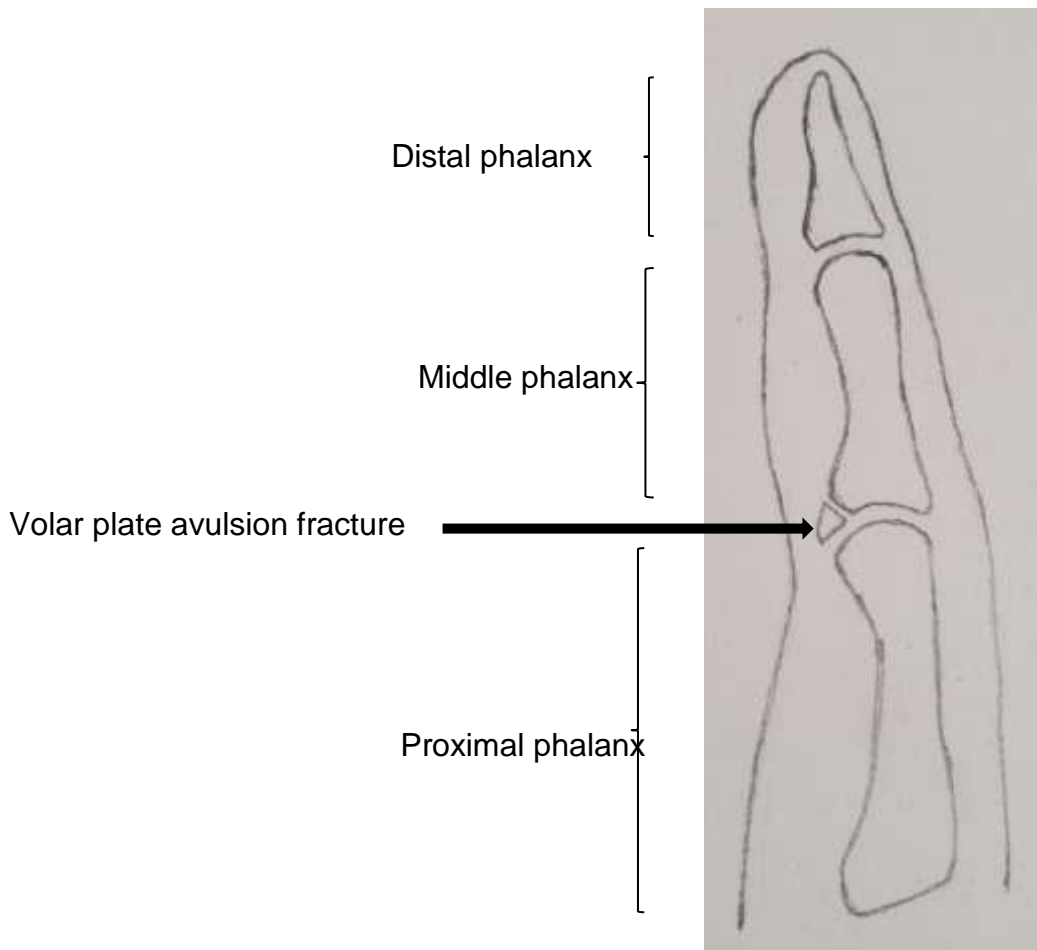


Occupational Therapy (Hand Therapy)

Volar Plate Injury

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What is a volar plate in the middle joint (PIP joint) of a finger/thumb?

A volar plate is a fibrous cartilage structure at the front of the middle joint of your finger. The **volar plate** prevents the middle joint from overstretching. The **collateral ligaments** on each side of the joint prevents the joint from bending sideways. The volar plate and collateral ligaments help maintain stability of the joint and prevent it from dislocation.

What is a volar plate injury?

Volar plate injury occurs when the middle joint of your finger is forced to overstretch backwards. It can be caused by a ball hitting the finger, or a fall or the finger is caught and forced backwards.

The volar plate can be partially torn or fully torn when it has been forced into overstretching. It can pull off a small piece of bone at the middle joint of your finger

Symptoms of a volar plate injury

- Painful
- Swollen
- Bruised around the middle joint of the finger
- Difficulty in moving the finger

What can you do to reduce swelling in your finger?

It is normal to have swelling after an injury. Swelling can make your hand uncomfortable and stiff. Most of the swelling should settle down in about 4 to 6 weeks but occasionally it will take a lot longer than expected.

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

Regularly exercising your shoulder and elbow, along with the rest of your hand will help the swelling to settle and prevent them from stiffening.

Your Occupational Therapist may advise you to use a compression wrap to reduce the swelling.

You can also try wrapping an ice pack or bag of frozen peas in a damp tea towel and putting this 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 suffer from circulation problems, it is not appropriate for you to use a cold compress.

How long it will take a volar plate injury to heal?

A volar plate injury usually takes between 4 to 6 weeks to heal. It can take up to 12 weeks to fully heal.

Treatment of a volar plate injury

Splinting (dorsal block splint)

You may be given a thermoplastic splint to wear specially made for you by the Occupational Therapist. The splint is worn for up to 6 weeks.

It is put on the back of your finger that keeps the middle joint in slight bending. This is to protect your finger from overstretching and any sideways forces that could cause further injury to your finger while it is still healing. This allows the volar plate and the structure around the joint to heal.



Dorsal block splint

Splinting schedule

- Please wear your splint all the time including when you are in the bath/shower and when you are in bed until _____.
- You can put a plastic bag over to keep your finger and splint dry.
- Your Occupational Therapist will advise you of the exercises that you can do within the splint to prevent your finger from stiffening.
- From _____, you can start to remove your splint and reduce the splinting during the day. You should wear your splint in bed and when the finger may be at risk of injury (i.e. on public transport or when you are outdoors).
- From _____, you do not need to wear the splint anymore.

How should I remove and put the splint back on?

Remove your splint once or twice a day to gently wash your hand.

- Undo the Velcro straps on the splint and remove the splint from your finger
- Keep all your fingers slightly bent
- Wash your hand with soap under a running tap
- Dry your hand thoroughly
- Put your splint back on your finger
- Keep your finger and splint dry

Buddy strapping

In cases where the injury is only minor and the joint is stable, the injured finger can be supported by strapping it with the adjacent finger. This helps to protect the injured finger and allow the injury to heal while you can move the finger freely. The buddy strapping should be worn all the time for 4 weeks.

The fingers can be buddy strapped with sticky tapes or a Bedford Splint (double finger elasticated stockinette)



Buddy strapping with sticky tapes



Buddy strapping with a Bedford splint

Finger exercises

While your finger is healing, the soft tissue in your joint could become stuck and make your finger stiff to move.

The following exercises can help prevent stiffness in your finger even if this means overcoming the discomfort. It is normal that you find moving your injured finger initially uncomfortable. You should not overstretch the middle joint of your finger when you exercise your finger as this may cause more damage to the joint.

Your exercises program

Besides the hand exercises, you also need to exercise your shoulder, elbow, wrist and any joints that are not included in the splint so as to prevent them from stiffening.

Please do the following exercises _____times a day.

Each time do _____repetitions of each movement.

Exercises while you wearing your splint

Isolated movement in end joint

- Undo the top strap on your splint.
- Use other hand to support your finger just below the end joint of your finger.
- Bend and straighten the end joint of your finger within the splint as far as you can.



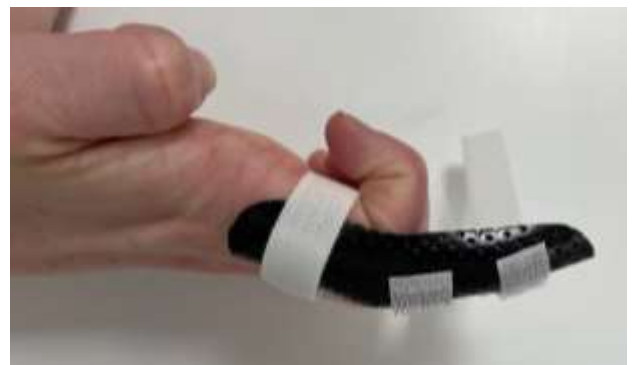
Isolated movement of the middle joint

- Undo the top 2 straps on your splint.
- Keep other fingers straight.
- Bend and straighten the middle joint of your finger as far as you can within the splint.



Clawing of middle joint and end joint of your finger

- Undo the top two straps on your splint.
- Keeping the knuckle joint of the finger straight.
- Bend the finger down at the end joint and the middle joint of the finger.
- Straighten your finger as far as to the splint.



Flexion of whole finger

- Undo the top two straps on your splint.
- Gently bend all the fingers down and curl them into the palm.
- Straighten your finger to as far as the splint.



Exercises without wearing your splint

From _____, you can take your splint off to do the same exercises.

Other exercises at a later stage

From _____, you can include the following exercises in your program

Passive clawing

- Use your other hand to gently bend the top and middle joint of the finger, keeping the knuckle joint flat.
- Straighten your finger under its own power (do not use your other hand to help).



Passive composite flexion

- Use your other hand to gently bend the finger into a full fist.
- Straighten your finger under its own power (not to use other hand to help).



When can you use your injured finger?

From _____, you can use your hand including the injured finger for light activities. Do not carry out heavy tasks.

From _____, you may return to full activity and normal use of your hand. You can go back to playing contact sports.

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 volar plate injury?

Most volar plate injuries heal in about 6 weeks. However the swelling, pain or discomfort may take several months to settle completely. The volar plate and soft tissue can take up to 3 months to heal fully. Most simple injuries will return to normal function after 3 months.

Your finger may become stiff due to lack of movement. It is important that you exercise your finger as you are advised by your Occupational Therapist. It may take 2 months or sometimes longer to regain full movement in your finger.

You may find your hand weaker when you start to use it. It may take a few months to get your strength back.

Complications

- Lasting swelling in finger
- Stiffness in finger
- Pain
- Inability to fully straighten the middle joint of the finger
- The middle joint can be larger than before the injury
- Deformity
- Very occasionally some instability in the joint

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:



**This leaflet is available in large print
and other formats and languages.**

Contact: Administrator

Tel: 01752 432220

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