

Swan-Neck Deformity of the Finger

What you're feeling

You may have noticed that one or more of your fingers has taken on an odd shape. The middle joint of the finger – the big knuckle in the middle, not the one at the base – bends **backwards** so the finger looks slightly arched or “swan-like,” while the small joint nearest the fingernail droops **forwards**. Side on, the finger makes a shallow zig-zag.

Early on this may be more of a nuisance than a pain: the finger can feel like it gets “stuck” or snaps as you try to bend it, and it can be hard to make a smooth fist or grip small objects. As it becomes more fixed, the finger may no longer straighten or curl the way it used to, and everyday tasks – doing up buttons, picking up coins, gripping a pen – become fiddly and tiring. Some people first notice it simply because the finger catches when they reach into a pocket or a glove.

What's actually happening

Your finger is balanced by a clever system of tendons and small ligaments that run along the top, bottom and sides of each joint. The middle joint (the PIP joint) is normally stopped from bending backwards by a tough little ligament on its palm side called the **volar plate**, and by tendon bands that sit along the sides of the finger.

In a swan-neck deformity that balance is lost. If the volar plate becomes loose, or the side-tendons (the lateral bands) slip up onto the top of the joint, the middle joint is pulled back into hyperextension – and because the tendons are all connected, the tip of the finger is dragged into a droop. The two go together.

There are several reasons the balance can fail. Sometimes it starts at the fingertip: an untreated **mallet finger** (a dropped fingertip after a tendon injury) shifts the pull of the tendons and slowly tips the middle joint backwards. Often it is driven by **inflammatory arthritis**, especially **rheumatoid arthritis**, which stretches and weakens the ligaments. It can also follow loose-jointedness, old injuries, or conditions that increase muscle tightness. Whatever the trigger, the end result is the same recognisable shape.

What we can do about it

The right treatment depends on how flexible the finger still is and what is driving it – so the first step is always a proper hand assessment, and treating any underlying arthritis.

If the finger is still supple and the joint can be straightened and bent freely, we often start without surgery. A small, custom **figure-of-eight splint** (sometimes a neat silver-ring style splint) sits across the middle joint and quietly blocks the backward bending while still letting the finger work. Many people manage very well this way, and hand therapy helps keep the joints moving.

If splinting isn't enough, or the finger is becoming stuck, surgery can re-balance it. There are several well-established options, chosen to fit your finger: re-tethering the middle joint with a slip of one of your own tendons so it can no longer snap backwards (a **tenodesis**); tightening the loose ligament on the palm side; or moving the slipped side-tendons back where they belong. If the joint surface itself is worn out and stiff – common in long-standing arthritis – we may instead **fuse** the joint into a good working position or, in selected cases, **replace** it.

What to expect

Caught early, while the finger is still flexible, the outlook is good – a splint or a re-balancing operation can restore a much more useful, smoother finger. The more rigid and arthritic the joint becomes, the more limited the options, which is exactly why it's worth being seen before the finger sets in one position.

If you have surgery, expect a period in a splint and a course of hand therapy afterwards to retrain the finger and protect the repair – this rehab is a real part of the result, not an optional extra. Where an underlying arthritis is the cause, keeping that well controlled with your rheumatology team protects the other fingers from going the same way.

When to see someone

- A **finger tip that droops** and won't fully straighten after a knock or jamming injury (a **mallet finger**) – treating this early can head off a swan-neck later.
- A finger that is starting to **arch backwards at the middle joint**, or that catches, snaps or locks when you bend it.
- **Increasing stiffness**, or a finger that no longer makes a smooth fist.
- Known **rheumatoid or inflammatory arthritis** with changing finger shapes – worth reviewing before the deformity becomes fixed.