

## PIP Joint Injury

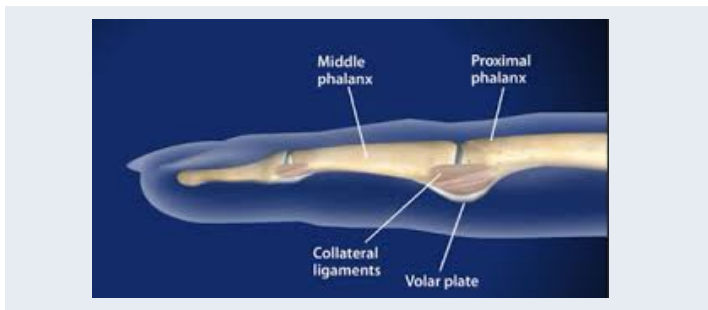
### WHAT IS A PIP JOINT INJURY AND HOW DOES IT HAPPEN?

The proximal inter-phalangeal or PIP joint is the small joint in the middle of your finger. The PIP joint bends and straightens your finger. The PIP joint is very complicated, there are a lot of structures in a very small space. The joint is where the proximal and middle phalanx bones articulate. It is stabilised by four soft tissue structures that support the top, bottom and sides of the joint like a box. The tendons that bend and straighten your finger run along the top and bottom, these normally glide smoothly as the joint moves.

If your finger gets forced in any direction or the joint dislocates, some of the soft tissue fibres will be stretched or torn, this usually include the collateral ligaments on the sides of the joint. Sometimes a piece of bone gets pulled off from where the collateral ligaments attaches. This is called an avulsion fracture.

Injury causes bleeding, swelling and scarring in all these tissues. Scarring and the natural healing process can cause the finger to tighten into a bent position and the weak injured muscles are unable to overcome this contracture.

When your finger has had a PIP joint injury it swells up at the PIP joint and can often be bruised. It usually hurts to straighten your finger fully and to make a fist. The PIP joint will often rest in a slightly bent position. Your finger can get stiff quickly which makes it even harder to bend or use normally.



### HOW IS A PIP JOINT INJURY TREATED?

#### Hand Therapy

Your hand therapist will assess your finger and ask you questions about your injury. Your hand therapy treatment may include

- A splint or strapping to protect your finger so the volar plate can heal.
- Management of your swelling with compression tape or sleeves, and massage
- Exercises to restore movement and strength to your finger.
- Advice about returning to work and sport.

#### Surgery

If your injury involves a large avulsion fracture you may need surgery to hold the fracture in place. This is not very common as most of these injuries heal well without surgery. Your hand therapist can review your xray and decide if you may need to be seen by a hand surgeon.



### WHAT CAN I EXPECT FROM MY REHABILITATION?

Your hand therapist will assess your finger, test the joint stability, and may refer you for an x-ray to check if there is a fracture and to make sure the joint is in a good position.

If you have a mild sprain, taping your finger to the next one (buddy-strapping) can be enough support. If you have a moderate to severe sprain or an avulsion fracture a plastic splint will be made to protect your ligaments while they heal. You will need to wear some support for at least 6 weeks. You may keep using a plastic splint or taping for sport or heavy tasks until 12 weeks after the injury.

The goals of hand therapy are to restore the bend (flexion) to your finger, and maintain or recover full straightening (extension) of the joint. Your hand therapist will tell you how often you need to attend hand therapy depending on how swollen, painful or stiff your finger is. You will be shown exercises to restore full movement and strength and given advice about how to return to normal activity.

It is normal for your PIP joint to remain mildly swollen for many months after this injury. This is because healing soft tissue is thicker than normal tissue. And there is a lot of healing tissue in a very small space within the PIP joint.

**Healing Time :** experience has shown us that even a simple looking PIP joint injury can take up to 9 months to settle and achieve a comfortable, functional range of movement.

If your finger has become stuck in a bent position this is called a fixed flexion deformity. You may need to attend hand therapy regularly over many months for stretching, serial casting or splinting to restore extension.

#### Do

- Wear your splint and/or compression tape/sleeve
- Follow your hand therapists' instructions about exercises and using your hand.
- Avoid daily tasks that involve any strong gripping or lifting.

#### Do Not

- Remove your splint without guidance from your hand therapist.
- Play ball sports until your hand therapist tells you it is safe.



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### WHAT SHOULD I LOOK OUT FOR?

- It is important to protect the healing joint from getting overstretched, especially in the first 6 weeks.
- Tell your hand therapist if your splint or plaster is too tight or uncomfortable, if your splint becomes loose or if you have any numbness or pins and needles.
- If your finger becomes red, swollen and painful you should stop your exercises and book an appointment to see your hand therapist. Elevation and ice may be helpful to reduce swelling.
- If your symptoms are getting worse book an appointment to see your hand therapist.
- If your finger is getting hard to straighten fully book an appointment to see your hand therapist

### WHAT WILL HAPPEN IF I DO NOT HAVE TREATMENT?

Over time the pain from the injury may settle but without proper treatment you may be left with a swollen or unstable joint that does not bend or straighten enough to use your hand in normal activity.

These injuries are much easier to treat early, please consider seeing a hand therapist.

### CONTACT DETAILS AND REFERENCES

Your hand therapist is

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Merivale Hand Clinic (03) 3559775

Orthobullets.com

Rehabilitation of the Hand and Upper Extremity, Sixth Edition. Ed Skirven, Osterman, Fedorczyk, Amadio.