

CMC Arthroplasty (Speed Spiral) Protocol

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Copies of this protocol and background may be found on kavisacharmd.com under Resources

Surgical Procedure: This procedure is recommended for advanced stages of thumb CMC joint arthritis and/or instability of the thumb CMC joint. The procedure is performed by first removing the trapezium. A reconstruction of the CMC joint is then performed by utilizing a tendon as the soft tissue interpositional arthroplasty. This is often referred to as ligament reconstruction and tendon interposition (LRTI). This technique creates a space between the trapezium and thumb metacarpal; the speed spiral implant is then sized and placed in the empty space.

The speed spiral implant is a tightly rolled human collagen allograft that replaces the arthritic trapezium bone. It is a structurally sound, stable, load-bearing graft implant that maintains the height of the joint to prevent thumb CMC joint collapse. The implant will incorporate into the body, reducing pain, and increasing grip strength and power pinch strength. This procedure allows for more aggressive therapy with an earlier range of motion, strength, and overall quicker recovery.

When you go home from surgery, you will be placed in post-operative dressings and a short arm thumb spica splint. All dressings should be left alone until your first post-op appointment. Dressings will be removed at your first post-op appointment and the wound will be cleaned. Once post-op dressings have been removed, you will either be placed in a short arm thumb spica cast or sent to a therapist to have a custom, removable splint made.

6-10 Days Post-Op (Initial Visit after Surgery):

- Dressing:
 - Bulky dressing is removed, and a light compressive dressing is applied.
- Splint:
 - Fabrication of forearm-based thumb spica splint (IP free) with the thumb positioned mid-way between palmar and radial abduction. Wear full-time x 4 weeks.
- Exercise:
 - Full Active/Passive Range of Motion of digits 2-5, forearm, elbow, and shoulder.
 - Thumb IP Active/Passive Range of motion at least 4 x/day
 - Gentle MCP Active Range of Motion

10-14 Days Post-Op:

- Therapist authorized to remove sutures if still in place/if applicable.
- Once the incision is completely healed, scar management techniques may be initiated.
 - Scar massage
 - Use of silicone gel sheeting
 - Scar desensitization
- Continue full-time use of the splint, remove 4x/day for Home Exercise Plan (HEP).
- Lifting is limited to <2lbs (weight of a coffee cup)

4 Weeks Post-op:

- Splint:
 - Transition to hand-based thumb spica splint, fabricated by the therapist
 - Continue wearing a splint between exercise sessions and at night for the protection of surgical procedure and for comfort.
- Exercise:
 - Active Range of Motion initiated to the thumb MPJ/CMCJ and wrist 6-8x/day for 10min sessions.
 - Begin wrist Active Range of motion

6 Weeks Post-Op:

- Splint:
 - Continue splint wear between exercise sessions and at night for the protection of surgery and for comfort.
- Exercise: Unrestricted Passive Range of Motion exercises may be initiated

8 Weeks Post-Op:

- Splint:
 - Discontinue daily use of splint with continued use during heavy lifting and/or sports activities for protection until 12 weeks post-op.
- Exercise:
 - Begin gentle progressive strengthening if pain-free

12 Weeks Post-Op:

- Splint:
 - May discontinue splint completely.
- The patient progressively returns to full activity

FAQ's

- **How quickly may I return to activities such as skiing/snowboarding, etc.?**
 - 8-10 weeks
- **How quickly may I be able to complete administrative duties such as typing and filing?**
 - Following your first post-op appointment, approximately 7-10 days after surgery. This time period is patient-dependent based on pain tolerance. No lifting more than 2lbs.
- **Can I get my incision wet?**
 - No, the incision should be kept covered and dry until your first post-op appointment, approximately 7-10 days following surgery.
- **Will I need pain medication?**
 - The thumb CMC arthroplasty surgery is often painful. Pain is always worse at night and elevating the surgical extremity is the most important factor when working to improve pain. If tolerated, we use extra-strength Tylenol and Ibuprofen/Naproxen as first-line medication. You will be offered a nerve block to numb the extremity for a period of time. There are two versions of the nerve block that we utilize; a single-shot block that will last roughly 14 hours and a 3-day catheter that constantly infuses numbing medication. You typically lose motor and sensory function during the effective timeframe of the desired block, we put you in a sling to protect your arm after surgery. In addition to the nerve block, you are provided with narcotic medication to help with the

breakthrough pain and to help you sleep at night. We will have a discussion on the day of surgery to best determine the medication and anesthetic regimen for you surgery. Most patients are done taking narcotic pain medication within 5-7 days post-op.

- **What anesthesia will I have?**
 - We perform our thumb CMC arthroplasty surgeries under general anesthetic with a single day or three day nerve block for the arm.

- **What is the Speed Spiral implant?**
 - The SpeedSpiral™ CMC Implant is a shaped allograft intended to be used for supplemental support and reinforcement of the flexor carpi radialis tendon and other structures of the capsuloligamentous complex; and as such, functions as a dense, strong and flexible connective tissue layer.