

Cut Hand

Important structures of the hand, including joints, tendons, arteries and nerves are very close to the surface. Knives, glass and porcelain frequently cut all the way down to bone despite a very small skin wound. **Surgery is recommended if there's any risk of an injury to one of these structures.**

Joint - There is a **risk of infection** as the bacteria becomes trapped beneath the surface. The infection may not become apparent for several days, cause septic arthritis and irreversible damage to the cartilage.

Tendon - Complete tendon injuries are obvious as you will not be able to flex or extend your finger normally. **Partial injuries are more problematic as dysfunction only becomes obvious after a number of days or even weeks.** Delayed rupture leads to abrupt dysfunction and will likely be obvious. Alternatively, a partial injury may lead to imbalance of the flexor and extensor mechanism over time and lead to a delay in seeking medical attention. **These types of injuries are often missed**, even by experienced GPs and emergency doctors. The most common example of this is when the central part of the extensor tendon is cut as it inserts into the middle bone of the finger. The rest of the tendon compensates, but as the balance is lost you may lose the ability to fully straighten the proximal interphalangeal (PIP) joint. Eventually a boutonniere deformity develops.

Arteries - The fingers and thumb have two arteries each and both have to be cut to cause ischaemia. This would be obvious and it's likely you would be taken to hospital. Arteries are one of the deeper structures in the hand and fingers, therefore injury to other structures such as tendons and nerves is likely. **Bleeding can be profuse, but will usually stop with direct pressure for ≤20 minutes.**

Nerves - The fingers and thumb have two nerves. If you cut one of them you will likely notice altered sensation along one side. This **should be repaired within 72 hours** as the ends retract making repair more difficult. The operation is **often done before this to prevent infection** any way. **Partial nerve injuries can be difficult to diagnose.** You may only notice a difference when the sensation is directly compared to an area that is normal. Even partial nerve injuries should be repaired due to the small risk of a painful neuroma, when the nerve endings are trapped within scar and become painful.

