

Thumb CMC Joint Arthroplasty

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone thumb CMC joint arthroplasty. General time frames are given for reference to the average, but individual patients will progress at different rates depending on their age, comorbidities, pre-surgical range of motion, strength, health/functional status, rehabilitation compliance, learning barriers and complications. Specific time frames, restrictions and precautions are given to protect healing tissues and surgical reconstruction.

Notes

The inability to flatten the palm after the procedure is typical. Often this is a concern to the patient. Activities such as cleaning the windows, wiping down a countertop, etc. can be frustrating. Patients need to understand this is to be expected to a degree because this positioning is maintaining stability at the CMC joint. Therapists should work on activity modification to decrease frustration. Patients will typically indicate their thumb and hand have restored functional use within 6 months.

Postoperative Guidelines

Surgical Indication

Thumb CMC joint arthritis and/or instability with significant pain at the base of the thumb. The pain is typically present both at rest and with daily activity. Patients who have failed conservative management for 2-3 months.

Pain and swelling

This procedure can be painful during the recovery period and can cause swelling. It is normal for hand and thumb to be swollen 6–12 months after surgery. Redness does not always indicate infection but a lot of drainage from the wound is usually a sign of infection.

Return to Work

Patients are normally able to return to work approximately 2 weeks after surgery. The following should be taken into consideration:

- Type of work
- Surgeon's approval
- Postoperative complications

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Phase I (surgery to 5-14 days after surgery)

<p>Rehabilitation appointments</p>	<ul style="list-style-type: none"> • Occupational Therapy (OT) made same day as hand surgeons’ post-operative appointment • Dr.Gander, Dr. Kruse, Dr. Michelotti, Dr. Salypongse, Dr. Tofte, and Dr. Zachary: 5-14 days post op
<p>Rehabilitation goals and priorities</p>	<ul style="list-style-type: none"> • Fit and fabricate forearm-based Thumb Spica orthosis (Interphalangeal joint (IP) free), unless indicated otherwise from MD. Metacarpophalangeal (MP) joint should be positioned at 30 degrees of flexion and thumb in slight abduction, wrist in neutral to ensure capsular healing. • Scar management • Control edema and pain • Activities of daily living (ADLs) with safe use of custom orthosis and activity modifications
<p>Suggested therapeutic exercises</p>	<ul style="list-style-type: none"> • Active Range of Motion (AROM): only for digits 2-5 and thumb IP joint within constraints of orthosis. • AROM for shoulder and elbow on affected side. • Ice as needed.
<p>Precautions</p>	<ul style="list-style-type: none"> • No resistive gripping or pinching. • No lifting more than 1 pound.

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Phase II (10 days to 3 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> • 1-2X per week. •
Rehabilitation goals and priorities	<ul style="list-style-type: none"> • Resume ADLs within pain tolerance and limitation of orthosis. • Scar management • Edema management • Desensitization • Adjustments/modifications to orthosis as necessary.
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Initiate gentle AROM of wrist (extension, flexion, ulnar deviation, radial deviation, circumduction). • Continue gentle AROM of digits 2-5 • desensitization
Precautions	<ul style="list-style-type: none"> • No resistive gripping or pinching.

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Phase III (4 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> • 1-2X per week.
Rehabilitation goals and priorities	<ul style="list-style-type: none"> • Transition to hand-based Thumb Spica orthosis (IP free).
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Dr. Kruse, Dr. Zachary, Dr. Tofte, Dr. Gander, and Dr. Michelotti: Initiate gentle AROM for thumb (IP, MP, CMC joints) • Stability exercises for thumb MP and CMC • Within splint, encourage functional activities and prehension of small lightweight objects to regain dexterity • AROM of wrist in all planes
Precautions	<ul style="list-style-type: none"> • Avoid resistive gripping and pinching.

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Phase IV (6-8 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none">This will be based on therapist discretion per patients' recovery and need
Rehabilitation goals and priorities	<ul style="list-style-type: none">Pt may begin to wean from orthosis. Recommended to continue hand-based orthosis for heavy activities and at night. Patient may want to consider using orthosis as needed for joint protection in the futureMay consider transitioning into a comfort cool for patients' comfort
Suggested therapeutic exercises	<ul style="list-style-type: none">On-going scar management, may initiate ultrasound if indicatedDr. Kruse, Dr. Zachary, Dr. Tofte, Dr. Gander, and Dr. Michelotti: AROM and AAROM of thumb composite flexion and opposition, extension, flexion, and circumduction
Precautions	<ul style="list-style-type: none">Avoid resistive pinching and gripping until 8 weeks post-operative.

Phase V (8-12 weeks post-operative)

Rehabilitation appointments	<ul style="list-style-type: none"> • This will be based on therapist discretion per patients’ recovery and need
Rehabilitation goals and priorities	<ul style="list-style-type: none"> • Functional use of surgical thumb and hand in pain free range • Minimal to no use of supportive orthosis
Suggested therapeutic exercises	<ul style="list-style-type: none"> • Continue with AROM and PROM of thumb • Functional light to moderate task and use of affected hand to tolerance • Initiate joint protection and activity modification for CMC arthritis as needed • Initiate light passive range of motion (PROM) of composite thumb • Desensitization techniques for hypersensitivity if indicated • 12 weeks: strengthening may be initiated if indicated

References

These rehabilitation guidelines were developed collaboratively between UW Health and UnityPoint Health - Meriter Rehabilitation and the UW Health Orthopedic Surgeons.

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