

Role of occupational therapy for peripheral nerve injuries

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PROBLEMS



- **Self-Care:** the person may be unable to perform some **ADLs** because of loss of intrinsic, reduces the effect of total grasp and normal release patterns.
- **Productivity:** The person may be unable to perform some job tasks, such as heavy labor, driving, typing , keypunching, or taking dictation.
- **Leisure:** The person may be unable to perform some leisure activities, such as playing the piano or other musical instruments requiring finger dexterity and coordination.



Common complaints

- Proximal medical forearm pain
- Sensory loss & weakness in affected muscles
- Grip & pinch strength decreased
- Clumsiness, dropping things

Intervention

Edema control, splinting, position guidelines, built up handles, sensory compensation & re-education

Assessment



Areas:

- 1- daily living skills
- 2- productivity history, skills, values, and interests
- 3- Leisure interests and skills
- 4- range of motion, passive and active
- 5- hand functions and prehension skills
- 6- muscle strength, grip, and pinch strength
- 7- fine motor coordination



Continue Assessment



- Pain الألم
- Sensibility including tactile discrimination, stereognosis, proprioception, temperature, and vibration
- Sympathetic functions: dryness, temperature, color, soft tissue atrophy, and nail changes



Tests

- Froment's sign (lateral pinch).
- localization of touch.
- Sensibility testing Moberg pick up test
- Two-Point Discrimination
- Stereognosis Test

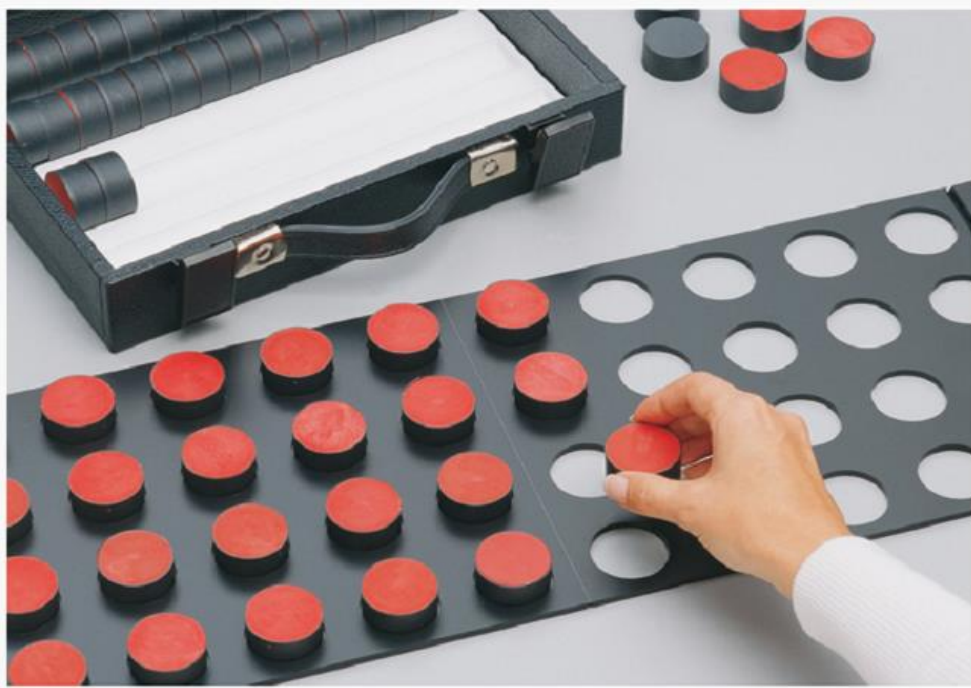
Equipment's



- ❖ **Goniometer**
- ❖ **Manual muscle test**
- ❖ **Jamar dynamometer**



Minnesota manual dexterity & Hole Peg Test



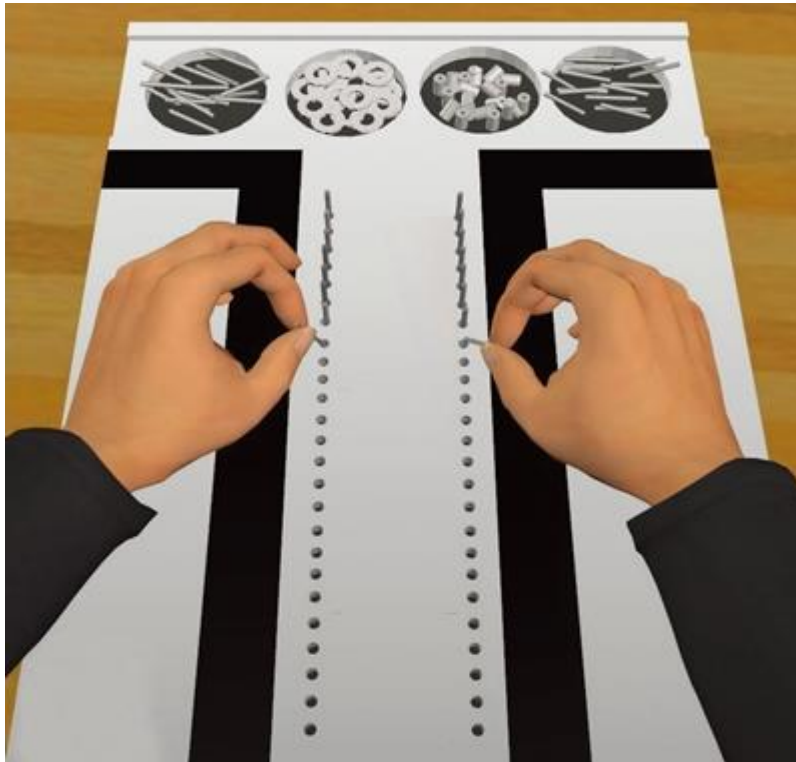
❖ Jamar dynamometer



pinch gauge & Crawford small parts dexterity test

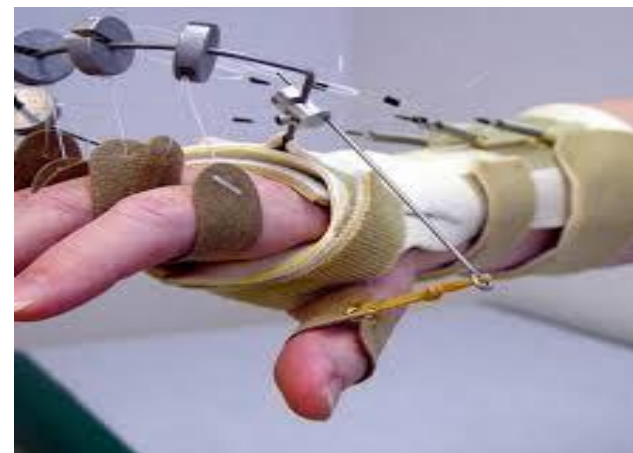


Purdue pegboard & O'Connor finger dexterity test



Radial nerve Injury

- Typical presentation- wrist drop
- Maintain ROM
- Orthosis- prevent deformity & promote function



Median Nerve Injuries

- Thumb rests in adduction- can lead to contracture so splint to maintain thumb abduction & opposition
- Sensory Loss – compensation & re-education as never regenerate
- Assistive devices to compensate for functional loss

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Carpal Tunnel syndrome

- Most common upper extremity nerve entrapment
- Compression of median nerve at wrist
- Most common in women 40-60 years, frequently bilateral
- Fairly common in pregnancy (transient)
- Associated with repetitive use

Typical symptoms

- Hand numbness, particularly
- Pain & paresthesia in median n. distribution
- Clumsiness & weakness

Intervention

- Night splinting – wrist in neutral
- Nerve & tendon gliding exercises
- Padded gloves, built – up handles
- Ergonomic intervention



Ulnar Nerve Injury

- Laceration – at wrist
- Loss of most hand intrinsic – claw deformity
- Fine manipulation skills & grip compromised
- Compression – Cubital Tunnel Syndrome

