

Thumb Base Arthritis — Joint Replacement or Trapeziectomy?

Patient information from Mendip Hand Clinic

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This leaflet compares the two operations Miss Edwards performs most often for arthritis at the base of the thumb, so that you can weigh them up before your consultation. It is designed to support, not replace, your conversation with Miss Edwards. The separate Patient Information and Consent leaflet covers the operations, the risks and the recovery in full detail.

Written by Miss Alison Edwards, Consultant Hand Surgeon. Published: September 2026.
Next review due: September 2028.

Before comparing operations

Surgery is considered when non-surgical treatment has stopped giving enough relief. If you have not yet tried a splint supporting the thumb base, activity modification, painkillers or anti-inflammatory medication, hand therapy and a corticosteroid injection into the joint, those come first and often work well.

Doing nothing also remains a reasonable choice throughout. Thumb base arthritis is not dangerous, many people manage well for years, and for some people the pain settles as the joint stiffens. The trade-off is that pain and loss of pinch strength may continue or worsen.

The X-ray decides part of this for you

Your X-ray shows how much wear there is and, importantly, whether the joint immediately below the trapezium is also affected. Joint replacement needs that lower joint to be free of significant arthritis. If it is worn, replacement is not an option, and the comparison below becomes academic.

Trapeziectomy, with or without a sling

What it involves. The trapezium bone is removed, creating a space at the thumb base so that the worn surfaces can no longer rub together. In the sling version — ligament reconstruction and tendon interposition, or LRTI — a strip of tendon is used to stabilise the thumb and fill the space, preventing the thumb metacarpal from dropping into it.

What it offers. Proven long-term pain relief. No implant, so nothing that can wear out or need revising for implant failure. Decades of reliable results. It is well suited to older or less active patients.

What it costs you. Recovery is slow — several weeks in a splint and a gradual build-up over months. There is some loss of pinch strength compared with a normal thumb. The thumb can shorten, and occasionally the base can become unstable.

Recovery. Light activities at around 8–12 weeks. Driving and light or moderate work at about six weeks. Full strength typically takes 6–12 months, which is normal and does not mean anything has gone wrong.

Thumb base joint replacement (MAIA total joint replacement)

What it involves. The worn joint surfaces are removed and replaced with an artificial joint — a metal stem in the thumb metacarpal and a socket component in the trapezium, which together look like a very small hip replacement.

What it offers. Thumb length and alignment are maintained. Pinch and grip strength are often better, at least initially. Recovery is considerably faster than after trapeziectomy.

What it costs you. It is an implant, so it can loosen, wear or dislocate over time and may need revision surgery. Occasionally a fracture during implantation means converting to a trapeziectomy during the same operation. And it needs the joint below the trapezium to be free of significant arthritis.

How long does the implant last? This is the question most people want answered, and it deserves an honest reply. The longest published series of this implant found 88% still working well at 12 years (Chiche et al., 2023), and a second series found 88% at 10 years (Toffoli et al., 2024). Beyond that, the long-term outcome is genuinely not yet known. The most recent review of this type of implant concludes that follow-up is not yet long enough to draw firm conclusions about how long they last (Maling and Rooney, 2025). If you are in your fifties, that uncertainty matters more than if you are in your seventies.

Recovery. Splint for 2–4 weeks, exercises from about two weeks, driving from around four weeks, light activities at 2–6 weeks, full strength and heavy tasks by around six weeks to three months. Most people are at full function within 2–4 months.

Comparing the two

	Joint replacement (MAIA)	Trapeziectomy with sling
Pain relief	Good	Good
Movement	Good	Good
Strength	Often better, at least initially	Moderate; some loss of pinch
Thumb length	Maintained	Can shorten
Recovery	Faster — full function for most by 2–4 months	Slower — full strength typically 6–12 months
Durability	88% still working at 10–12 years; beyond that not yet known	No implant, so no wear and no revision for implant failure
Main drawback	The implant can loosen, wear or dislocate and may need revision	Thumb shortening and some loss of pinch strength
Requirement	The joint below the trapezium must be healthy	None

Both operations are carried out under a general anaesthetic, or a regional block that numbs the arm. The operation takes approximately 1–1.5 hours and is normally a day case, with same-day discharge.

The risks, and where they differ

Some risks are common to both operations: nerve or blood vessel injury, which is uncommon; persistent pain or stiffness; complex regional pain syndrome, which is rare but recognised; and scar tenderness.

Infection is not the same for both. It is around 1–2% after trapeziectomy (Hoogendam et al., 2023), and well under 1% after joint replacement (Vitiello et al., 2026).

Specific to trapeziectomy: reduced pinch strength, because the trapezium has been removed; thumb shortening, or the base of the thumb settling into the space; instability or collapse at the thumb base; and persistent pain if scar tissue forms.

Specific to joint replacement: loosening or wear of the implant over time, which may need revision surgery; dislocation of the implant; fracture during implantation, which may mean converting to a trapeziectomy during the same operation; tendon pain or trigger thumb in around 5%, with about 2% needing further surgery (Hoogendam et al., 2023); and the need for further surgery at some point in the future.

Please note that the trapeziectomy complication figures above come from a series using a Weilby sling technique.

Two other operations

Neurectomy divides the small nerve branches that carry pain signals from the joint, leaving the joint itself alone. Fusion, or arthrodesis, joins the bones of the joint together so that they no longer move against each other. Both suit specific groups of patients and are not commonly undertaken. If either might be right for you, Miss Edwards will go through it with you in detail.

How to think about the choice

Where there are several reasonable operations for the same problem, it usually means each has its own advantages and is best in particular circumstances. What matters is choosing the one that fits your joint, your hand and your priorities — and that your surgeon does that operation regularly and gets good results with it.

Broadly: if you want the quickest recovery and the best chance of preserved strength, and you accept that the implant may need revising at some point, replacement leans your way. If you would rather have nothing in your thumb that can fail, and you can tolerate a long, slow recovery, trapeziectomy leans yours. Your X-ray may make the decision for you.

Questions you may want to ask

- Which procedure would you recommend for me, and why that one rather than the other?
- What does my X-ray show, and does it rule either option out?
- How many of these operations do you perform, and what are your results?
- How long will I be in a splint, and how long before I can drive and get back to work?
- If I have a joint replacement, what happens if it wears out?
- What can I expect my pinch strength to be like afterwards?

Contact details

Mendip Hand Clinic, Practice Plus Group Hospital, Old Wells Road, Shepton Mallet, Somerset BA4 4LP. Bookings: 0330 818 8981.

If you think anything in this leaflet is unclear or needs updating, please tell us using the contact details above. For further background on this condition, the British Society for Surgery of the Hand also publishes patient information at bssh.ac.uk/patients.

A final note

This leaflet is general information and does not replace individual advice. Your own risks, alternatives and expected recovery should be discussed personally with Miss Edwards, in line with GMC guidance on decision making and consent.

References

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