

Sagittal Band Injury – Conservative

This protocol is intended to provide the clinician with a guideline for the postoperative rehabilitation course of a patient who has undergone **Acute sagittal band rupture**. 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.

Sagittal band injuries present with the metacarpal phalangeal joint (MCPJ) in a flexed position with the extensor tendon on the radial or ulnar side of the joint. Radial subluxation of extensor tendon is more common than ulnar. This can be caused trauma or chronic inflammatory process, like arthritis. Diagnosis can be made clinically with the inability to initiate MCP extension but the ability to hold MCP in extension once passively extended. Imaging like an ultrasound or MRI can help to determine the injury as well. Acute injuries can be treated with an orthosis while chronic injuries often will need surgical intervention.

Guidelines

Indication

- Acute (<3 weeks) sagittal band rupture (complete or partial)
- Inability to initiate MCP extension but the ability to hold MCP in extension once passively extended

Return to Work

The timeline for returning to work can vary depending on the type of work performed, various accommodations that may be available within your work environment, and any postoperative complications. Your surgeon will discuss the timeline for returning to work after consideration of these factors.

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Phase I (Initial)

Rehabilitation appointments	<ul style="list-style-type: none"> • 1x/week or per therapist discretion
Rehabilitation goals and priorities	<ul style="list-style-type: none"> • Activities of daily living (ADLs) within orthosis • Fabricate orthosis • Edema management
Suggested therapeutic exercises	<ul style="list-style-type: none"> • AROM within the orthosis
Precautions	<ul style="list-style-type: none"> • No lifting, pushing, or pulling more than 5 pounds with involved upper extremity • No weightbearing of the involved upper extremity
Orthotic management	<ul style="list-style-type: none"> • Fabricated a P1 blocking extension orthosis (MCPJ in extension, IPJ free) or relative extension motion orthosis with the involved finger in MCP 10-20 degrees of hyper extension • Orthoses should provide support to the extensor tendon to not allow it to sublux. • Wear all the time. Can remove for safe hygiene at the sink while keeping the MCPJ in extension

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Phase II (4 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> • 1x/week or per therapist discretion
Rehabilitation goals and priorities	<ul style="list-style-type: none"> • Activities of daily living within orthosis • Edema management
Suggested therapeutic exercises	<ul style="list-style-type: none"> • AROM in relative extension motion orthosis
Precautions	<ul style="list-style-type: none"> • No lifting, pushing, or pulling more than 5 pounds with involved upper extremity • No weightbearing of the involved upper extremity
Orthotic management	<ul style="list-style-type: none"> • Transition to relative extension motion orthosis if able
Progression criteria	<ul style="list-style-type: none"> • Restricted MCPJ flexion with no extension tendon subluxation

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Phase III (6 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> Per therapist discretion
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Activities of daily living within orthosis Initiated gentle unrestricted ROM
Suggested therapeutic exercises	<ul style="list-style-type: none"> Initiate AROM full composite ROM 5x/day without orthosis in place
Precautions	<ul style="list-style-type: none"> No lifting, pushing, or pulling more than 5 pounds with involved upper extremity No weightbearing of the involved upper extremity
Orthotic management	<ul style="list-style-type: none"> Wear orthosis all the time except for therapeutic exercises
Progression criteria	<ul style="list-style-type: none"> No subluxation of extensor tendon at MCPJ

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Phase IV (8 weeks)

Rehabilitation appointments	<ul style="list-style-type: none"> Per therapist discretion
Rehabilitation goals and priorities	<ul style="list-style-type: none"> Light to moderate activities with no orthosis in place Full ROM of digits
Suggested therapeutic exercises	<ul style="list-style-type: none"> Initiate PROM if needed
Precautions	<ul style="list-style-type: none"> No lifting, pushing, or pulling more than 5 pounds with involved upper extremity No weightbearing of the involved upper extremity
Orthotic management	<ul style="list-style-type: none"> Wear orthosis at night and with heavy activities, leisure activities, and unsafe activities
Progression criteria	<ul style="list-style-type: none"> Stability of extensor tendon on MCPJ present

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Phase V (10 weeks)

Rehabilitation appointments	<ul style="list-style-type: none">• As needed
Rehabilitation goals and priorities	<ul style="list-style-type: none">• Return to all daily activities and progressively get back to heavy activities and leisure activities
Suggested therapeutic exercises	<ul style="list-style-type: none">• Initiate strengthening
Precautions	<ul style="list-style-type: none">• No restrictions• Perform activities within pain tolerance
Orthotic management	<ul style="list-style-type: none">• Discontinue orthosis
Progression criteria	<ul style="list-style-type: none">• Stability of extensor tendon on MCPJ present

References

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- Peelman, J., Markiewitz, A., Kiefhaber, T., & Stern, P. (2015). Splintage in the treatment of sagittal band incompetence and extensor tendon subluxation. *The Journal of hand surgery, European volume*, 40(3), 287–290. <https://doi.org/10.1177/1753193414530591>
- Wu, K., Masschelein, G., & Suh, N. (2020). Treatment of Sagittal Band Injuries and Extensor Tendon Subluxation: A Systematic Review. *Hand (New York, N.Y.)*, 1558944719895622. Advance online publication. <https://doi.org/10.1177/1558944719895622>

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

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