

## **Therapeutic Guidelines for conservative Therapy of Finger Pulley Injuries**

**Pulley support ring** 6-8 weeks (23/24), depending on the instructions in the diagram. Remove the ring for one hour per day and apply skin care (panthenol ointment). Secure the ring with tape.

**Load build-up** Non-specific training and general strength training can be started immediately, without using the injured finger.

Week 1-2 • Guided movements, careful active movement, light isometry, coban taping under the ring during movement exercises if necessary.

Week 3-4 • Isometry, physiotherapy/hand therapy. Carefully guided eccentric exercises with minimal resistance. Free movement in everyday life.

Week 5-6 • Careful concentric strengthening of the fingers under pulley protection ring with, for example, Gogor (Muskers Climbing) while gradually increasing the resistance. Start with the weakest springs and then slowly increase. Additional light static holding exercises on the grip bar, but no hanging on the grip board yet. Avoid direct pressure on the injured ring ligament (pull-up bar!).

Week 7-8 • Only applies to grade 4a and, if applicable, grade 3 injuries. Further increase in load over the two weeks while still using the pulley support ring as protection

### **Rehabilitation training after immobilization phase with pulley support ring**

Careful hanging exercises on the grip board using sloper grips and relief using elastic bands, pull-ups on the bar with H-tape.

No hanging exercises with the pulley support ring!

Start careful climbing, increase load to full load over 4-6 weeks, pulley protection with H-tape.

After 4 months • Full load, competition readiness, continued taping for at least one year, in some cases permanently

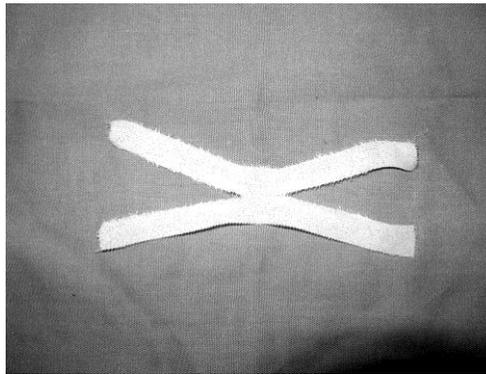
**As a general rule: Do not climb with the pulley support ring (significant risk of injury!).**

## Pulley Injury Therapy Regimen

Therapeutic guidelines of pulley injuries in rock climbers (Consensus Statement of Expert Commission Sportsmedicine Bamberg (Volker Schöffl, Isabelle Schöffl, Christoph Lutter, Michael Simon, Yasser El-Sheikh), Bamberg 2019 [36], modified after (Schöffl et al. 2004c))

	Grade I	Grade II	Grade III	Grade IV a	Grade IV b
	Pulley strain	Complete tear of A3 or A4, partial tear of A2	Complete tear of A2	Multiple ruptures: – A2/A3 or A3/A4 rupture if: – No major clinical bowstring – Ultrasound-proven possibility of reposition of the flexor tendon to the bone – Therapy starting <10 d after injury – No contracture	Multiple ruptures: – A2/A3 or A3/4 with obvious clinical bowstring – A2/A3/A4 rupture – Singular pulley rupture with FLIP phenom – Singular rupture with increasing contracture – Singular rupture with secondary, therapy-resistant, tenosynovitis
Therapy	Conservative	Conservative	Conservative	Conservative, if secondary onset of PIP contracture >20° secondary surgical	Surgical
Immobilization	None	optional, <5 days	Optional, <5 days	Optional, <5 days	Postsurgical 14 days
Functional therapy with pulley protection (defined)	2–4 weeks H-tape (during day time) or thermoplastic ring	6 weeks thermoplastic pulley ring	6–8 weeks thermoplastic pulley ring	8 weeks thermoplastic pulley ring	4 weeks thermoplastic ring (after 2 weeks of immobilization)
Easy sport-specific activities	After 4 weeks	After 6 weeks	After 8 weeks	After 10 weeks	After 4 months
Full sport-specific activities	After 6 weeks	After 8–10 weeks	After 3 months	After 4 months	After 6 months
H-taping during climbing	3 months	3 months	3 months	>12 months	>12 months

## H-Tape:



(Schöffl I, Einwag F, Strecker W, Hennig F, Schöffl V (2007)

Impact of „Taping“ after Finger Flexor Tendon Pulley Ruptures in Rock Climbers J Appl Biomech 23(1) 52-62

A strip of tape approximately 1.5 cm wide and 8-10 cm long (depending on finger thickness) is torn from both ends so that a strip approximately 1 cm wide remains in the middle and two 0.75 cm thick strips remain on each side of the middle strip. Two of these strips are then passed around the proximal phalanx and stuck down tightly. The joint is then bent and the two remaining strips are passed distal the joint and stuck down tightly.