



Spinal Cord Injury

VA researchers are studying the biological processes involved in spinal cord injury (SCI), in hopes of finding a cure. They are also working to develop better treatments and adaptive technologies for Veterans with SCI. Another focus of research is preventing the medical complications that often develop as a result of this disability. For example, VA investigators are developing microstimulators that help to prevent respiratory problems by recreating natural breath and cough patterns. Respiratory problems are the leading cause of death in patients with SCI.



Examples of VA Research Advances

Exploring the value of steroids for acute treatment – A team at VA's Bronx-based Center of Excellence for the Medical Consequences of SCI is exploring whether the steroid drug oxandrolone may be useful as an acute treatment for spinal cord injury. To date, nearly all the research in this area has involved another steroid, methylprednisone. Studies suggest that this drug, given within eight hours of an injury and continued for up to two days, may preserve some movement and limit permanent damage. However, it can cause immunosuppression and other side effects. Oxandrolone does not suppress the immune system and has been used for decades to promote muscle regrowth in conditions causing weight loss. In the latest VA study, oxandrolone increased axonal sprouting and functional recovery when given to rats soon after an injury. Further study is planned on the drug's potential risks and benefits.

OEF/OIF Veterans with SCI – VA's Center for Complex Care and SCI Quality Enhancement Research Initiative surveyed providers at 17 VA SCI centers to learn more about the particular needs of Veterans returning from Iraq and Afghanistan with SCI. Among the findings: The Veterans often had additional conditions that required intensive care and in many cases delayed SCI rehabilitation—for example, fractures, pressure ulcers, traumatic brain injuries, PTSD, and drug-resistant infections. Priority vocational needs included computer use, education, and participation in sports.

Sharing SCI pain data – Dr. Eva Widerstrom-Noga of VA and the Miami Project to Cure Paralysis chaired an international group on pain assessment in SCI. The group developed a standardized measure of pain for research and clinical practice that is expected to ease collaboration between medical centers worldwide.

Facts About SCI

Spinal cord injury impairs the brain's ability to send messages to the rest of the body, and can result in paralysis, loss of feeling, chronic pain, and many other serious medical problems. Spinal cord injuries are estimated to affect some 250,000 Americans, with 10,000 new injuries occurring each year, mostly among young males. VA cares for more than 25,000 Veterans with spinal cord injuries or disorders, making it the largest integrated health care system in the world providing spinal cord care.

