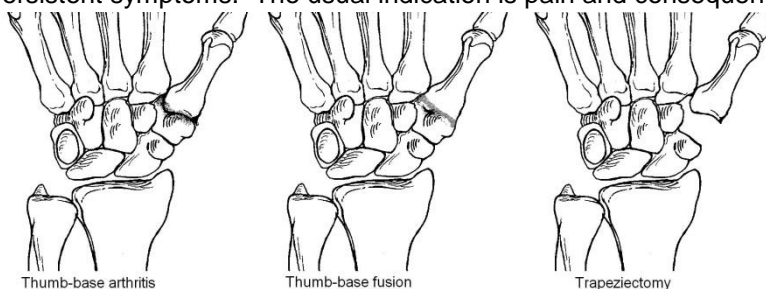


# THUMB-BASE FUSION

The trapezium is one of the eight carpal (wrist) bones and lies at the base of your thumb. Arthritis in this joint is very common and is contributed to by instability of the joint and a natural vulnerability to wearing of the joint surfaces. It is a progressive condition that leads to increasing stiffness and deformity in the thumb. If neglected, the joint tends to stiffen. The methods for relieving discomfort in an arthritic joint include (i) activity modification, (ii) pain-killers, (iii) splints, (iv) steroid injections and (v) surgery.

Surgery is the only definitive treatment for persistent symptoms. The usual indication is pain and consequent functional difficulties. There are several options available and some controversy as to which is best.

**Joint stabilisation** involves either realignment of bones or ligament reconstruction using a tendon and is only suitable for a minority of patients who have an unstable joint but little damage to the joint surfaces.



**Trapeziectomy** involves the complete removal of the trapezium bone. It is mandatory if the joints both above and below the trapezium are arthritic. This is generally a very successful approach, particularly in older patients who do not require high power. If performed in young patients, secondary wear & tear may occur over many years and is very difficult to treat. I prefer to keep this option in reserve in young patients.

**Arthrodesis (fusion)** involves removal of the arthritic joint and joining the two bone-ends together. There are many ways of joining the bones but they are usually held by a number of metal wires, which may either be external or internal. Although this approach is more complex and has a higher complication rate than trapeziectomy, it has a reputation for maintaining good power. It does offer some advantages in young patients, if only by delaying the need for trapeziectomy.

Fusion is usually performed as a day-case under regional anaesthetic (arm numb) and/or general anaesthetic (asleep). Your hand will be placed in a bulky dressing which includes a plaster to protect the operation. Hand elevation is important to prevent swelling and stiffness of the fingers. Movement of the hand and thumb-tip should be continued and you should perform normal light activities after the operation.

Two weeks after the operation, your stitches will be dissolving and your plaster will be changed to a lighter splint. You will need to wear your splint virtually continuously for at least six weeks after the operation. The bones heal together over a period of weeks; the joint gradually becoming stronger similar to glue setting. The fusion must be kept protected from knocks and stresses until x-rays show that the bone-ends are joining together. This usually takes about 6 weeks at which stage the K-wires are removed in clinic. The fusion will not be really "solid" and ready for heavy use until at least 12 weeks at the earliest and some splinting will still be needed until this time.

**Wound** Possible problems include swelling, bruising, bleeding, blood collection under the wound (haematoma), infection and splitting of the wound (dehiscence).

**Scar** You will have a scar on the thumb, which will be firm to touch and tender for some months. This can be helped by firm massage with the moisturizing cream.

**Non-union** The bones can fail to join for many reasons such as too much movement or infection. It may be necessary to redo the operation if this occurs.

**Metalwork** Internal wires or screws can remain uncomfortable, prominent or even become exposed through the skin. Contact us if worried. The offending metalwork is then removed, usually as a minor procedure under local anaesthetic.

**Function** Recovery from this operation can be slow and it can often be 6 months before you can resume heavy activities. You will probably be able to drive a car after 8-12 weeks as long as you are comfortable and you have regained full finger movements. Timing of your return to work is variable according to your occupation.

**Movement** Fusion of the joint causes loss of your ability to position the thumb but you still can move the other joints.

**Neuroma** A small nerve running in the region can occasionally be damaged during the surgery and either cause numbness on the back of the thumb or form a painful spot in the scar (neuroma). The latter complication may require a further operation to correct it.

**Regional pain syndrome** About 5% (1 in 20) of people are sensitive to hand surgery and their hand may become swollen, painful and stiff after the operation. This problem cannot be predicted, is variable in severity and is principally treated with physiotherapy.

**Revision** Fusion places extra strain on neighbouring joints, which can become arthritic in time. This may not cause pain but the problem can be revised by converting the operation to a trapeziectomy.