



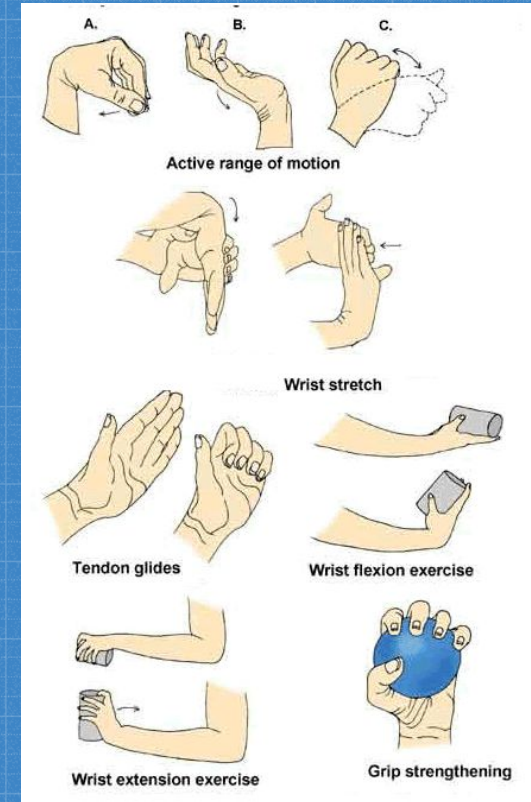
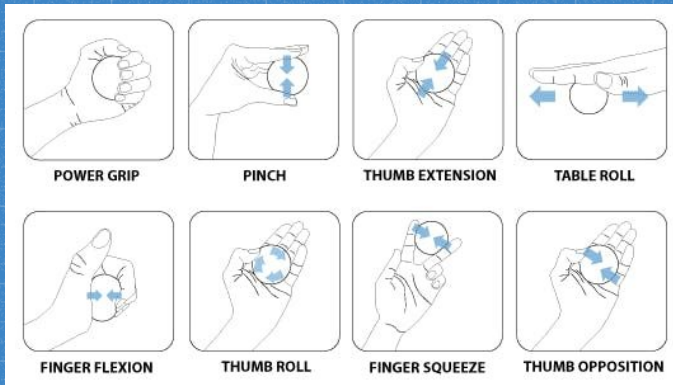
# VIRTUAL REALITY & HAND REHABILITATION

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# HANDS-ON TREATMENTS

- Focuses on repetitive movements
- Strength and mobility
  - ◆ Range of motion
- Grip and pinch
- Flexion and extension
- Pronation and supination





# HOW DOES VR HAND REHAB WORK?

- Gamification
- Immersive, completely simulated virtual world
- Hand gesture recognition
- Repetitive exercises and specific tasks given

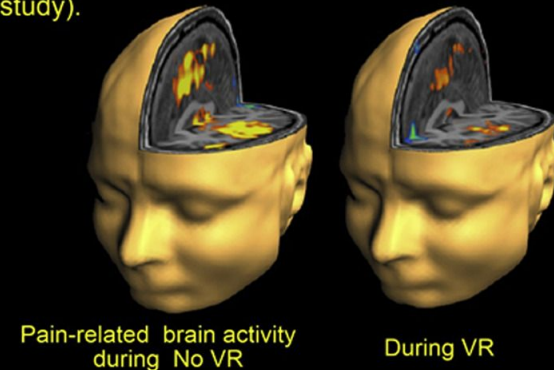




# BENEFITS OF VR HAND REHAB

- Improved patient engagement
- Attention distraction
- Ease of use
- Pain reduction/management

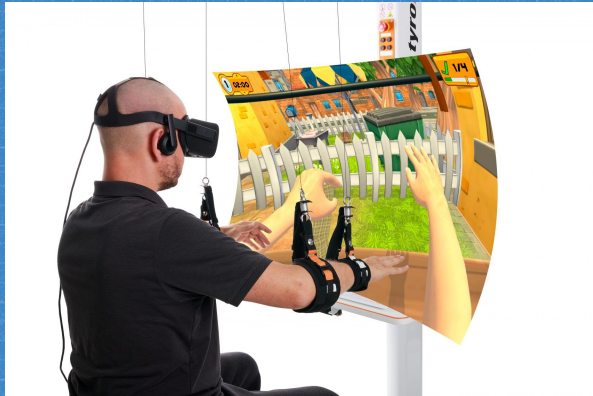
VR significantly reduced pain-related brain activity during thermal pain (fMRI laboratory study).





# THE FUTURE OF VR HAND THERAPY

- Newer VR systems
- New uses (chronic pain/exposure therapy)
- Upgrades





## Sources

<https://ieeexplore.ieee.org/document/9201789>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7719341/>

<https://www.nytimes.com/2021/04/21/health/virtual-reality-therapy.html>