

Metacarpal Fracture Fixation

ਇਹ ਪੰਨਾ ਮਸ਼ੀਨ ਦੁਆਰਾ ਅਨੁਵਾਦ ਕੀਤਾ ਗਿਆ ਹੈ ਅਤੇ ਹਾਲੇ ਤੱਕ ਕਿਸੇ ਡਾਕਟਰ ਦੁਆਰਾ ਜਾਂਚਿਆ ਨਹੀਂ ਗਿਆ। **ਅੰਗਰੇਜ਼ੀ ਸੰਸਕਰਣ** ਹੀ ਅਧਿਕਾਰਤ ਹੈ।

ਤੁਰੰਤ ਰਿਕਵਰੀ। 169 ਪ੍ਰਕਾਸ਼ਿਤ ਅਧਿਐਨਾਂ ਤੋਂ ਇਕੱਠਾ ਕੀਤਾ ਗਿਆ — ਤੁਹਾਡੀ ਗਤੀ ਵੱਖਰੀ ਹੋ ਸਕਦੀ ਹੈ।

ਹਲਕੀਆਂ ਕੰਮਾਂ ਦੀਆਂ ਜ਼ਿੰਮੇਵਾਰੀਆਂ ਡੈਸਕ ਕੰਮ, ਡਰਾਈਵਿੰਗ, ਰੋਜ਼ਾਨਾ ਕੰਮ	ਜ਼ਿਆਦਾਤਰ ਰੋਜ਼ਾਨਾ ਗਤੀਵਿਧੀਆਂ ਮੈਨੁਅਲ ਕੰਮ, ਖੇਡਾਂ, ਜਿਮ	ਅੰਤਿਮ ਨਤੀਜਾ ਪਲੇਟੋ ਦਰਦ ਅਤੇ ਤਾਕਤ
1-3 weeks	8-12 weeks	6-12 months
Finger movement starts early. After an intramedullary screw, active movement began within five days and the protective splint was weaned once the stitches were out. When wires are used, the hand is protected for about three weeks before the fingers are moved freely. Desk work and light one-handed tasks are possible during this time.	The bone is usually healed by about six weeks: 76% had united by week six in one series and union took 5.6 weeks on average in another. Return to full duties, manual work and sport averaged 76 days (median 54). Punching has to wait until healing is complete: in one series 5 of 17 people who had broken a metacarpal punching, and punched again, bent their implant.	Grip strength keeps recovering for months after the bone has healed. After intramedullary screw fixation it averaged 104% of the other hand at a mean of ten months.

Why this operation has been suggested

Dr Kieran Hirpara, an upper-limb surgeon at Mater Private Hospital Rockhampton, matches the treatment to your specific injury. Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. At your appointment we take a history, examine your hand, and arrange imaging if it is needed to work out what is broken and how it has moved.

A metacarpal fracture is a break in one of the long bones of the hand, between the wrist and the fingers. Metacarpal fracture fixation means lining the broken bone up and holding it in place while it heals. Many of these fractures settle without surgery, with a splint and rest. Surgery is usually suggested when the bone will not stay lined up, when the finger has twisted out of position, when the break reaches the joint surface, when several hand bones are broken, or when non-

operative care has not given enough improvement. The aim is a stable, well-lined-up bone so your hand can move and work as it should. We will talk through the options with you and decide together what suits your injury and your goals.

Before the operation

Your surgeon will give you clear instructions on what to do in the days before surgery. You will need to stop eating and drinking for seven hours beforehand. We ask for seven hours rather than six so you can be brought forward if the theatre list runs early. Tell your surgeon about any medicines you take, as some may need to be paused. Bring a written list of them on the day. Arrange for someone to drive you home afterwards, as you will not be able to drive yourself. Wear loose, comfortable clothing that is easy to change out of. X-rays are usually all that is needed to plan the operation, though an MRI or ultrasound scan is sometimes used for certain injuries. If you have other medical conditions, you may need blood tests or a review with the anaesthetist.

On the day

You will come to the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You will meet the anaesthetist, the doctor who puts you to sleep and looks after you during the operation. This operation is done under general anaesthetic. You will be fully asleep for the operation. Some patients may also have a regional nerve block for post-operative pain relief; the anaesthetist decides on the day based on your individual circumstances.

You are then taken into the operating theatre, where the operation is performed. Afterwards you will wake up in the recovery area, where nurses watch over you while the anaesthetic wears off. Once you are stable, you will either go to a ward or go home, depending on the procedure and how your recovery is going.

What the operation involves

There are two ways this operation can be done, and your surgeon will choose the one that suits your fracture. The first is a closed approach. The skin is not opened. The bone is lined up from the outside, then held with fine wires or a screw passed in through small puncture wounds. The second is an open approach, through a single cut over the broken bone. This lets your surgeon see the fragments and fit them back together. It is used when the break reaches the joint, when the bone has broken into several pieces, or when it will not line up from the outside.

Once the bone is lined up, it needs something to hold it steady while it heals. There are several ways to do this, chosen to suit the shape and position of the break. Fine wires can be passed across the bone. A small screw can be placed down the inside of the bone, a technique called intramedullary fixation, which suits some breaks of the shaft and neck. Small screws can be placed across a long, angled or twisted break. Or a small plate with screws can be fixed to the bone.

Wires left sticking out through the skin are usually removed in the clinic after a few weeks, once the bone is stable. Screws and plates that sit under the skin are usually left in place unless they cause a problem later.

The wound is closed with stitches. You will go home with a dressing on your hand, which stays on for about 10 days.

After the operation

You will wake up in the recovery area, where nurses watch over you while you come round. Your hand will be in a dressing and a splint, and it may feel sore or heavy. We will give you pain relief to keep you comfortable, and the nurses will check on you regularly. You can get up and move around as soon as you feel able; your hand does not stop you walking. Someone should stay with you for the first 24 hours after you go home. You may go home the same day or stay one night in hospital after this operation. Both are common, and your team will talk with you about which suits you. We leave the dressing on for about 10 days; please do not take it off before then unless we tell you to. We change or remove it when we see you.

Recovery

Your hand will be sore and swollen for the first few days. This is normal and it settles gradually. Keeping your hand raised on pillows, even while you sleep, helps bring the swelling down. Take the pain relief you are given as directed.

You will leave hospital with a dressing and a splint made by your hand therapist, Ruby Doolan at Extend Rehabilitation. The splint protects the bone while it heals, so keep it on as advised. You will not be able to grip the steering wheel safely while the splint is on, so no driving until the splint is off and your surgeon clears you. See our page on [driving after upper-limb surgery](#).

Hand therapy starts soon after surgery. Ruby will show you gentle exercises to keep your fingers moving and reduce stiffness. Early movement is a real benefit of this operation, and most people find they can use their hand for light daily tasks quite soon. As the swelling settles and movement returns, you will build up to gripping, lifting and heavier tasks. Once you can grip without pain and your therapist is happy with your strength, you can return to manual work, sport and the gym.

Recovery varies from person to person. Your timeline may differ, and your surgeon and hand therapist will guide you at each visit.

What can go wrong

Most patients do well, but problems can occasionally happen. Your surgeon and the team monitor you closely to spot any issue early.

The bone may not heal as quickly as hoped, or it may slip out of its lined-up position. You might notice a new ache in the hand, or the finger looking twisted or shorter than before. If you see this, bring it up at your next review, or call the clinic sooner if the change is sudden.

The metalwork can sometimes irritate the hand. This can feel like a firm lump under the skin, a clicking or grinding feeling when you move the finger, or aching where the plate or screw sits. If it bothers you, mention it at your review. Occasionally metalwork needs to be taken out in a further operation.

The fingers can become stiff or slow to straighten fully. You may find you cannot flatten the finger against a table, or that gripping stays harder than expected. Tell your hand therapist and your surgeon at review, as exercises and therapy can help.

The break may reach the joint where the finger meets the hand, or a screw may sit close to it. If this happens you might feel catching or pain when you bend that finger. Raise it at your next appointment so it can be checked.

Some problems need urgent attention. If you have a deep, throbbing pain that does not ease with simple painkillers, redness spreading out from the wound, or a wound that leaks fluid, call the clinic straight away or go to the emergency department.

If you notice any of these signs, do not wait for your next visit. Call us, and we will advise what to do.

The complications table on this page lists typical rates if you want the specifics.

When to call us

Most problems after this operation are picked up at your review visits. Some signs need attention sooner. Call us if you have a fever, if the skin around your wound becomes more red or starts leaking fluid, or if your pain suddenly gets much worse. Go to emergency if you have swelling or pain in your calf, or shortness of breath. Call us straight away if your fingers go numb, feel cold, or you cannot move them. If in doubt, call us and we will advise what to do.

Metacarpal Fracture Fixation

ਪ੍ਰਕਾਸ਼ਿਤ ਸਾਹਿਤ ਤੋਂ ਜਟਿਲਤਾ ਦਰਾਂ

169 ਪ੍ਰਕਾਸ਼ਿਤ ਅਧਿਐਨਾਂ ਤੋਂ ਇਕੱਠਾ ਕੀਤਾ ਗਿਆ। ਇਹ ਆਬਾਦੀ-ਪੱਧਰੀ ਦਰਾਂ ਹਨ, ਤੁਹਾਡੀ ਵਿਅਕਤੀਗਤ ਜੋਖਮ ਨਹੀਂ — ਤੁਹਾਡਾ ਸਰਜਨ ਤੁਹਾਡੇ ਲਈ ਲਾਗੂ ਹੋਣ ਵਾਲੀਆਂ ਗੱਲਾਂ ਬਾਰੇ ਚਰਚਾ ਕਰੇਗਾ।

ਜਟਿਲਤਾ	ਰਿਪੋਰਟ ਕੀਤਾ ਦਰ	ਨੋਟਸ
a further operation for any reason	4-11%	Pooled across 1,261 fractures: 4% after an intramedullary screw, 11% after wires and 11% after plates. The same meta-analysis found no difference in healing time or infection between the three methods.
stiffness or a finger that will not fully straighten	<5%	Across 1,014 metacarpal fractures fixed with intramedullary screws, 47 complications (4.6%) were reported in total, and stiffness was the commonest of them; 18 of those 47 patients needed further surgery. Early movement with hand therapy is the main protection.
the fracture slipping out of position after plate or screw fixation	12-15%	19 of 138 fractures (13.8%) lost position on X-rays in the first weeks: 11.6% after lag screws and 15.4% after plates. The risk rose by about 7% for each year of age.
an extra operation to remove wires buried under the skin	17%	Wires buried under the skin needed a return to theatre to take them out in 58 of 337 cases (17.2%). Wires left out through the skin are removed in the clinic, and infection rates did not differ between the two.
a screw problem after fixing a knuckle (neck) fracture	9%	For unstable metacarpal neck fractures, 5 of 57 (8.8%) fixed with an intramedullary screw had a major hardware problem, such as the screw moving into the knuckle joint or a marked lag in straightening the finger, against none of 56 fixed with wires. Movement returned faster after the screw.
a bent or broken implant	2-6%	3 of 160 intramedullary screws bent or broke (1.9%), and 5 of 90 intramedullary implants bent (5.6%) in another series. Every bent implant in that series followed another punch, between 4 weeks and 7 months after surgery.

ਮੈਂ ਇਸ ਜਾਣਕਾਰੀ ਨੂੰ ਪੜ੍ਹ ਲਿਆ ਹੈ ਅਤੇ ਡਾਕਟਰ ਹੀਰਪਾਲਾ ਨਾਲ ਇਸ ਪ੍ਰਕਿਰਿਆ, ਇਸਦੀ ਉਮੀਦਵਾਰ ਠੀਕ ਹੋਣ ਦੀ ਮਿਆਦ, ਅਤੇ ਉੱਪਰ ਦੱਸੇ ਗਏ ਜੋਖਮਾਂ ਬਾਰੇ ਸਵਾਲ ਪੁੱਛਣ ਦਾ ਮੌਕਾ ਪ੍ਰਾਪਤ ਕੀਤਾ ਹੈ।

ਰੋਗੀ — ਨਾਮ ਪ੍ਰਿੰਟ ਕਰੋ

ਸਹੀ ਸਹੀ

ਤਾਰੀਖ