

BSN medical


International Casting Conference  
Goa, India  
March 15, 2014

Functional Cast Therapy

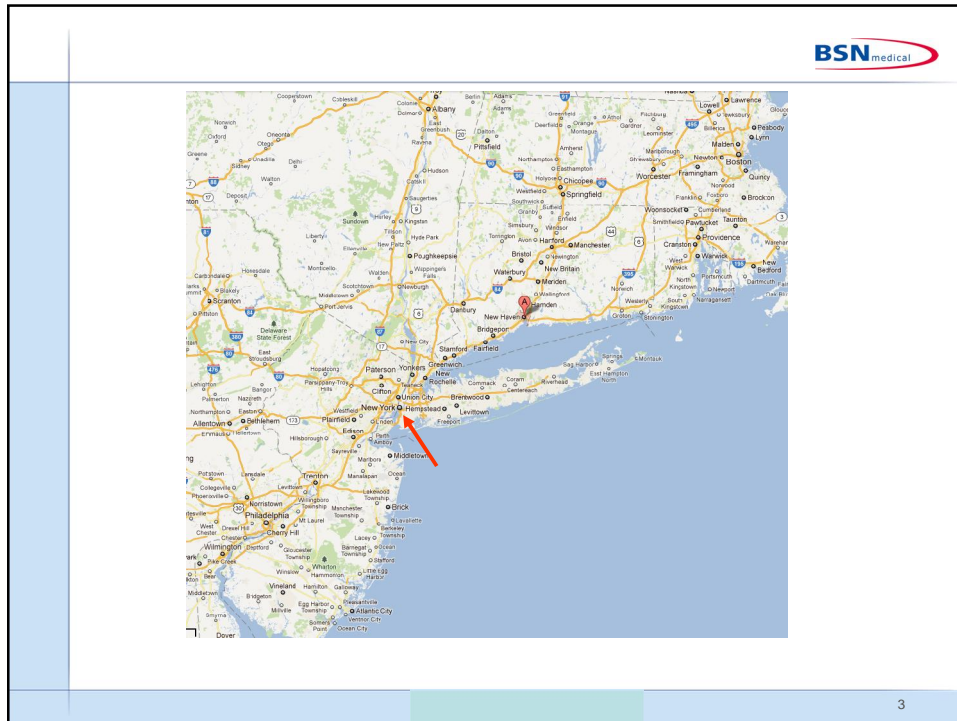
Emily Altman, PT, DPT, CHT, OCS, CLT

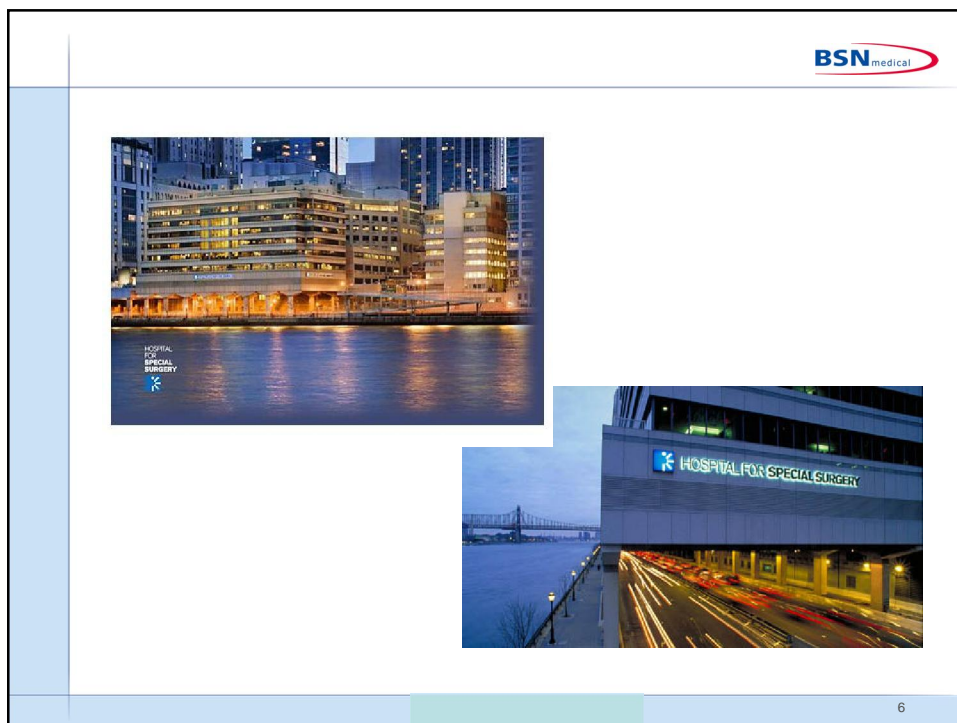
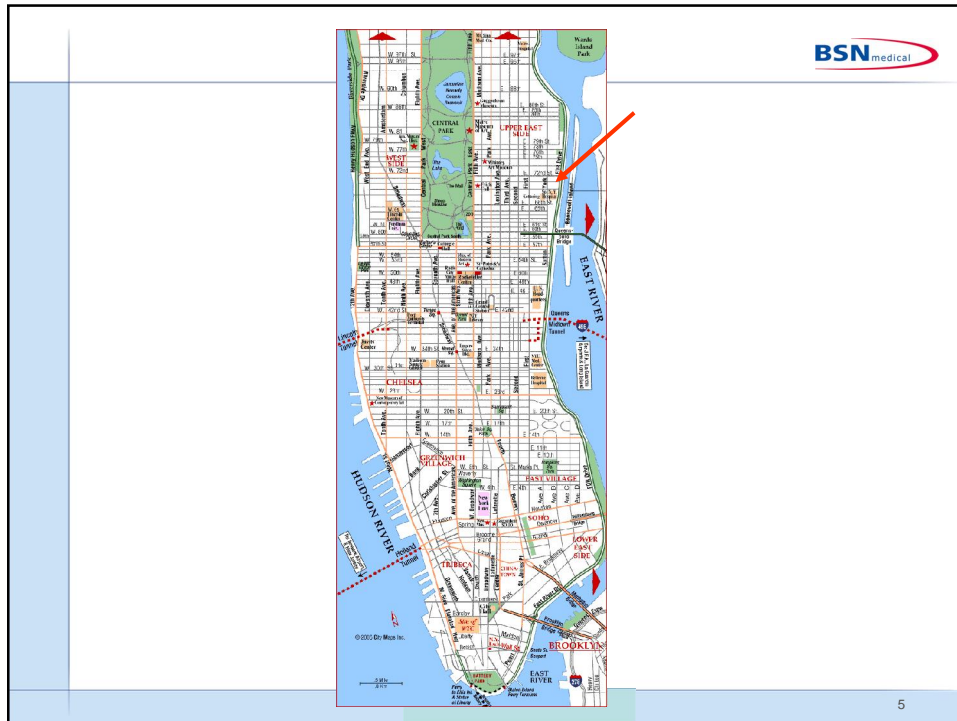
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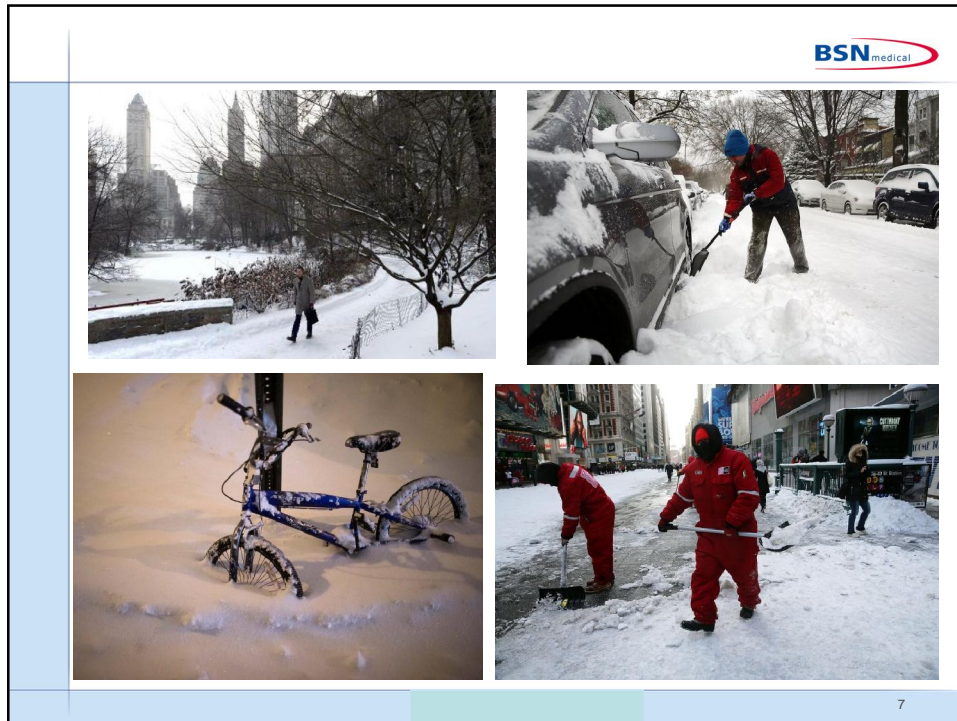
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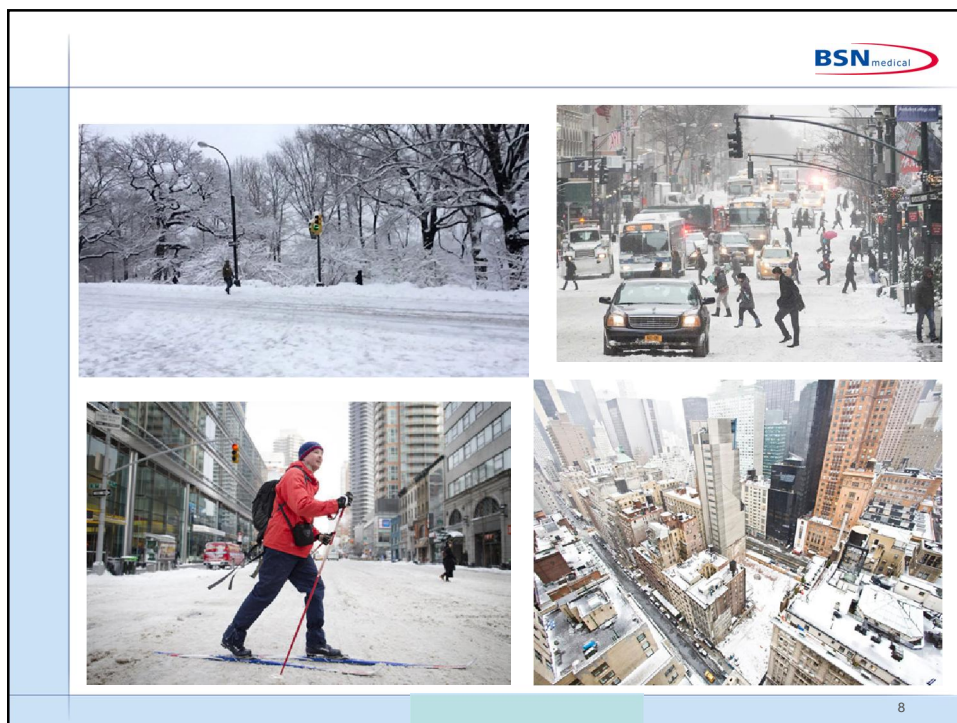
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## Symposium Objectives



- § Discuss the Functional Cast Therapy (FCT) technique
- § Walk through a step-by-step example of FCT in pictures
- § Describe my experience with FCT and how we use it in our clinic
- § Share some creative clinical examples of FCT use

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## About Me



- § Hospital for Special Surgery, New York, NY
- § Physical Therapist
- § Certified Hand Therapist (CHT)
- § Hand Therapy Center of the Rehabilitation Department
- § Patient Population
  - Fractures: distal humerus to distal phalanx
  - Tendon injuries
    - § Traumatic
    - § Overuse
  - Nerve injuries
    - § Traumatic
    - § Compression
  - Overuse injuries
  - Osteoarthritis/degenerative joint disease
  - Rheumatoid arthritis

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## How FCT and Emily Crossed Paths

- § Booth at the American Society of Hand Therapist annual conference in 2004
- § Contacted BSN representative
- § Inservice by Mike Gill
- § Practice, practice, practice
- § Surgeon buy-in
- § Now a staple in the clinic

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## What is Functional Cast Therapy?

- § FCT technique cast will provide strong, functional, and lightweight support to the affected area
- § Cast can be uni-valve or bi-valve with scissors to adjust for initial fit or edema
- § Cast provides a customized fit to the patient and can be quickly and easily refitted
- § Trimming is easily done with scissors and therefore eliminates the need for a cast saw

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## What is Functional Cast Therapy?

- § The development of the FCT technique resulted from the revolutionary technological breakthrough in non-fiberglass casting tape
- § This technology allows us to combine safety, durability, strength, and comfort that is as easy to use as fiberglass and thermoplastics


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## Advantages of FCT For Practitioner

- § Fast, individual, and versatile treatment of the patient
- § Quick and easy application
- § Long lasting and cost effective treatment
- § Very little waste
- § No need for cast saws, heating, or drawing patterns

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## Advantages of FCT For Patient



- § Fast Treatment
- § Light Weight Immobilization
- § Will never change its shape or size due to heat exposure
- § Machine Washable
- § User Friendly

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## Overview



- § The FCT technique is an easy to learn technique that can be implemented into any treatment area with ease
- § FCT/Splints 5 Steps
  1. Material preparation
  2. Application of under padding
  3. Application of Delta-Cast Conformable
  4. Removal and customization
  5. Fit test of the application

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## Short Arm Cast

Recommended Materials

- One roll of Delta-Cast Conformable 3"
- 18-20" Terry-Net Stockinette 2" or 3"
- Gloves
- Black Sharpie Pen
- Bandage Scissors
- BSN Black & Gold Scissors
- Cutting Strip
- Foam Padding (adhesive)
- BSN Sticky-back Hook Velcro
- BSN Stretch Loop Strap (or non-stretch)
- Bucket of water

Possible Indications

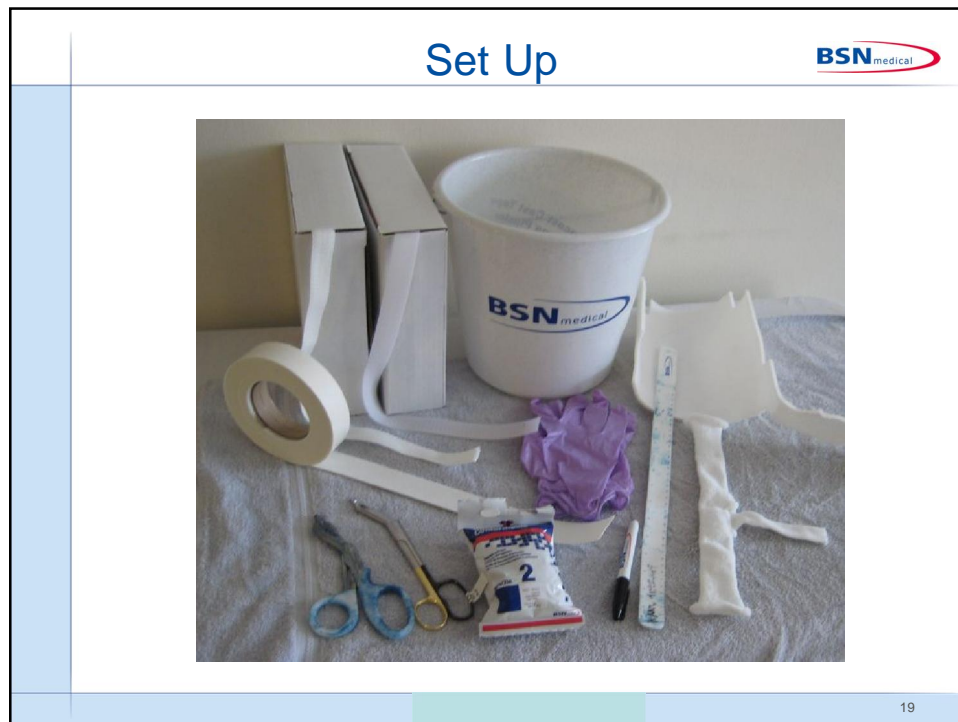
- Distal Radius Fracture
  - Post-op
  - Non-op
- TFCC injury
- Post-op Distal Radioulnar Joint (DRUJ) Reconstruction
- Wrist extensor/flexor tendonitis

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## Concept of Layers

- § One Layer: Flimsy
- § Two Layers: Adequate. Target for areas to be cut
- § Three Layers: Rigid, very difficult to cut with scissors
- § Four Layers: Very rigid, cannot cut
  
- § Focused rigidity, yet easy to don/doff
  
- § Plan ahead
  
- § Use different # of layers in different areas to achieve your specific goals

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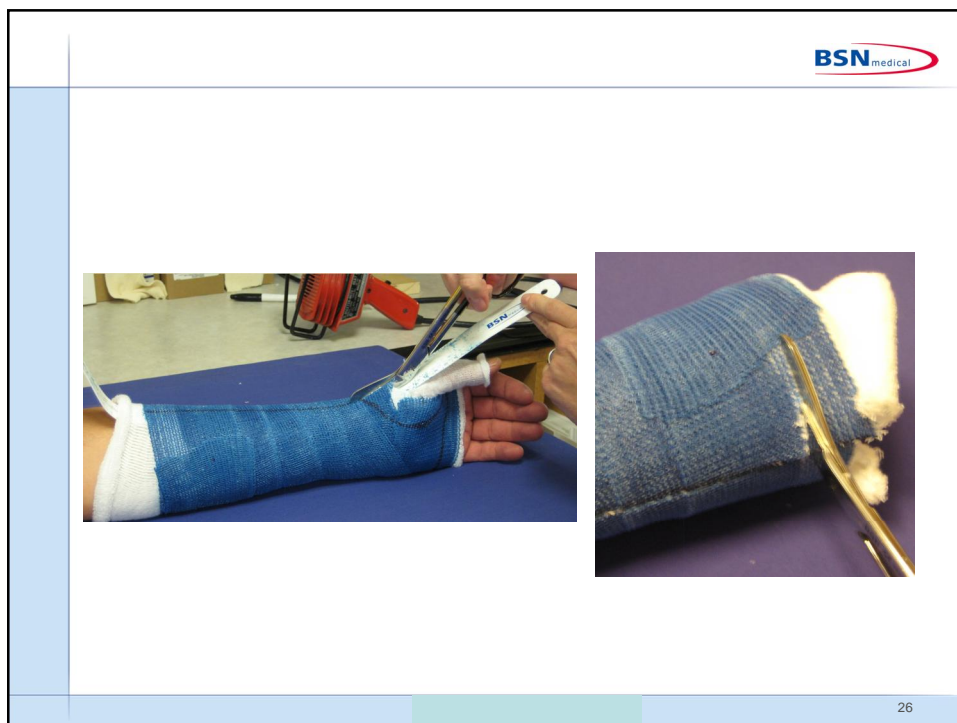


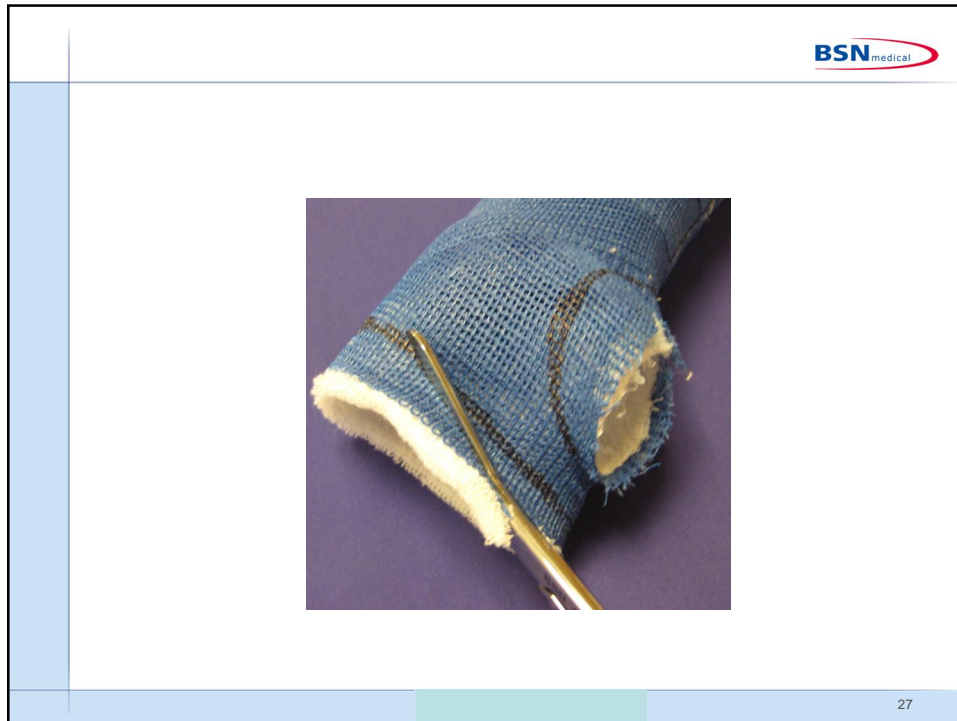
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## What Else?

§ Work horse splints in our clinic

- Wrist Splint (short arm cast)
- Thumb Spica
- Posterior Elbow Shell (long arm cast)

§ Creative applications

- Limited only by your imagination!

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### Short Opponens



### Wrist Splint



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### Pediatric Elbow Shell



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### Thumb Spica





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Detailed description: This slide illustrates a thumb spica cast. The title 'Thumb Spica' is centered at the top. The BSN medical logo is in the top right corner. Two photographs show the cast from different perspectives: a lateral view on the left and a medial view on the right. The cast is made of a blue fabric shell with white Velcro straps. It covers the thumb, wrist, and the base of the hand, with a central opening for the thumb. The patient's hand is shown in a fist position.

### Adult Posterior Elbow Shell









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Detailed description: This slide illustrates an adult posterior elbow shell. The title 'Adult Posterior Elbow Shell' is centered at the top. The BSN medical logo is in the top right corner. Four photographs show the device: a person wearing it on their right arm (top left), the device lying on a wooden table (top right), a close-up of the white Velcro straps on the blue fabric shell (bottom left), and a close-up of the hand and forearm inside the shell (bottom right). The device is designed to support the elbow from the backside.


### Creative Solutions







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### Creative Solutions






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### Creative Solutions





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### Creative Solutions





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### Creative Solutions



The image shows two photographs illustrating creative solutions for a casted arm. The left photograph shows a person's arm in a blue cast with two white elastic straps wrapped around it. The right photograph shows a blue sock with white stripes on the heel and toe, which has been cut and modified to fit over the cast and provide additional support.

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### Creative Solutions



The image shows three photographs illustrating creative solutions for a hand cast. The top left photograph shows a hand with a white cast on the index finger. The top right photograph shows a hand with a white cast on the thumb. The bottom photograph shows a white, U-shaped cast splint designed to support the thumb and index finger.

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### Creative Solutions



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### Creative Solutions




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### Creative Solutions





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### Creative Solutions





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### Creative Solutions





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### Creative Solutions





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### Creative Solutions

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You can find this powerpoint presentation and step-by-step directions for several of the splints we make at:

[www.handtherapyhub.com](http://www.handtherapyhub.com)

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**Thank You!**

**Emily Altman, PT, DPT, CHT, OCS, CLT**

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