

1st Carpometacarpal (CMC) Arthroplasty

1st CMC Joint Osteoarthritis

The 1st CMC joint is located at the base of the thumb. It gives the thumb a wide range of motion – up, down, across the palm, and the ability to pinch. A healthy joint has cartilage on the surface of the bones that acts as a cushion, allowing smooth and painless movement of the joint.

Osteoarthritis means that there is wear and tear of the joint. With osteoarthritis, the cartilage breaks down and releases substances in the joint that cause inflammation and pain.



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What is 1st CMC Arthroplasty?

1st CMC arthroplasty is a joint replacement surgery, one of the surgical options for the treatment of 1st CMC joint osteoarthritis. This surgery is performed under general anesthesia, which means that you will be put to sleep during surgery.

The aim of the surgery is to replace the damaged joint, relieve pain, regain functional thumb movement and improve your quality of life.



What are the risk of the surgery?

Complications will be explained to you by your surgeon before surgery. The potential risks are minimal but include:

- Infection
- Stiffness
- Nerve and blood vessel injury
- Dislocation
- Periprosthetic fractures
- Loosening and wear of prosthesis

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What to Expect After 1st CMC Arthroplasty?

The goals for postoperative management following a CMC arthroplasty are to regain thumb / wrist range of motion, decrease pain, increase functional strength and return to functional activities.

1) Bandage and splint

After surgery, your forearm and hand will be kept in a bulky bandage. Please do not remove the bandage on your own.



Postoperative Day 1 (POD1):

- The bandage and dressing will be lightened.
- A custom splint will be fabricated for you by our Hand Occupational Therapist.



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You should wear the splint all the time as advised by your surgeon and Hand Occupational Therapist. You should wear the splint during shower to protect your operated hand from trauma or strenuous activities. Remove splint for exercise and splint hygiene ONLY.

2) Swelling management

Swelling may persist up to a few weeks after operation. Controlling the swelling helps to improve pain and speed up your recovery.

- You should keep your operated hand above the level of your heart
- To use the arm sling ONLY when walking around
- When sitting or lying, you should use pillows to support your operated hand
- Do the hand exercises that you have been taught to do. Continue to move the other unaffected fingers to prevent stiffness and improve the swelling



3) Wound care

- The wound over your operated hand will take about 14 days to heal. The site will be covered with dressing during this period.
- Please keep your dressing clean and dry. Protect your dressing with a waterproof cover (e.g. a plastic bag) when showering
- Use a wet tissue to wipe the unaffected fingers on your operated hand
- If the dressing gets wet, dirty or loose, go to nearby polyclinic or General Practitioner to get it changed

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- You should keep your hand in neutral position when taking off the splint during wound dressing
- The stitches are usually removed 14 days after surgery (unless otherwise instructed by your surgeon)
- You should avoid smoking as it may delay wound healing



4) Exercise and therapy:

The goals of rehabilitation are:

- 1) Be able to oppose your thumb to all your fingers
- 2) Move your thumb away from your index finger
- 3) Regain functional strength

You will have regular outpatient follow ups with your surgeon and Hand Occupational Therapist during the rehabilitation phase:

- You should follow the exercise regime as taught by your surgeon and Hand Occupational Therapist
- You should also mobilize unaffected joints to prevent stiffness, e.g. shoulder, elbow, other unaffected fingers
- You should avoid gripping, pinching motion, or lifting heavy objects with your operated thumb unless otherwise instructed

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5) Pain management

The degree of pain you may have will vary and differ amongst individuals. The goal is to minimize the pain so that you can perform your prescribed and exercise regimens and to be able to rest comfortably. Your pain medication must be taken as prescribed by your attending surgeon.

Hand numbness and tingling may be expected after surgery. This is due to the local anesthesia used during surgery and may last up to 6-12 hours.

6) Other concerns:

- **Implant Card:** you will receive an implant card on discharge to state the types of implant used during surgery.
- **Driving restrictions:** You should not drive while taking pain medications as some medications may cause drowsiness.
- **Back-to-work restrictions:** If your job does not require use of the hand that was operated on, you may return to work after the wound has healed. However, if your job requires use of that hand, you will likely not be able to work for at least six weeks after surgery.
- You will be able to start using your hand and thumb around three weeks after surgery. It can take up to six months to one year for the thumb to feel normal, and with time, the strength of your thumb will continue to improve.

7) When and how to seek further treatment

Seek urgent medical consultation with your doctor at the Department of Emergency Medicine of Singapore General Hospital if any one of the following conditions occurs:

- Fever of 38 °C and above
- Severe pain on the operated site not relieved by prescribed medication
- Your operated hand is cold and blue
- Redness, swelling, odour and discharge (blood, fluid or pus) from the wound
- Any other abnormal and / or prolonged symptoms, which cause concern

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8) Follow - Up Appointment

- Keep your appointment(s) as scheduled, reschedule your appointment as soon as possible if you missed your appointment
- Report to Specialist Outpatient Clinic on your appointment date and time.
- For any change of appointments(s) in Singapore General Hospital Out-patient clinic, please download Singhealth Health Buddy Application or call the Singapore General Hospital appointment hotline at 63214377 **OR** email to appointments@sgh.com.sg.

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