



POWH MCP Arthroplasty Modified Madden Protocol

Dynamic Extension Assist

Suitable for Patients who are assessed to be able to apply a dynamic splint and perform a regular exercise program. The combination of outrigger slings and radial bar create a force couple to protect from recurrence of ulna drift during the initial post op period

Assess

Pre-Op Function:
PRWHE
ROM
Deformities (e.g.
Swan neck,
Boutonniere or
Flexion
contractures
Pinch and grip
strength

Commence

Day 3-5
Assess Post-Op
AROM
Wound
Oedema

Ongoing

AROM
Monitor for MCP
extension lag
Scar

Advice

Oedema
management and
wound care, scar
massage and
avoid lateral
pinch

Two orthoses

Static night orthosis
Wrist 0-20° extn and 10°-20° ulna deviation
MCP joints supported in neutral with radial
alignment support
IP's comfortable extension



Dynamic MCP assist orthosis
Wrist 0-20° extⁿ and 10°-20° ulna deviation
Outrigger finger slings at 90° angle of pull
from the proximal phalanx +/- mild radial
pull allowing MCP flexion and extension 0°
to 70° with minimal resistance
May incorporate a radial bar



On wean of dynamic splint consider
neoprene 'in line' splint or hand based
dynamic MCP extension splint if MCP lag
present

Exercises

The most effective postoperative
management is one that is based on
the patient's tissue response to the
exercises and the positioning
program instituted by Hand Therapy.

Initial (10 reps 2 hourly)
MCP flexion and extension
Composite flexion and extension
Passive IP flexion and extension

Week 3

Reconstructed joints become more
stable and may present as increased
stiffness. Review passive exercises.

Week 4

Out of orthosis exercises can be
added when changing splints e.g.
radial finger walking and passive
MCP flexion if indicated

Week 5

If no lag or alignment issues out of
splint day for pain free daily
activities. Avoid lateral pinch

Week 6

The implant is encapsulated.
Dynamic splint can be weaned
unless lag present. Return to light
duties

Week 8

Strengthen
Continue night splint for 4-6+
months

Implant clinically stable at 21 days but avoid deforming forces such as lateral pinch for 12 weeks.

Outcomes: average MCP Arc of motion of 15-65°. The desired result is a functional arc of motion for the patient, pain relieved and deformity improved. Grip strength and function are not necessarily improved.

