Trigger Finger: Current Research and Treatment
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Trigger finger is a condition that can impact the daily lives of our patients by causing a finger or thumb to become “stuck” or “trigger.” Often, passive movement is required to resolve the episode. It is most commonly seen in the thumb and ring finger and usually presents with pain. Although the exact etiology is unknown, it is linked to chronic repetitive movement, and middle aged women are more likely to present with the condition. Trigger finger is also associated with rheumatoid arthritis, gout, and diabetes, and it often co-exists with De Quervain's and carpal tunnel syndrome. There are a variety of options for treatment including surgical intervention, corticosteroid injections, and splinting. According to the research, corticosteroid injections range from a 60-90% success rate and complications are rare. Recent research examining splinting methods have shown high success rates. Below you will find past and up-to-date research investigating a variety of splinting methods to resolve trigger digits, an attached protocol with images of splints that are proven to be successful, and a home exercise program that can be given to trigger finger patients following a splinting regimen.

### Conservative Trigger Finger Research

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<th>Splinting Method</th>
<th>Treatment/ Duration</th>
<th>Results</th>
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<td>MCP joint splinted in 10-15 degrees of flexion</td>
<td></td>
<td>70% successful outcome Splint was successful in 77% with patients who experience symptoms in 6 months or less and 44% of those with symptoms longer than 6 months Higher compliance rate when splinting MCP at 10-15 degrees flexion versus 0 degrees to increase functional use of hand</td>
<td>Patel MR, Bassini L. Trigger fingers and thumb: when to splint, inject or operate. J Hand Surg. 1992;17 A:110-3.</td>
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<tr>
<td>Ring splint with MCP joint at 15 flexion (optimizing hand function and allowing tip-to-tip prehension)</td>
<td>Wear day and night for minimum of 6 weeks; if pt continued to have triggering, treatment was extended to 10 weeks Exercise worksheet demonstrating passive IP flexion, composite full finger flexion, full finger extension, and active hook exercises. Exercises were to be completed out of the splint 5 repetitions, 3x a day</td>
<td>92% felt that their trigger finger symptoms resolved after 6-10 weeks of splinting</td>
<td>Colbourn J, Heath N, Manary S, Pacifico D: Effectiveness of splinting for the treatment of trigger finger. J Hand Ther 21 336-343, 2008. Level II-Quasi-experiment</td>
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<tr>
<td>Static finger circumferential orthosis that blocked PIP, but allowed MP and DIP active motion Multiple digits affected: Hand finger orthosis to immobilize MP joints in 10-15 degrees of flexion with unrestricted IP motion Thumb: circumferential IP blocking splint with open tip</td>
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<td>98% achieved a triggering SST score of 1 or 2 after the intervention and 87% required no further intervention one year following the study</td>
<td>Valdes, K. (2012). A retrospective review to determine the long-term efficacy of orthotic devices for trigger finger. Journal of Hand Therapy, 25(1), 89-95 Level III-Retrospective, non-experimental</td>
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**Trigger Finger**

**Conservative Management Protocol**

Description: Trigger finger is a condition in which the flexor tendon "triggers" or "snaps" with finger movement. The tendons of the flexor digitorum superficialis (FDS) and the flexor digitorum profundus (FDP) glide within fibro-osseous sheaths, which are maintained on the phalanges by fibrous pulleys providing mechanical efficiency. Irritation and inflammation of the flexor tendon
and/or sheath can lead to swelling or the formation of a flexor tendon nodule preventing the normal excursion of the tendon under the pulleys. Splinting has been proven to be effective in resolving trigger symptoms. The intent of splinting is to alter the biomechanics of the flexor tendons while encouraging maximal differential tendon glide.

**0-6 Weeks:** Splint should be worn day and night for a minimum of 6 weeks.

**Single digit (2 options):**
- Ring splint with MCP Joint at 15 degrees flexion (optimizes hand function and allowing tip-to-tip prehension). If patient has a large PIP joint size or frequent swelling at the PIP joint, the splint may be left open dorsally to allow for ease of removal.
- Static finger circumferential splint with blocked PIP, allowing MP and DIP active motion

**Multiple affected digits:**
Hand finger splint to immobilize MP joints in 10-15 degrees of flexion with unrestricted IP motion

**Thumb:**
Circumferential IP blocking splint with open tip

**Splint Instructions:**
- The splint should be worn day and night, but can be removed for exercises and showering.
- The splint will be used for a minimum of 6 weeks; if triggering continues, splinting will be extended to 10 weeks.
- Complete the above exercises out of the splint 5 repetitions, 3x a day.
- Remember precautions in order to decrease symptoms:
  - Do not grip repetitively
  - Do not grip forcefully
  - Wear splint as instructed

**HEP Instructions:**
The patient should be educated in splint use and exercises to be completed outside of the splint 5 repetitions, 3 times a day.

Exercises include:
- passive IP flexion
- composite full finger flexion
- full finger extension
- active hood exercises
○ MP joint is passively held in flexed position while patient actively extends IP joints to strengthen extensor hood

6-10 Weeks:
If triggering continues after splinting for 6 weeks, the patient should extend treatment to 10 weeks. Most patients feel their symptoms resolve after 6-10 weeks of splinting. If triggering continues after 10 weeks, a steroid injection or surgical intervention may be needed.

Resources: