

MCP Joint Postoperative Therapy

- ❖ Postoperative Guidelines
 - This technique has been developed in conjunction with Robert D. Beckenbaugh, MD and Ann Lund, OTR, CHT.
 - As the manufacturer of this device, Integra LifeSciences Corporation does not practice medicine and does not recommend this or any other therapy protocol for use on a specific patient. The surgeon who performs any procedure is responsible for determining and using the appropriate therapy for each patient.
- ❖ Integra® MCP Postoperative Therapy Protocol Rheumatoid Patients:
 - Postoperative therapy for the Integra® MCP differs for Rheumatoid versus Osteoarthritis/ Trauma patients. This brochure summarizes postoperative guidelines. For more information, please contact customer service at 512.836.5001, or in US, 877.370.5001 (toll-free).



Integra® MCP

- ❖ Postoperative Dressing
 - Apply a bulky dressing with a palmar and dorsal plaster splint maintaining the wrist at 10-15° of dorsiflexion and slight ulnar deviation. The MCPs should be held in full extension and the PIPs in slight flexion at 5-10°. Position must be checked in the OR with post-op x-ray.
 - If swan neck deformities are present preoperatively, the PIPs should be placed in maximum flexion.
 - 2 Days Postoperative Care:
 - Remove the bulky dressing and apply a short arm cast that maintains:
 - Wrist in ulnar deviation at 0-10°,
 - MCP joints in full extension with slight radial deviation (apply moleskin-tape straps to hold digits in radial deviation and extension),
 - Allows full PIP/DIP extension/flexion.
 - X-ray to confirm correct implant position after cast is applied.
 - 2 Days -- Postoperative Care
 - Remove the bulky dressing and apply a short arm cast that maintains:
 - wrist in ulnar deviation at 0-10°,
 - MCP joints in full extension with slight radial deviation (apply moleskin-tape straps to hold digits in radial deviation and extension),
 - Allows full PIP/DIP extension/flexion.

- X-ray to confirm correct implant position after cast is applied.
- 2 Days – 3 Weeks Postoperative Care
 - If necessary, minimize edema by elevation, massage, or compression.
 - Take care **not to rotate, compress, or distract** the joints.
 - Gentle, active and passive motion of individual PIPs/DIPs can be performed to maintain IP flexibility.
- 3 Week Postoperative Care
 - Patient's first formal therapy appointment.
 - Remove sutures, and lightly dress wound.
 - Take care **not to rotate, compress, or distract** the joint during routine therapy.

❖ Splint Fabrication

- Dynamic Extension Assist
 - Positions the wrist at 0-10° extension with slight ulnar deviation; MCPs at 0° extension and slight radial deviation; with IPs and thumb free.
 - Alternatively, the splint may be based volarly or radially as a gutter splint.
 - A volar wrist block added to the dynamic splint can focus flexion through the joints themselves and not the wrist. Oval 8's could also be used for this.
 - Use as necessary:
 - Derotational slings to correct digit supination or pronation, and
 - Distal radial pull outriggers may be added (as shown) to correct ulnar drift.



- Static MCP Flexion Block: This is an exercise splint for intrinsic tightness and/or to maintain IP joint mobility.
 - Supports the MCPs volarly and allows IP flexion,
 - Forearm-based with wrist neutral and slight ulnar deviation,
 - MCPs at 0° of extension, and IPs and thumb are free.
- Static Resting Splint
 - Positions the wrist at 0-10° of extension and slight ulnar deviation,
 - The MCPs at 0° with finger dividers or out of form to promote slight radial deviation,
 - The PIPs are held in comfortable flexion, and
 - The thumb should be in a position of rest.



Confirm proper implant position in splints with x-ray. Once the splints are made and have been checked with x-ray, patients may begin exercises as described below:

❖ Exercises

It is imperative for the success of this surgery in RA that the MCPs are not allowed to flex past 45° for the first six weeks. More aggressive motion can result in recurrent ulnar deviation or an extension lag of the MCPs.

The patient should not begin any resistive use of the hand, even for ADLs until week 6, as this can result in subluxation. Basic joint protection principals to prevent recurrent ulnar drift and subluxation should be discussed. A review of appropriate ADL techniques and adaptive equipment may be necessary to maintain the patient's overall independence.

All exercises should be done in a slow and pain-free manner.

❖ Exercise Frequency & Repetition

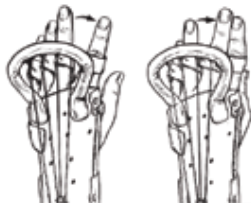
It is recommended that exercise sessions be performed hourly throughout the day, with 10-15 repetitions of each exercise during each session. **Frequency and number of repetitions depends on soft tissue stability and rate of healing.**

EXERCISE #1 Controlled MCP flexion 0-30°
(regulated by lead sinkers on outrigger fish line)

EXERCISE #2 Touch each finger tip to thumb tip
(careful not to flex more than 30°)

EXERCISE #3 Radial Finger Walking

EXERCISE #4 PIP/DIP Flexion & Extension



Radial
Finger
Walking

- 4 Weeks Postoperative Care
 - Continue wearing splints and do exercises as previously described.
 - If the MCPs cannot actively flex to 45° after the first four weeks, finger slats can be taped either dorsally or volarly to block flexion at the IPs and focus motion at the MCP joints (reverse oval 8's also work). Dynamic flexion assist splints may be used.
 - Continue MCP flexion to 45° and begin light functional activities in dynamic splint.

- 6 Weeks Postoperative Care
 - Continue wearing splints and do exercises as previously prescribed.
 - Begin gentle motion outside of splint but continue dynamic splinting to ensure proper alignment.
 - Resume light ADLs only while wearing dynamic splint.
- 6-12 Weeks Postoperative Care
 - Gradual weaning from the dynamic splint if alignment maintained; resume light ADL's.
- 12+ Weeks Postoperative Care
 - Continue therapy as needed.
 - Night resting splint worn for life.

❖ Integra® MCP Joint Replacement Postoperative Therapy Protocol Osteoarthritis & Trauma Patients

- Postoperative Dressing
 - Apply a bulky dressing with palmar and dorsal plaster splint maintaining wrist at 10-15° of dorsiflexion and slight ulnar deviation. The MCPs should be held in full extension and the IPs in slight flexion at 5-10°.
 - X-ray to confirm correct implant position after splints are applied in the OR.
- 1 Week Postoperative Care
 - First therapy appointment.
 - Remove plaster splint and lightly dress the wound.
 - Take care **not to rotate, compress, or distract** the joint during routine therapy.

❖ Splint Fabrication

- Dynamic Extension Assist:

(see “Rheumatoid–3 Weeks Postoperative Care” section for splint details.)

 - Initiate active MCP motion in dynamic splint with controlled flexion of 0-60°. Maintain IP motion.

If stable, the surgeon may choose not to use dynamic splinting.

- Static MCP Flexion Block:
 - An MP flexion block splint should be made to maintain full MCP extension yet allow IP flexion for day exercises and rest periods. It is also worn as a night resting splint. Individual or all fingers may be included.
 - X-ray to confirm correct implant position after fabrication of splints. Once this is done, patients may begin exercises as described in the next section.

❖ Exercises

It is important that the MCPs extend fully. In osteoarthritis and trauma patients, the soft tissue envelope may be very stable and flexion to 90° may be achievable. However, flexion should be limited to 60° during the first two weeks postoperatively to protect the extensor repair.

The patient should not begin any resistive use of the hand, even for ADLs.

All exercises should be done in a slow, pain-free manner while wearing the dynamic splint.

- **Exercise Frequency & Repetition:**

- It is recommended that exercise sessions be performed hourly throughout the day. The patient should do 10-15 repetitions of each exercise during each session.

EXERCISE #1 MCP Flexion to 45-60° according to surgeon's Instructions

EXERCISE #2 Touch Each Finger Tip to Thumb Tip

EXERCISE #3 Full PIP/DIP Flexion & Extension

- **4 Weeks Postoperative Care**

- Continue wearing splints or use buddy taping and do exercises as previously prescribed.
- Resume light ADL outside of the splint.
- Increase MCP flexion to 90° actively.
- If 60° of flexion has not been achieved, active assistive ROM exercises and a dynamic MCP flexion assist splint may be required.
- X-ray to confirm correct implant position.

- **6+ Weeks Postoperative Care**

- Progress to full activities as tolerated.