

# SPINAL CORD INJURY RESEARCH PROGRAM



**CDMRP**  
DEPARTMENT OF DEFENSE  
CONGRESSIONALLY DIRECTED  
MEDICAL RESEARCH PROGRAMS

**MISSION:** To fund research and encourage multidisciplinary collaborations for the development and translation of more effective strategies to improve the health and well-being of Service Members, Veterans and other individuals with spinal cord injury

## Congressional Appropriations

FY09-FY24:

**\$477.85M** total



“My involvement...helped me to realize that there are really people and programs existing that are actively awaiting real-life input

regarding mental and physical disabilities so that advancements can be made to better the quality of life of individuals facing those issues.”

Sean Ferry, SCIRP Peer Reviewer, Research Participant, and FY19 Award Consumer Advocate



## SCOPE OF THE PROBLEM<sup>1</sup>

In the U.S. there are...

**~300k**

people living with spinal cord injury

**~17k**

new cases per year

New cases nearly every

**~30 minutes**

## RELEVANCE TO MILITARY HEALTH



The rate of spinal cord injuries within the military was **8-10X** that of the civilian population at the height of conflicts in Iraq and Afghanistan<sup>2</sup>



Roughly **20%** of all people in the U.S. with spinal cord injuries are Veterans<sup>3</sup>



The VA is the **largest single provider** for spinal cord injury care in the U.S.<sup>3</sup>

## PROGRAM PRIORITIES

- Preserving and protecting spinal cord tissue following **acute injury**
- **Biomarkers** for diagnosis and prognosis, and for evaluation of treatment efficacies
- Promising interventions to address **secondary health effects** across the life span in people with spinal cord injury
- **Psychosocial issues** relevant to people with spinal cord injury, their families and/or their care-partners across the life span
- **Rehabilitation and regeneration** to improve function after spinal cord injury

<sup>1</sup> <https://msktc.org/sites/default/files/Facts-and-Figures-2023-Eng-508.pdf>

<sup>2</sup> U.S. Medicine. VA Meets Challenge: Pressure Injuries in Veterans with Spinal Cord Injuries 2021.

<sup>3</sup> VA Health Services Research & Development. Spotlight: Improving Care for Veterans with Spinal Cord Injuries and Disorders 2013.



For more information, visit: <https://cdmrp.health.mil/scirp>



## PROGRAM IMPACT AND OUTCOMES



### ACUTE INJURY

#### 4-aminopyridine

A drug that promotes extensive and durable functional recovery after SCI and traumatic brain injury

#### Accurate Imaging of the Spinal Cord

Multispectral imaging reduces signal disruption near metal implants during MRI



### BIOMARKERS

#### PiPChip

A home monitoring system for pressure injury risk



### SECONDARY HEALTH EFFECTS

#### Immersive Virtual Walking

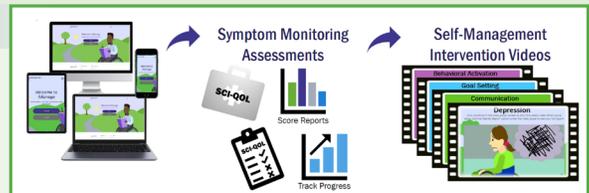
A non-opioid pain management therapy optimized for in-home use



### PSYCHOSOCIAL ISSUES

#### iManage SCI

A symptom-monitoring and self-management tool to facilitate mental wellness



### REHABILITATION AND REGENERATION

#### MyndMove™

A noninvasive neuromodulation device for improved upper extremity function

#### Stentrode™

Brain-computer interface technology to restore independent function and limb control



## Supporting Community Collaborations for Impactful Research Outcomes

*Capturing and integrating the unique perspectives of people living with spinal cord injury into research*



- The SCIRP requires research teams to use equitable collaborations and partnerships with members of the lived experience community.
- Engaging community partners during the planning and implementation of research projects enhances the potential impact for people living with spinal cord injury.

*SCIRP-funded research incorporating user experiences resulted in recommendations for exoskeleton use based on:*

- Psychological benefits, including being eye-level with non-disabled friends and family, and improvements in bowel/bladder function and pain management
- Participant-reported drawbacks, such as safety concerns, fatigue, muscle spasms, device size and inaccessibility for the average user



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