Finger Sprains

What is a sprain ?

A sprain refers to an injury to the tissues surrounding and supporting a joint. This includes the ligaments and joint capsule. (See diagram). The ligaments are strong structures that prevent the joint from going into abnormal positions. The capsule is a less strong structure that seals the joint from the other tissues. A sprain can be of varying degrees. In a minor sprain the tissues essentially remain intact and recover rapidly, in a more serious sprain the tissues may be badly torn and sometimes need to be repaired surgically.

After a sprain the injured joint will become swollen, painful and stiff. The amount of swelling usually reflects the degree of injury.

The commonest joint to be sprained is the PIP joint (See diagram). The ligament that is injured most often is called the volar plate (palmar plate) (See diagram). This ligament prevents the joint from over straightening. This ligament is damaged when force is applied in a longitudinal direction for example a ball hitting the end of the finger.

The MP joint of the thumb (See diagram) is vulnerable and one of the most frequently occurring injuries is the so called 'skiers thumb' where the ligament on the inside of the thumb is torn. Further information on this injury can be found under Skiers thumb (also known as Game keepers thumb).

What is the treatment ?

The aim of the treatment is to restore movement to the injured joint. The initial assessment will look at which structures have been damaged and decide on the appropriate method of treatment. An x-ray will often show small fragments of bone which are attached to the damaged ligaments. Your Hand Surgeon will advise you of the plan of treatment which will likely be instituted by a hand therapist.

In the initial phase the joint may be rested using a splint or cast if there is a lot of bruising and swelling. Otherwise the joint will be encouraged to move straight away, this is done using specific exercises and passive stretching. The swelling will reduce with time but can

be helped by using compressive bandaging. Other measures may include dynamic and static splints, ultrasound and massage. Your therapist will advise on these techniques.

Surgery is uncommon but may be required if one of the ligaments has been torn and if not repaired give rise to a risk that the joint may not fully recover and in particluar be unstable and unable to function satisfactorily.

What is the outcome ?

These injuries can take a suprisingly long time to heal. In particular the swelling around the joint may last several months. Most patients will regain a full range of movement.

One of the recognised problems after any sprain is loss of movement which may be either a loss of bending or more commonly the straightening of the joint. The loss of full straightening may be minor and not need any treatment, however if the finger is in a bent position that causes problems with use of the hand then additional treatment can be helpful. The therapists will undertake a programme of stretching, massage and exercises combined with the use of splints which can often improve the situation. If the joint does not respond then a surgical release may be needed.

The other problem that can develop after a joint sprain where a ligament has been damaged is instability. This means the joint cannot resist the normal forces applied to it and will give way. The symptoms are pain and weakness causing difficulty with use of the hand. Under those circumstances your surgeon may suggest either the use of splints to support the joint or a reconstruction of the damaged ligament. Your Hand Surgeon and Therapist will discuss the options with you and an appropriate decision made.

In the long term a sprained joint may have a slight increased risk of developing osteoarthritis. The risk does depend on the joint involved and the nature of the injury and you should discuss this with your surgeon where appropriate.