

## EXTENSOR TENDON INJURY (BOUTONNIERE)

The extensor tendon system is complex and consists of (i) tendons running from the forearm to the fingers and (ii) muscles which arise in the hand itself. Their combined action is to straighten the fingers.

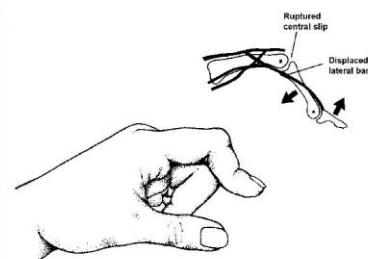
You have snapped the **central slip** that straightens the central finger joint (PIPJ). This injury can be hard to detect. If not recognised quickly, the joint often becomes stiff, partly because of the injury and partly because you cannot straighten it. In time, the entire system gets out of balance. The PIPJ droops and the last finger joint (DIPJ) over-straightens. This combination is called a Boutonniere deformity (Buttonhole).

Unfortunately, these injuries are complicated to treat and need extensive rehabilitation. They can do poorly. This is due to the complexity of the tendon system and the speed at which the PIPJ can become stiff. If there has been any delay in treatment, surgery will not be performed until you have recovered full mobility of the PIPJ. This may require physiotherapy and splinting to achieve.

If the tendon was cut ("open" injury), it will be repaired. If the tendon snapped ("closed"), it may be necessary to perform an operative repair, particularly if a chip is pulled out of the bone. However, the tendon can sometimes be returned to the correct site without an operation by keeping the PIPJ straight. Rehabilitation depends on your precise injury but generally follows the following pattern.

Following your injury/repair you will be required to wear three different splints, which will allow protected exercise.

**Splint 1** This splint is to be worn at all times except for exercise. Ensure that when it is applied the strapping holds the joints of your fingers straight.



**Splint 2** Apply this splint five times a day. Hold the splint at the base of your fingers, rest your wrist forwards and point your finger (see picture). Gently bend until your finger touches the splint and hold for five seconds. Gently straighten your finger and hold for five seconds. Repeat the exercise five times. Your therapist will alter this splint every week to allow increased movement.



**Splint 3** Apply this splint five times a day. Hold the splint onto your finger with the other hand. Make sure you keep the first joint of your finger straight by holding over the top joint (see picture). Gently bend the tip of your finger over edge of the splint - hold for five seconds. Gently straighten the tip of you finger – hold for five seconds. Repeat five times.



The wrist and other joints of your hand that are not splinted are free to move through all available. If unsure then ask the therapists or doctors.

Any stitches will be removed at two weeks. After seven weeks, you will be allowed to move your finger freely during the day. The tendon is still weak and therefore you should only do light activities. Again, you should wear the static splint at night and at times when the finger might be knocked. You should be able to return to most normal activities at about ten to twelve weeks after injury.