

## Patient Information Sheet

# Flexor Tendon Injuries

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### **Flexor tendons**

The forearm flexor muscles are able to bend the fingers, via tendons, which are attached to the bones. The thumb has one long flexor tendon and the fingers each have two. In the finger the two tendons are in a narrow lubricated canal and the longer tendon passes through the other in a complex three-dimensional arrangement.

### **How are the tendons become injured?**

Deep cuts on the palmar side of the wrist, hand or fingers can injure the flexor tendons and nearby nerves and blood vessels.

### **Diagnosis**

The shorter of the two flexor tendons to each finger bends the middle knuckle joint and the longer tendon bends the finger at all the joints. When the tendons are completely cut, the finger cannot be bent and each tendon can be tested in turn. When a tendon has been partially cut, although the finger can be moved, this is associated with pain. X rays are not necessary to make the diagnosis but may be used to exclude the presence of foreign bodies such as glass or if fractures of the bones are suspected.

### **Treatment**

Cut tendons do not heal satisfactorily on their own and have to be repaired surgically. This is done under general anaesthesia. The surgery does not have to be performed immediately, but can be delayed for up to a couple of days until appropriate facilities are available. At the time of surgery the original cut usually has to be enlarged to allow the retracted ends of the tendons to be retrieved and the adjacent structures inspected for injury. The wound extensions are usually in a zigzag to avoid scar contracture.

### **After surgery**

After the surgery, a plaster of Paris splint is applied to prevent straightening of the fingers and wrist. This is to protect the tendon repair whilst it is healing. The stitches are left in for 2-3 weeks, and the hand must be kept dry during the first week. You can bathe by placing a plastic bag over the hand. A long-acting local anaesthetic is also used at the time of surgery to provide postoperative pain relief. The numbness lasts for several hours and simple pain killers are all that are necessary afterwards. You must avoid aspirin as this may cause bleeding. It is very important you keep your hand elevated as much as possible, at least during the first week. During the daytime you can wear a sling and at night the hand can be rested on a couple of pillows. This helps reduce the swelling and postoperative discomfort. The dressings are changed after a few days and at this stage the hand therapist will apply a plastic splint to protect the tendon repairs. The therapist will also teach you a

programme of controlled mobilisation. There is a balance between protecting the tendon repair and mobilising the fingers to prevent the tendons becoming stuck down. Initially, you will be bending the affected fingers using the other hand and straightening them out actively. The plastic splint is worn for 6 weeks, at which stage you will be actively bending the fingers and progress to building up grip strength. You will be able to return to all your normal activities without restriction at about the 12 week stage.

## **Possible complications**

- Scarring can be a problem around all tendon repairs but usually responds to hand therapy to regain the range of motion.
- The outcome is in part determined by the site of the injury. In general, if both tendons are cut in the finger, the overall result is not as good because the two tendons can get stuck down in the tight canal through which they pass. Occasionally it is necessary to proceed to perform surgery to release the scar tissue and free up the tendons.
- Infection is rare, and usually respond to antibiotics.
- Sympathetic dystrophy, which presents as pain, swelling, stiffness and discolouration, is uncommon and is treated by intensive hand therapy.