

# Sagittal Band Rupture (Boxer's Knuckle)

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## What you're feeling

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The knuckle at the base of one of your fingers – most often the middle finger – feels sore, a little swollen, and **something isn't moving the way it should**. The classic sign is a feeling that the tendon on the back of the knuckle **snaps or jumps sideways** when you bend and straighten the finger. You may notice the finger drifts slightly toward the little-finger side, and that it is **hard to get the finger to straighten on its own** from a bent position – though once someone gently straightens it for you, it can hold there.

Many people first feel this **after throwing a punch** – against a bag, a wall, or in a fight – which is why the injury is nicknamed “boxer’s knuckle.” But it can also happen with a much smaller movement, like forcefully flicking a finger straight, or it can creep up gradually in people with inflammatory arthritis. There may be a painful clicking or catching every time you use the hand.

## What's actually happening

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On the back of each knuckle, the straightening (extensor) tendon runs down the centre of the finger like a cable in a groove. Thin slings of tissue called the **sagittal bands** sit on either side and hold that tendon centred over the top of the knuckle. The sling on the thumb side is the important one.

When that sling tears or stretches – from a punch, a sudden forceful movement, or long-standing joint inflammation – the tendon is no longer held in place and **slips off the top of the knuckle into the valley** between the bones, toward the little-finger side. Because the tendon is now sitting to the side rather than on top, it can't pull the finger straight efficiently from a fully bent position, and it snaps back and forth as the finger moves. That slipping, snapping, and weakness of straightening is the whole problem in a nutshell.

## What we can do about it

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The good news is that **if it's caught early, this often heals without surgery**. The key is to stop the tendon slipping while the sling repairs itself.

**Splinting (non-surgical).** The most common treatment is a small, custom splint that holds the injured knuckle from bending too far while leaving the other fingers – and the finger joints further out – free to move normally. One neat version, sometimes called a **relative-motion or “yoke” splint**, simply holds the injured finger a touch higher than its neighbours, which keeps the tendon centred while you keep using the hand. The splint is usually worn for around six to eight weeks. Started within the **first few weeks of the injury**, this works well for most people.

**Surgery.** If the injury is old by the time it’s seen, if the splint doesn’t settle it, or if the tendon is fully dislocating, surgery can put things right. The surgeon either **repairs the torn sling** directly or **rebuilds it** using a nearby strip of tendon to re-create the sling and re-centre the tendon over the knuckle. After surgery the finger is protected in a splint for a period while it heals.

## What to expect

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For early injuries treated in a splint, the outlook is good – the snapping settles, the finger straightens normally again, and most people return to full use of the hand. It does ask for patience: the splint is worn for several weeks, and pushing the hand too hard too soon can let the tendon slip again before the sling has healed.

For injuries that need surgery – usually the older or more severe ones – repair or reconstruction is generally reliable at stopping the dislocation and restoring smooth movement, followed by a period of splinting and hand therapy to rebuild motion and strength. Boxers, martial artists and other athletes can usually return to their sport, but the hand needs time to heal properly first to avoid the problem coming straight back.

## When to see someone

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- A knuckle that **snaps, clicks or catches** when you bend and straighten the finger, especially after a punch or forceful movement – get it looked at early, because early splinting is what makes the difference.
- **Difficulty straightening a finger on its own** from a bent position, or the finger **drifting toward the little-finger side**.
- Ongoing **pain and swelling over a knuckle** that isn’t settling, or a feeling that the tendon is “out of place.”
- A **knuckle injury in a boxer or martial artist** – these injuries are easy to play through and easy to miss, and they do better when treated sooner rather than later.