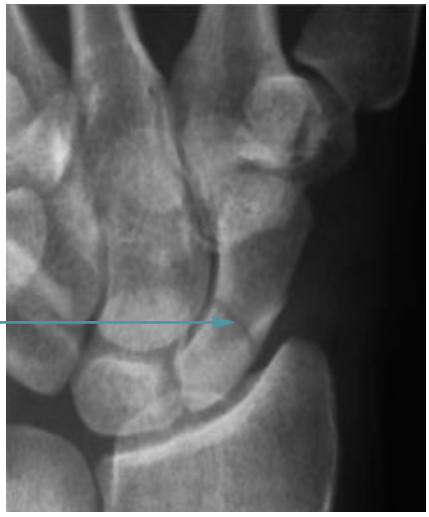
Sussex Hand Surgery

SURGERY

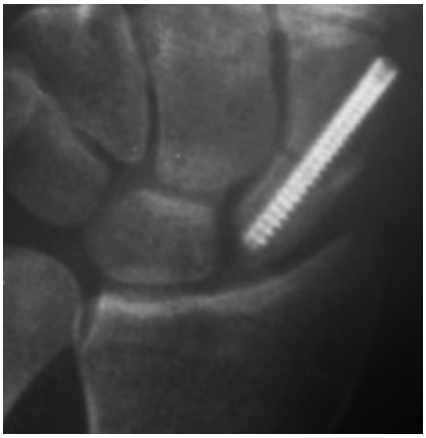
Percutaneous screw fixation of Scaphoid Fractures

Fracture in scaphoid



Fracture line just visible in scaphoid

Screw in position



What does this involve?

This involves placing a screw down the middle of the scaphoid, across the fracture, to hold it firmly in the right position while it heals up. In some fractures this can be carried out using small incisions only (1 – 2cm only).

When is this surgery needed?

Most (80%) of scaphoid fractures heal up well by themselves given time and prompt treatment in a plaster cast.

Fixation might be considered if the bone fragments are not well lined up (more than 1mm of displacement), if the fracture is diagnosed later, if the fracture shows few signs of healing despite being in a cast for sometime or occasionally because of patient preference.

Which operation is the right one for me?

A minimally invasive, percutanous approach is not appropriate for fractures that require significant re-alignment and a big bone graft. This is only the case in fractures which have been present for several months.

Your surgeon will discuss the options with you.

Type of Operation	Day case
Length of Procedure	0.5 – 1.5 hours (depending on complexity of injury)
Anaesthesia	Regional Anaesthetic (whole arm numb) or (rarely) General Anaesthetic (asleep)

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What are the main risks of this operation?

Swelling, Stiffness and Scar pain

This can be reduced by keeping the arm elevated and moving all the free joints as soon as possible. In most people the general swelling reduces dramatically in the first week after the operation.

Local swelling around the surgical site can persist for several months. Local swelling can be helped by massaging the tissues and this may also improve any irritability in the surgical scar.

Stiffness in the wrist is generally short-lived with this procedure, particularly if you surgeon feels that fixation is strong enough to allow early movement of the wrist. Plaster cast immobilisation does make the wrist stiff in the short-term which lengthens the rehabilitation period a little.

Occasionally patients are troubled by more swelling and stiffness than average. In this case complex regional pain syndrome (CRPS) is sometimes the cause (see relevant information sheet in 'Conditions we Treat'). Severe CRPS occurs in less than 1% of cases.

Infection

This is unusual in the hand (less than 1% of cases). Local wound infections can often be treated with oral antibiotics. Rare, deep seated infections may require re-admission to hospital, antibiotics into the vein and occasionally more surgery.

Nerve Damage

The nerves most at risk with these operations are the small skin branches supplying sensation around the scar. The lost patch of skin sensation from these injuries might be irritating but should not affect how your hand works.

Metalwork problems

The screw used in this operation is designed to be buried within the bone. Usually it is not removed but sometimes it gives trouble. This is the case most frequently if the fracture is slow to heal and the screw starts to work its way loose or protrude out of the ends of the bone. This can mean that further surgery is needed.

Failure of bone healing

The chance of a fresh fracture not healing if it is treated with screw fixation is very small (less than 1%). Fractures that are closer to the distal radius than the thumb (at the bottom of the picture in the examples above) are most likely to fail to heal, because of how the blood supply to the scaphoid is arranged. Older fractures treated in this way also have an increased chance of not healing. In any of these cases further surgery might be needed.

Residual joint discomfort

Patients report occasional wrist symptoms in the long term even with scaphoid fractures which heal completely in a plaster cast. This is also true of patients who have had surgery. These symptoms are mild compared to symptoms from a scaphoid fracture that does not heal or that is badly lined up when it heals.

Post Operative Course

Day 1 - 14

- A dressing and padded bandage is applied after the operation. Sometimes a temporary plaster is also applied for support
- Keep the dressings clean and dry
- Keep the arm elevated in a sling or on pillows to reduce swelling
- Start moving any free joints immediately to prevent stiffness
- Take painkillers before the anaesthetic wears off and as necessary thereafter

During the first 2 Weeks

- An appointment will be made for a wound check, dressing change and a removal of the sutures (if necessary). The details will be arranged on the day of surgery
- A removable splint will be provided if necessary. Occasionally a further period in a plaster cast is necessary.
- Exercises and scar massage will be demonstrated if you have come out of plaster.

4 - 6 Weeks

- A further review is often arranged around this stage in clinic, with another xray out of any splints or plaster casts.
- Exercises and scar massage to continue.

3 Months

- Contact sports and heavy loading can be re-started, if the xrays are satisfactory

1 Year

- Improvements in symptoms and stiffness can continue up to this point.

Plaster Cast Information

Contact your surgical centre if:

- Your fingers become blue, swollen or numb and tingling with a plaster cast in place
- You see any discharge, wetness or detect any unpleasant smells from around your cast
- The cast becomes cracked, soft, loose or uncomfortable.

Outside normal working hours you may need to attend your local Accident and Emergency Department for help with these issues.

Driving

You may drive when you feel confident to control the car, even in an emergency.

For fresh fractures most patients wait until after the first wound check (2 weeks) to drive. If a plaster is necessary it might be six weeks before you feel able to consider driving. Your surgeon can advise you on your individual case.

You should discuss it with your insurer if you are considering driving with a splint in place.

Time off Work

This will vary depending on the nature of your job.

Sick notes can be provided on the day of your operation, at your clinic visits and by your own GP.