CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

EVIDENCE SUMMARY

Thumb Base Joint Replacement (Touch)

Thumb Base Joint Replacement (Touch) – Procedure Outcomes & Post-operative Rehabilitation (Dual-mobility TMC/CMC Total Joint Arthroplasty)

Topic scope: post-operative rehabilitation after a **dual-mobility total joint replacement of the trapeziometacarpal (thumb base / CMC) joint** for advanced thumb base osteoarthritis – the **Touch** implant. Unlike trapeziectomy, the trapezium is **retained** and thumb length preserved, and a correctly seated dual-mobility implant is **immediately stable and load-sharing**. The rehab is therefore a **minimal-immobilisation, early-motion** pathway: protect briefly against the implant-specific early **dislocation** risk, restore opposition within the first month, then load.

> *Defining principle of the rehab here: a trapeziectomy relies on a scar/haematoma "spacer" forming where the bone was removed, which takes roughly **12 months** to mature – so rehab is slow by necessity. A dual-mobility thumb base **replacement** instead provides an **immediately stable, load-sharing artificial joint**, so immobilisation can be minimal, **opposition is restored within the first month**, and recovery is **faster than trapeziectomy**. The dual-mobility cup specifically **reduces the early dislocation risk** that drove longer immobilisation with older single-mobility implants. The one deliberate early restraint is therefore avoidance of **forced/extreme thumb positions** (the implant-specific dislocation risk) for the first few weeks, after which loaded pinch/grip strengthening begins. This is a **newer implant**: the evidence base is short-to-mid-term and low-to-moderate level, and rehab regimens are **under-reported and not standardised**.*

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A. PROCEDURE OUTCOMES (dual-mobility Touch TMC arthroplasty)

Dual-mobility total joint replacement of the thumb base is a comparatively new alternative to trapeziectomy for advanced trapeziometacarpal osteoarthritis. Early- to mid-term series report high implant survival and good restoration of pinch and function, with the principal trade-off being a higher complication/revision profile than the well-established trapeziectomy — though the dual-mobility design improves on the dislocation rate of earlier single-mobility implants.

- **High short-to-mid-term implant survival and good function.** A Touch-specific series reported **96% implant survival at 2 years** with high key-pinch strength; the main adverse events were **soft-tissue complications (de Quervain-type tenosynovitis, trigger digit)** rather than implant failure [Herren 2023]. A 150-patient dual-mobility cohort similarly reports early normalisation of function. *Moderate (case series / retrospective cohort).*
- **Faster recovery than trapeziectomy because the joint is immediately stable.** Because the implant is load-sharing from the outset, the thumb is only **briefly immobilised**, patients return to **near-normal activity early**, and **formal therapy may not always be required** — contrasting with the ~12-month maturation of a trapeziectomy spacer [Duerinckx & Verstreken 2022]. *Moderate (narrative review / cohort).*
- **Opposition and pinch/grip recover well.** Using the MOOVIS dual-mobility implant, the **Kapandji opposition score improved from 7 to 10** with improved pinch and grip [Dreant 2018]. *Moderate (cohort).*
- **The dual-mobility design reduces dislocation.** The extra articulation lowers the early dislocation risk that limited older single-mobility prostheses, supporting earlier mobilisation [Tchurukdichian 2019; Martins 2020]. *Moderate (cohort / mechanistic).*
- **Lower reoperation than ball-and-socket designs; persistent revision risk overall.** A network meta-analysis found dual-mobility implants had **lower reoperation than ball-and-socket** designs, with **TOUCH reoperation around 1.0%** [Burnett 2026 NMA]. Reported outcomes continue to evolve in ongoing reviews [Tosti & Duerinckx 2026]. *Moderate (NMA of mostly observational data).*
- **Registry-level work-absence benchmark.** Swedish registry data give a sense of real-world recovery: sick leave of roughly **94 days for men and 109 days for women** — a benchmark to set realistic return-to-work expectations rather than a target. *Moderate (registry).*

B. REHABILITATION / THERAPY EVIDENCE

The central rehab questions are (1) how long to immobilise, and (2) when to start motion and loading. Because the implant is immediately stable, the modern answer is **minimal immobilisation with early active opposition** — but the literature is explicit that there is **no consensus** and wide variation between centres, and that rehab protocols are **under-reported**.

- **Minimal immobilisation is justified by immediate stability.** A correctly seated dual-mobility implant is stable and load-sharing, so prolonged casting is unnecessary; the thumb is briefly protected, then mobilised

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early, with opposition typically back within the first month [Duerinckx & Verstreken 2022]. *Moderate (review).*

- **No standardised regimen — wide variation in immobilisation and motion timing.** A dedicated review of immobilisation and rehabilitation after thumb-base arthroplasty found reported **immobilisation ranging from 2 to 12 weeks** and **active range-of-motion commencing anywhere from 1 to 6 weeks**, with **no consensus** across studies [Barrett 2022]. This is the key caveat for any protocol: the timings are a defensible, surgeon-confirmed plan, not a trial-derived standard. *Moderate (systematic review of heterogeneous protocols).*
- **Early opposition recovery is achievable and is the functional priority.** Improvement of the Kapandji opposition score (7→10) demonstrates that active opposition is the early rehab target and is realistically attainable in the first weeks-to-months [Dreant 2018]. *Moderate (cohort).*
- **The early restraint is dislocation avoidance, not protected healing.** The dual-mobility design reduces but does not abolish early dislocation; the practical implication is to avoid forced/extreme thumb positions in the first weeks rather than to immobilise for prolonged periods [Tchurukdichian 2019; Martins 2020]. *Moderate / mechanistic.*

RECOVERY TRAJECTORY (EXPECTED, EVIDENCE-ANCHORED)

Phase	Window	Restraint	Hand use / therapy focus	Strength / load	Notes
I — Protect	**Week 0 to ~2–3**	Soft bulky dressing 7–10 d → thumb spica DAY splint	Keep IP/MCP/digits/wrist moving; oedema control; **avoid forced/extreme thumb positions**	No resisted thumb work	Early **dislocation** is the implant-specific risk; minimal immobilisation because the implant is immediately stable
II — Active motion	**Week ~2–3 to 6**	NIGHT splint to 6 wk	Out of day splint; **active unresisted opposition (Kapandji), palmar + radial abduction, gentle circumduction, web-space work**; light everyday use; scar massage once healed	Still **no heavy grip/pinch**	Opposition typically restored within the first month; faster than trapeziectomy
III — Load / strengthen	**Week 6+**	Restrictions lifted	Progress pinch/grip-specific loading and task use	**Pinch + grip strengthening from 6 wk** (putty, key/tip pinch); full weight-bearing ~6 wk	**Strength matures over 6–12 months**; return to heavy/manual work staged across this window

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(Phase windows reflect KH-confirmed parameters and are consistent with the wide ranges reported in the literature; they are typical guides, not trial-derived deadlines — see Barrett 2022.)

C. KEY CONTROVERSIES / EVIDENCE QUALITY

1. **Replacement vs trapeziectomy.** Dual-mobility replacement restores the joint and gives a **faster functional return** (immediate stability, opposition back within a month) versus the ~12-month maturation of a trapeziectomy spacer, but at the cost of a **higher complication and revision rate** and a shorter evidence track record. Trapeziectomy remains the well-established, lower-risk benchmark. *Moderate; trade-off, not a clear winner.*
2. **How long to immobilise / when to start motion. No consensus** — reported immobilisation spans **2–12 weeks** and AROM start **1–6 weeks** [Barrett 2022]. This page's day-splint-2–3-weeks → night-splint-to-6-weeks → strengthen-from-6-weeks plan is a defensible, surgeon-confirmed regimen within that reported range, not a proven standard. *Weak–moderate.*
3. **Dislocation risk.** The dual-mobility cup **reduces** the early dislocation that limited older single-mobility implants, but the risk is not zero in the first weeks — hence the early forced/extreme-position restraint [Tchurukdichian 2019; Martins 2020]. *Moderate / mechanistic.*
4. **Complication profile.** Soft-tissue complications (de Quervain-type tenosynovitis, trigger digit) are the commonest early issues rather than implant failure [Herren 2023]; reoperation is low for dual-mobility (TOUCH ~1.0%) and lower than ball-and-socket designs [Burnett 2026 NMA]. *Moderate.*
5. **Maturity of the evidence.** This is a **newer implant**: outcomes are **short-to-mid-term**, evidence is **low-to-moderate level** (case series, retrospective cohorts, registry and NMA of mostly observational data), and **rehabilitation is under-reported and not standardised**. Tone should be appropriately cautious. *Evidence base still maturing.*

D. EVIDENCE STRENGTH FLAGS (summary)

- **MODERATE (cohort / registry / NMA of observational data):** high short-to-mid-term implant survival (96% at 2 yr, Touch) with good key-pinch; Kapandji opposition 7→10; dual-mobility lower reoperation than ball-and-socket (TOUCH ~1.0%); registry sick-leave benchmark (~94 d men / 109 d women); faster functional return than trapeziectomy.
- **MODERATE (systematic review of heterogeneous protocols): no consensus** on rehab — immobilisation 2–12 weeks, AROM start 1–6 weeks (Barrett 2022).
- **WEAK / CONSENSUS:** the **specific** immobilisation-then-early-opposition-then-strengthen phase timings (surgeon-confirmed, within the reported range; not trial-derived); the dislocation-avoidance rationale (mechanistic).

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- **CAVEAT:** newer implant — short-to-mid-term, low-to-moderate-level evidence; higher complication/revision rates than trapeziectomy persist; rehab under-reported.

CITATIONS

RAG CORPUS (180,000+ ORTHOPAEDIC ARTICLES)

- Duerinckx J, Verstreken F. Dual mobility prosthesis for trapeziometacarpal joint arthritis. *EFORT Open Rev*. 2022. DOI: 10.1530/eor-22-0027
- Herren DB, et al. Trapeziometacarpal joint replacement with the Touch prosthesis: two-year results. *J Hand Surg (Eur Vol)*. 2023. DOI: 10.1177/17531934231179581
- Dreant N, et al. Trapeziometacarpal arthroplasty with the dual-mobility MOOVIS prosthesis. *Hand (NY)*. 2018. DOI: 10.1177/1558944718797341
- Tchurukdichian A, et al. Dual-mobility implant reduces the dislocation risk in trapeziometacarpal arthroplasty. *Hand (NY)*. 2019. DOI: 10.1177/1558944719855690
- Martins A, et al. Dual-mobility trapeziometacarpal prosthesis. *J Hand Surg (Eur Vol)*. 2020. DOI: 10.1177/1753193420901435
- Barrett H, et al. Immobilization and rehabilitation after trapeziometacarpal joint arthroplasty: a review. *J Hand Surg Glob Online*. 2022. DOI: 10.1016/j.jhsg.2022.05.011
- Tosti R, Duerinckx J. Trapeziometacarpal total joint arthroplasty: current concepts. *J Hand Surg Am*. 2026. DOI: 10.1016/j.jhsa.2026.01.003
- Burnett K, et al. Implant designs for trapeziometacarpal arthroplasty: a network meta-analysis of reoperation. *J Hand Surg Am*. 2026. DOI: 10.1016/j.jhsa.2025.12.011

THUMB BASE ARTHROPLASTY LITERATURE (URLS)

- Herren DB, et al. TOUCH trapeziometacarpal prosthesis — two-year results. PMC. https://pmc.ncbi.nlm.nih.gov/articles/PMC12098211/
- Dual-mobility trapeziometacarpal arthroplasty — 150-patient cohort. PMC. https://pmc.ncbi.nlm.nih.gov/articles/PMC12662895/
- TOUCH prosthesis case series. PMC. https://pmc.ncbi.nlm.nih.gov/articles/PMC8470025/
- KeriMedical — TOUCH thumb base prosthesis patient information. https://www.kerimedical.com/en/patients/

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