

# A User-friendly, Non-invasive Neuro-orthosis That Restores Volitionally Controlled Grasp Functions for SCI Survivors With Tetraplegia

NCT06087445

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Status	RECRUITING
Phase	Not Applicable
Sponsor	Ohio State University
Enrollment	12 participants

## Key Eligibility Criteria

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### Inclusion (6)

- age 22 years or older
- sustained a chronic (>12 months) cervical SCI (AIS A, B, C, or D) and is currently medically stable
- unable to grasp and manipulate objects to allow independent performance of activities of daily living (e.g., Tetraplegia)
- retain voluntary ability to enact unilateral shoulder and elbow movements either independently or with a mobile arm support
- Willing and able to attend study sessions in Columbus, Ohio for 12 weeks, 3x/week and all assessment sessions (4 weeks prior to and 4 weeks following 12-week intervention protocol)
- ... and 1 more (see full listing online)

### Exclusion (7)

- medical contraindications to FES (e.g., pacemaker or other implanted devices, uncontrolled seizure disorder, cancer or open wounds on hands)
- severe, uncontrolled autonomic dysreflexia
- comorbid medical condition that, in the opinion of the PI, that may impact participant safety or study results
- severe upper extremity spasticity or contractures that prevent FES-evoked wrist and finger movements
- ventilator dependent
- ... and 2 more (see full listing online)

## Locations (2 total)

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Battelle Memorial Institute, Columbus, Ohio, United States  
Ohio State University Wexner Medical Center (Columbus Campus, Dodd Hall, Martha Morehouse Medical Pavillion), Columbus, Ohio, United States