

Volar plate injury

Other names: *finger sprain, volar plate avulsion, bony volar plate injury*

Reading time: 3-5 minutes

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What is a volar plate injury?

A volar plate injury happens when your finger joint is bent too far backwards (hyperextension). This causes the ligament and cartilage tissue on the palm side of your joint (volar plate) to tear or become detached from the bone. This injury is most commonly seen in the middle joint (proximal interphalangeal joint) of the index, middle, ring or little fingers.

Causes of a volar plate injury

These are very common injuries and often occur in a sporting accident. For instance, when a football or netball hits the end of your finger. It can also happen during a fall or catching your finger during everyday activity. The strong ligament known as the volar plate is stretched. This can then tear or pull off a small piece of bone (Figure 1).

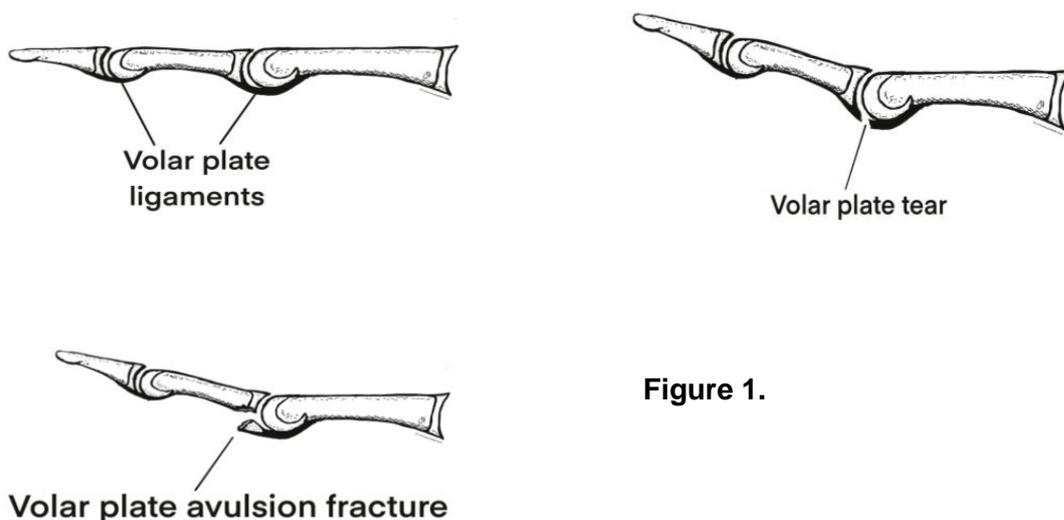


Figure 1.

Symptoms of a volar plate injury

The most common symptoms of a volar plate injury are:

- pain and tenderness around your joint
- swelling around your joint
- stiffness, and difficulty bending or straightening your finger. In some cases, your injured finger may appear crooked or deformed.

How is volar plate injury diagnosed?

A volar plate injury is usually diagnosed through an understanding of the likely injury pattern (finger bent back), an examination of the finger and an x-ray.

During the physical examination, your healthcare provider will look for swelling, tenderness and deformity of your affected joint. They will also perform a stress test on your affected finger to evaluate the stability of the joint and the integrity of the volar plate.

An x-ray is taken to rule out dislocation of the joint or breaks in the bone where the volar plate attaches.

Treatment of a volar plate injury

The aim is to return your finger to good pain free movement.

These injuries are treated without surgery using exercises and support for the finger (strapping or splinting). Your pain can be treated with simple painkillers. Ice and keeping your hand above the level of the heart can help with the swelling and pain.

Your injured finger is most often strapped to the next-door finger ('neighbour strapping' or 'buddy strapping') (Figure 2). Sometimes a splint is fitted on the back of the finger instead (Figure 3). Both treatments help to protect the finger while it heals. This part of the treatment usually stays in place for 3 weeks.



Figure 2.



Figure 3.

During the early stage it is important to move your finger regularly to reduce swelling and increase your movement. This means carefully following finger exercises given by your healthcare team. A hand therapist or physiotherapist may continue the treatment of your injury.

The exercises below can start immediately. The exercises should be done within a comfortable range. They should get easier over time.

Buddy strapping based exercise



Exercise 1

Bend your top two knuckles into a hook position with the big knuckles straight. Return your fingers to an open position. Repeat 10 times 4 to 6 times/day.



Exercise 2

Bend your fingers to the palm to make a full fist. Straighten your fingers back to the splint. Repeat 10 times 4 to 6 times/day

All movements should be done within comfort

Splint based exercises



Exercise 1

Loosen the top Velcro strap but retain the bottom strap around the base of your finger.

Bend your fingertips towards your palm to try and make a hook. Straighten your fingers back to the splint. Repeat 10 times 4 to 6 times/day.



Exercise 2

Retain the bottom strap around the base of your finger as above

Bend the fingers to the palm to make a full fist.

Straighten your fingers back to the splint. Repeat 10 times 4 to 6 times/day

Recovery from a volar plate injury

These injuries usually heal well and your finger returns to good use. Your healthcare team will give specific advice. You may:

- Return to light everyday activities with your strapping or splint on, avoiding heavy activities that cause pain.
- Return to work with the strapping or splint on if your type of job allows.
- Avoid sporting activities while your finger heals.
- Return to driving when you feel safe to control the vehicle. As the driver, you are responsible to drive safely.

However:

- Your injured finger can take longer than expected to heal. This means the swelling and some mild pain may be present for one to two years after the strapping or splint is stopped.
- Your finger is sometimes sensitive to touch or cold for one or two years.
- Less often stiffness in your finger joint can become a long term problem. Early movement helps to prevent this. If your finger movement is becoming worse six weeks after the injury, please contact your healthcare provider.

FAQs

1. What should I do if my neighbour strapping comes off?

You can reapply strapping yourself. You should place the strapping across the flat parts of your fingers, allowing movement at the joints.

2. How do I treat the swelling and pain in my finger?

Use simple painkillers regularly. Use ice and keep your finger moving. Keep your hand at the level of your heart to reduce swelling.

3. What should I do if my finger is becoming more stiff months after the injury?

The exercises for your finger are very important, so continue these. If the stiffness is worsening, seek advice from your healthcare provider.

4. What do I do if my finger joint is still swollen after three months?

Swelling of your finger joint after a volar plate injury is normal. It often continues for one or two years.

5. How often should I do my finger exercises each day?

You can complete the exercises four to six times each day. The movements should be done within comfort.

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Patient representatives

References

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