WHAT IS HAND THERAPY?

Treating more than just a hand...

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Hand Therapy Is …

“... the art and science of rehabilitation of the upper quarter of the human body. Hand therapy is a merging of occupational therapy and physical therapy theory and practice that combines comprehensive knowledge of the upper quarter, body function, and activity. Using specialized skills in assessment and treatment, hand therapists promote the goals of prevention of dysfunction, restoration of function, and/or reversal of the progression of pathology in order to enhance participation in life situations for individuals with upper quarter disease or injury.”

Source: Hand Therapy Certification Commission (www.htcc.org)

Why Refer to a Hand Therapist?

• Effective treatment can reduce overall treatment time
• Faster recovery results in decreased medical costs
• Improved functional outcomes ensure a faster return to work and productive lifestyle
• Client training and education improve compliance and help to reduce recurrence of repetitive injuries

The Benefits of Occupation-Based Hand Therapy

• Preserves roles and habits, and psychological well-being through attention to details of day-to-day functioning early in the rehabilitation process
• Clients can see a direct relationship between their therapy intervention and ability to resume normal participation in their activities, which increases motivation for therapy and therefore more cost-effective rehabilitation
• Makes the client a partner in his/her rehabilitation

COMMONLY TREATED CONDITIONS

Who should be referred to a hand therapist

What Injuries/Conditions Benefit from Hand Therapy?

• Fractures, dislocations, and sprains
• Wounds and infections
• Amputations
• Burns and frostbite
• Tendon and nerve injuries
• Sports injuries
What Injuries/Conditions Benefit from Hand Therapy?

- Tendonitis, such as tennis elbow
- Rheumatoid arthritis and osteoarthritis
- Dupuytren's contracture
- Nerve compressions, such as carpal tunnel syndrome and cubital tunnel syndrome

Evaluation

- Demographics
- PMH
- Method of injury/illness
- Course of treatment
- Occupational Profile
- Chief complaint

Range of Motion

Strength Testing
Sensory Testing

<table>
<thead>
<tr>
<th>Color</th>
<th>Nerve Fibers</th>
<th>Force in grams</th>
<th>Somatosensory Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gray</td>
<td>2.0</td>
<td>0.2</td>
<td>Normal light touch</td>
</tr>
<tr>
<td>Purple</td>
<td>4.0</td>
<td>2.0</td>
<td>Distorted protective sensation</td>
</tr>
<tr>
<td>Red</td>
<td>4.55</td>
<td>4.0</td>
<td>Loss of proprioceptive sensation</td>
</tr>
</tbody>
</table>

Score Interpretation:

- 25-44: Normal
- 45-59: Light touch
- 60-99: Touch sensitive
- 100-100: Touch sensitive
- 101-100: Touch insensitive

Edema Assessment

Pain Assessment

Wound Status

Scar Status

Functional Dexterity Testing
Wound Care and Pin Care

Desensitization Techniques

Desensitization Program:

Desensitization is a program designed to help improve the feeling in your hand and therefore increase the ability to use your arm and hand in functional activities. This program is to be performed up to 10 minutes 2-3 times per day.

Beginning with the texture that causes the least discomfort, rub the sensitive area lightly on a fabric or dig in a container for up to 10 minutes or until the area is no longer sensitive.

For the next session, return to the same texture and rub or dig as before. However, if this texture seems to no longer cause abnormal feelings, it is time to progress to the next level. Do NOT return to the softer texture; continue to progress through the list until you complete it.

* It is important to be very consistent with this treatment. The closer the program is followed, the faster you will find relief of your symptoms.
* The desensitization activities need to be done while focusing on something else, i.e. talking or watching TV.

<table>
<thead>
<tr>
<th>Level</th>
<th>Fabric</th>
<th>Container</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Satin, moleskin, fur</td>
<td>Cottonballs</td>
</tr>
<tr>
<td>2</td>
<td>Flannel, t-shirt</td>
<td>Dry oatmeal</td>
</tr>
<tr>
<td>3</td>
<td>Cotton, fleece</td>
<td>Dry lentils</td>
</tr>
<tr>
<td>4</td>
<td>Denim</td>
<td>Dry peas, beans</td>
</tr>
<tr>
<td>5</td>
<td>Corduroy, wool, terry cloth, burlap</td>
<td>Dry rice, unpopped popcorn</td>
</tr>
<tr>
<td>6</td>
<td>Tapping on edge of table</td>
<td>Uncovered ammunition</td>
</tr>
<tr>
<td>7</td>
<td>Vibration</td>
<td>Metal (BB's, paper clips)</td>
</tr>
</tbody>
</table>

Scar Management

Edema Management

Range of Motion Exercises

Strengthening Exercises
Functional Activities

Work Simulation vs Hardening

Modalities
• Pre-Treatment Modalities
  - Moist heat
  - Paraffin wax bath
  - H Wave
  - Tens
  - Fluidotherapy
  - Whirlpool
  - Ultrasound

Modalities
• Post-Treatment Modalities
  - Iontophoresis
  - Cold
  - NMEs
  - Paraffin wax bath

Progression of Treatment
• Indiana Protocol
• Gail Groth pyramid
• Amount/Frequency of Treatment

Customized Orthosis Fabrication
• Static
  - Wrist cock-up
  - Thumb spica
  - Ulnar gutter
  - Radial gutter
  - IP extension
  - Dorsal blocking
  - Muenster
  - Sugar tong
  - Tip protector

• Figure-of-eight
• Resting hand
• Long arm
• Sarmiento
• Intrinsic plus
Customized Orthosis Fabrication

- Static progressive
  - Jas brace
  - MP/IP flexion
  - MP/IP extension
  - Serial casting

- Dynamic
  - Radial nerve palsy
  - Kleinert
  - MP/IP flexion
  - MP/IP extension
  - LMB

Customized Splinting

- Pre-fabricated
  - Counterforce strap
  - Wrist cock-up
  - Thumb spica
  - Ulnar gutter

Current Proposed Legislation

- Establishment of Special Payment Provisions and Requirements for Qualified Practitioners and Qualified Suppliers of Prosthetics and Custom Fabricated Orthotics (CMS-6012-P)
  - Changes to qualifications for custom-fitted splints
  - No date set for ruling

How do I find a hand therapist?

Visit ASHT’s website: www.asht.org

AHN Hand Therapy

- Central
  - HMR Federal North – Jamie Oakes, MOT, OTR/L, CHT
  - HMR Bloomfield – Carrie Thomas, OTR/L, CHT
- North
  - HMR Cranberry – Don Kong, MOT, OTR/L
  - Westfield HWP – Effie Hagen, OTR/L, CHT
  - Allegheny Valley Outpatient Svcs – Carol Beene, OTR/L, CHT
- South
  - HMR McMurray – Elizabeth Molinaro, OTR/L, CHT
  - Jefferson Regional Outpatient Svcs (Curry Hollow) – Sue Ritter, OTR/L, CHT
  - JMC – Kimberly Kreis, OTR/L, CHT & John Wicrek, OTR/L, CHT
  - Greensburg Hospital – Alice Lang, OTR/L, CHT
- East
  - HMR Monroeville – Kelley Luedtke, MS, OTR/L
- West
  - HMR Robinson – Judy Garcia, MOT, OTR/L, CHT
  - HMR Suburban General – Robin Carson, OTR/L
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References


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