully evaluate and treat this injury promptly so that the finger does not later become deformed. There may be an injury to the growing portion of the bone.

Your hand surgeon will examine your finger and may make a diagnosis by noting the droop of the fingertip. He/she may push the finger into a straighter position and notice that it will not remain straight on its own. Physicians will often order x-rays to see if a piece of bone has pulled away (a fracture) and to make sure the joint is aligned. Injuries with even a little swelling may have a fracture. Your physician will also look for any cuts to the finger, bleeding, or detachment of the nail.

Nonsurgical Treatment

Most mallet finger injuries (in both adults and children) can be treated without surgery. They can initially be treated with splinting. A cold treatment (ice) should be applied immediately, and the hand should be elevated (fingers toward the ceiling.) A tongue depressor or a clean popsicle stick can be taped to the finger to keep it straight.

There are many different types of splints/casts for mallet fingers. The goal is to keep the fingertip straight until the tendon heals. Most of the time, a splint will be worn at all times for about eight weeks (see Figure 4). Over the next three to four weeks, the splint can be worn only during sleep and less frequently during the day. Your surgeon or hand therapist will provide instructions on how to wear the splint and will also show you exercises to maintain motion at the middle joint (the proximal interphalangeal joint) so your finger does not become stiff. The finger usually regains acceptable function and appearance with this treatment; however, splinting may not be successful if treatment is delayed.

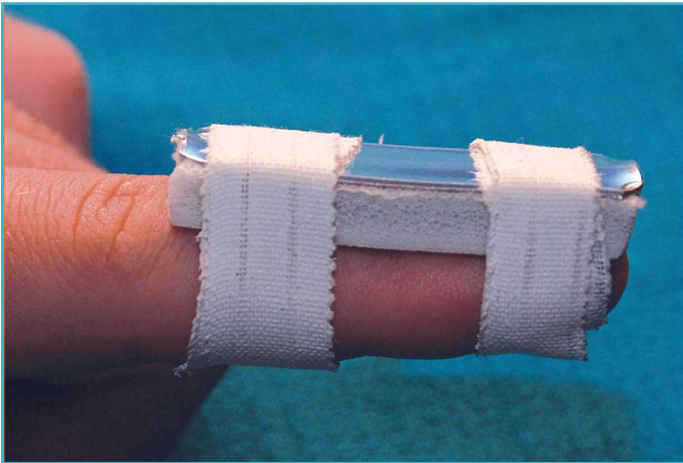


Figure 4: A splint supporting the finger tip after a mallet finger injury

Once the mallet finger has healed, your surgeon or hand therapist will teach you exercises to regain motion at the fingertip. Many patients will have a very slight droop and may notice a small bump at the back of the finger after treatment. This normally does not cause any problems with performing normal activity.

Surgical Treatment

Surgery may be considered when a mallet finger injury has a large bone fragment or the joint is not properly aligned. In these cases, wires or small screws are used to realign the joint (see Figure 5). Surgery may also be considered if wearing a splint is difficult or was not previously successful. Surgery may involve applying a wire in the finger to keep it straight, stitching the tendon together or making a new tendon, or fusing the joint so it stays straight. Your hand surgeon will help recommend the proper treatment that is specific to you.



Figure 5: X-ray of mallet finger treated with a temporary pin