MRI GLOVE

This could come in HANDY

- **What is MRI?**
  - Magnetic Resonance Imaging is used to create 2D and 3D images with magnetic fields and receptor coils.
- **What is the MRI Glove?**
  - According to research done at NYU School of Medicine, US in May 2018, it is a glove shaped MRI component that has delivered the first clear images of bones, tendons and ligaments moving together in a human hand.

Sodickson, Zhang B. "MRI Glove Enables Imaging of Moving Joints." *National Institutes of Health*, U.S. Department of Health and Human Services, 5 June 2018, https://www.nih.gov/news-events/nih-research-matters/mri-glove-enables-imaging-moving-joints

References

- Langone Health. (2018) MRI 'Glove' provides new look at hand anatomy. *NYU Langone News*. https://nyulangone.org/news/mri-glove-provides-new-look-hand-anatomy
- O'Connor, M. (2022). Glove prototype captures MRI of joints in action. *Health Imaging*. https://healthimaging.com/topics/artificial-intelligence/glove-prototype-captures-mri-joints-action
- Socher, R. (2018). MRI glove reveals hand anatomy: Wearable technologies. *Wearable Technologies*. https://www.wearable-technologies.com/2018/05/wearable-mri-glove-provides-new-viewpoint-to-hand-anatomy/#:~:text=The%20MRI%20glove%20receiver%20coils,the%20need%20for%20rigid%20structures
- Sodickson, Z. (2018). MRI glove enables imaging of moving joints. *National Institutes of Health*. https://www.nih.gov/news-events/nih-research-matters/mri-glove-enables-imaging-moving-joints

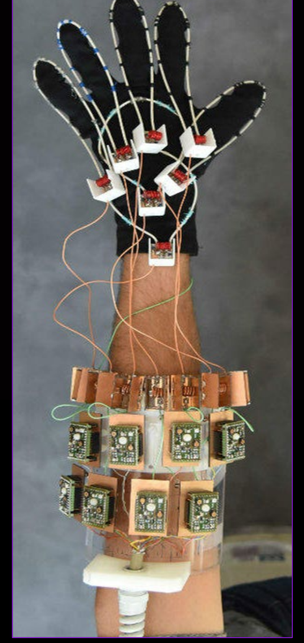
Traditional MRI Unit

- Claustrophobic patients
- Limited movement
- Stationary (with the exception of mobile units)

VS.

MRI Glove

- No claustrophobic patients
- Free movement
- Mobile



Langone Health, NYU. "MRI 'Glove' Provides New Look at Hand Anatomy." *NYU Langone News*, https://nyulangone.org/news/mri-glove-provides-new-look-hand-anatomy

According to Socher (2018)

- "The new study found that, in visualizing fingers as they flexed, the new coils revealed how the black bands moved in concert with the bones, which could help to catalogue differences that come with injury."
- "This is why MRI is ideal for imaging muscles, cartilage and nerves that is normally tougher to study with other non-invasive methods."

HOW CAN THE GLOVE BE APPLICABLE TO THE FUTURE OF IMAGING?

- This new approach in technology can aid in developments over time by creating similar advancements.
  - Flexible sleeve arrays around injured knees, or comfy beanies to study the developing brains of newborns
- It will help in the diagnosis of repetitive strain injuries such as carpal tunnel syndrome.
- It could enable the construction of a more versatile atlas of hand anatomy, guide surgery with hand images in more realistic positions, or aid in the design of better prosthetics.