

Occupational Therapy (Hand Therapy)

Finger Metacarpal fracture

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Distal phalanges

Middle phalanges

Proximal phalanges

Metacarpals

Carpal bones



Thumb distal phalanx

Thumb proximal phalanx

Thumb metacarpal

What is a fracture?

A fracture is a break in the bone.

Metacarpal in the hand

It is a long bone in the hand.

Common symptoms of a metacarpal fracture

- Pain
- Swelling
- Bruising
- A lump on the back of the hand
- Deformity
- Difficulty moving a finger

What can you do to reduce the swelling?

It is normal to have swelling after an injury or surgery. Swelling can make your hand uncomfortable and stiff. It can also affect the recovery process.

Most of the swelling should settle in 6 weeks but it can sometimes take a few months to fully settle.

You can keep the swelling down by elevating your hand higher than your heart as often as possible. You can rest your hand on a couple of pillows at night to keep it slightly elevated.

Your Occupational Therapist will advise you when you can start to exercise your fingers. Exercising your hand will help to reduce the swelling.

You can also try wrapping an ice pack or a bag of frozen peas in a damp tea towel and putting on your hand in the first few days of your injury. Leave for 10 minutes or less and repeat 3 times a day. If you have circulation problems, it is not appropriate for you to use a cold compress.

How long will it take to heal?

Most metacarpal fractures will take up to 6 weeks to heal. It will take another 6 weeks to consolidate the healing. In some cases it may take longer than expected. You should avoid taking part in contact sports or heavy lifting or gripping for up to 12 weeks in order to reduce the risk of re-injury. If you use your hand too soon for demanding activities it may delay the recovery.

Treatment

The metacarpal fractures can be treated by surgical fixation, manipulation or in most cases treated conservatively without surgery.

The treatment of a metacarpal fracture depends on the type of fracture; its location; the stability of the fracture; displacement of fracture; deformity and movement of the finger as well as any individual circumstances.

Buddy Strapping/Buddy taping

You may be advised to use buddy strapping to tape the injured finger with the adjacent finger. The fingers can be buddy strapped with sticky tapes or using a Bedford Splint (elasticated double finger stockinette).

Buddy strapping can be used on its own in a simple metacarpal fracture when wearing a splint is not required. It protects the injured finger while allowing you to move the finger to prevent stiffness.

Some injuries need splinting as well as buddy strapping to position and protect the fracture.

At the completion of splinting, buddy strapping can be used for protection when there is a risk the finger may get caught or knocked (i.e. on public transport or in crowded areas).



Buddy strapping with sticky tapes



Buddy strapping with a Bedford splint

Splinting

During the time of healing, you may be given a thermoplastic splint to wear. The splint is tailor-made for you by the Occupational Therapist. It is important that you wear your splint and follow the advice from the Occupational Therapist. This splint is to position your hand and to protect the fracture while the bone is healing.

Splinting Schedule

- Please wear your splint all the time including when you are in bath/shower and when you are in bed until _____.
- You can put a plastic bag over to keep your hand and splint dry.
- From _____, you can start to remove your splint to do exercises as you are advised by your Occupational Therapist. You need to put the splint back on after you finish your hand exercises.
- From _____, you should wear your splint at night and when the hand may be at risk of injury (i.e. on public transport and outdoors).
- From _____, you do not need to wear your splint anymore.

Exercising your arm and hand

While you are still wearing your splint continuously, you need to exercise your shoulder, elbow, wrist, thumb and any joints that are not included in the splint to prevent them from stiffening.

The healing tissue of the bone can stick to the overlying tendons and soft tissue. This can restrict the movement of your hand and make your hand stiff. It is normal that you find moving your hand can be painful after the injury or surgery. The following exercises can help prevent stiffness in your hand even if this means overcoming the discomfort.

Your exercises program

From _____, please remove your splint to do the following exercises.

Please exercise _____ times a day, each time do _____ repetitions of each movement.

Wrist exercises

Wrist extension and flexion

- Place the side of your forearm and hand on a table.
- Move your wrist up and bend your wrist down.



Wrist extension



Wrist flexion

Wrist sideways movement

- Place your hand with palm down on a table.
- Move your wrist left and right.



Forearm rotation movement

- Place your forearm on a table.
- Turn your palm up.
- Turn your palm down.
- Repeat the same movements.



Fingers exercises

Flat table top movement

- Bend the knuckle joints (base of your fingers) down without bending any other joints of your fingers.
- Then straighten your fingers.



Straight fist movement

- Bend your fingers as if you are making a fist but without bending the fingertips.
- Then straighten your fingers.



Hook fist movement

- Hold your fingers straight.
- Bend your fingers down at the top and middle joints but keeping the knuckle joints straight.
- Then straighten your fingers.



Full fist movement

- Curl your fingers into a fist but not clenching it tight.
- Then straighten your fingers.



From full fist to hook fist

- Curl all your fingers to your palm.
- Straighten your fingers from the knuckle joints first, follow by the middle joints and end joints of the fingers.



When can you use your injured hand?

- From _____, you may use your hand for light activities.
- From _____, you may return to full activity and normal use of your hand. You can go back to playing contact sports. However boxing should be delayed for at least another 2 weeks.

When can you return to driving?

You should not drive while you are in a splint. You should not return to driving if you have significant pain or if you have reduced grip function that affects your ability to drive safely and perform an emergency stop manoeuvre.

We cannot give you permission to drive. It is your decision. It is your responsibility to ensure that you are safe to drive and you are in control of the vehicle. Please refer to the DVLA website regarding fitness to drive.

You are advised to check with your driving/motor insurance provider before returning to driving.

What outcome can you expect after a metacarpal fracture?

Most metacarpal fractures heal well. The swelling and pain normally takes 6 weeks to settle. In some cases the remaining swelling and tenderness at the fracture site may take several months to fully settle. Elevation of the hand and active hand exercises should help to improve these symptoms.

Metacarpal fractures may leave a lump/deformity at the break due to the fracture. A callus forms at the fracture site which can also leave a lump. The lump may gradually smooth out a little over the next year. The knuckle may not look the same or as prominent after the fracture. This should not affect the function of your hand.

Sometimes the finger seems to drop down slightly. This normally improves over the next few months.

Your hand will become weaker and it may take a few months to get your strength back.

Occasionally, the bone may take longer than expected to heal or the bone may heal with a deformity or it may not align properly when it heals. You may need to seek advice from the Plastics Surgery doctor.

If you have any questions on this information leaflet, please contact your Occupational Therapy Department.

The telephone number in Occupational Therapy is **01752 432220**

Your Occupational Therapist is: _____

Your notes:

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Contact: Administrator

Tel: 01752 432220

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