



## Spinal Cord Injury

The website of the **Christopher & Dana Reeve Foundation Paralysis Resource Center** (PRC) [www.paralysis.org](http://www.paralysis.org) offers a wealth of information. There is a section specifically for the newly injured as well as for those living with SCI. You can find valuable links to other organizations as well as information specific to advances in SCI research. Please also ask for a free copy of our Paralysis Resource Guide book.

Spinal cord injury involves damage to the nerves within the spinal canal; most SCIs are caused by trauma to the vertebral column, thereby affecting the spinal cord's ability to send and receive messages from the brain to the body's systems that control sensory, motor and autonomic function below the level of injury.

The spinal cord and the brain together make up the central nervous system (CNS). The spinal cord coordinates the body's movement and sensation.

The spinal cord includes neurons and long nerve fibers called axons. Axons in the spinal cord carry signals downward from the brain (along descending pathways) and upward toward the brain (along ascending pathways). Many axons in these pathways are covered by sheaths of an insulating substance called myelin, which gives them a whitish appearance; therefore, the region in which they lie is called "white matter."

The nerve cells themselves, with their tree-like branches called dendrites that receive signals from other nerve cells, make up "gray matter." This gray matter lies in a butterfly-shaped region in the center of the spinal cord.

Like the brain, the spinal cord is enclosed in three membranes (meninges): the pia mater, the innermost layer; the arachnoid, a delicate middle layer; and the dura mater, which is a tougher outer layer.

The spinal cord is organized into segments along its length. Nerves from each segment connect to specific regions of the body. The segments in the neck, or cervical region, referred to as C1 through C8, control signals to the neck, arms, and hands.

Those in the thoracic or upper back region (T1 through T12) relay signals to the torso and some parts of the arms. Those in the lumbar or mid-back region just below the ribs (L1 through L5) control signals to the hips and legs.

Finally, the sacral segments (S1 through S5) lie just below the lumbar segments in the mid-back and control signals to the groin, toes, and some parts of the legs. The effects of spinal cord injury at different segments along the spine reflect this organization.

Several types of cells carry out spinal cord functions. Large motor neurons have long axons that control skeletal muscles in the neck, torso, and limbs. Sensory neurons called dorsal root ganglion cells, whose axons form the nerves that carry information from the body into the spinal cord, are found immediately outside the spinal cord. Spinal interneurons, which lie completely within the spinal cord, help integrate sensory information and generate coordinated signals that control muscles.

Glia, or supporting cells, far outnumber neurons in the brain and spinal cord and perform many essential functions. One type of glial cell, the oligodendrocyte, creates the myelin sheaths that insulate axons and improve the speed and reliability of nerve signal transmission. Other glia enclose the spinal cord like the rim and spokes of a wheel, providing compartments for the ascending and descending nerve fiber tracts.

Astrocytes, large star-shaped glial cells, regulate the composition of the fluids that surround nerve cells. Some of these cells also form scar tissue after injury. Smaller cells called microglia also become activated in response to injury and help clean up waste products. All of these glial cells produce substances that support neuron survival and influence axon growth. However, these cells may also impede recovery following injury.

After injury, nerve cells, or neurons, of the peripheral nervous system (PNS), which carry signals to the limbs, torso, and other parts of the body, are able to repair themselves. Injured nerves in the CNS, however, are not able to regenerate.

Nerve cells of the brain and spinal cord respond to trauma and damage differently than most other cells of the body, including those in the PNS. The brain and spinal cord are confined within bony cavities that protect them, but this also renders them vulnerable to compression damage caused by swelling or forceful injury. Cells of the CNS have a very high rate of metabolism and rely upon blood glucose for energy – these cells require a full blood supply for healthy functioning. CNS cells are particularly vulnerable to reductions in blood flow (ischemia).

Other unique features of the CNS are the "blood-brain-barrier" and the "blood-spinal-cord barrier." These barriers, formed by cells lining blood vessels in the CNS, protect nerve cells by restricting entry of potentially harmful substances and cells of the immune system. Trauma may compromise these barriers, perhaps contributing to further damage in the brain and spinal cord. The blood-spinal-cord barrier also prevents entry of some potentially therapeutic drugs.

Finally, in the brain and spinal cord, the glia and the extracellular matrix (the material that surrounds cells) differ from those in peripheral nerves. Each of these differences between the PNS and CNS contributes to their different responses to injury.

### **Complete vs. Incomplete**

What is the difference between a "complete injury" and a "incomplete injury?" Persons with an incomplete injury have some spared sensory or motor function below the level of injury – the spinal cord was not totally damaged or disrupted. In a complete injury, nerve damage obstructs every signal coming from the brain to the body parts below the injury.

While there's almost always hope of recovering function after a spinal cord injury, it is generally true that people with incomplete injuries have a better chance of getting some return.

In a large study of all new spinal cord injuries in Colorado, reported by Craig Hospital, only one in seven of those who were completely paralyzed immediately after injury got a significant amount of movement back. But, of those who still had some movement in their legs immediately after injury, three out of four got significantly better.

About 2/3 of those with neck injuries who can feel the sharpness of a pin-stick in their legs eventually get enough muscle strength to be able to walk. Of those with neck injuries who can only feel light touch, about 1 in 8 may eventually walk.

The sooner muscles start working again, the better the chances are of additional recovery. But when muscles come back later - after the first several weeks - they are more likely to be in the arms than in the legs.

As long as there is some improvement and additional muscles recovering function, the chances are better that more improvement is possible.

The longer there is no improvement, the lower the odds it will start to happen on its own.

### **Statistics**

Approximately 1,275,000 people in the United States have sustained traumatic spinal cord injuries. Males account for 61 percent of all SCI's and females 39 percent.

Spinal cord injuries are most commonly caused by motor vehicle accidents. The next most frequent causes are falls and acts of violence. Sports-related spinal cord injuries occur more commonly in children and teenagers, while work-related injuries (especially from construction work) predominate in adults.

Most spinal cord injury patients are in their teens or twenties. Approximately 77.8% are

male. This male preponderance decreases beyond age 65, at which age falls become the most common mechanism of spinal cord injury. More than half of all spinal cord injuries occur in the cervical area, i.e., in the neck. Almost a third occur in the thoracic area (where the ribs attach to the spine). The remainder occur in the lumbar area, i.e., the lower back.

Currently, there is no cure for spinal cord injuries. However, ongoing research to test surgical and drug therapies is progressing rapidly. Injury progression prevention drug treatments, decompression surgery, nerve cell transplantation, nerve regeneration, and complex drug therapies are all being examined as a means to overcome the effects of spinal cord injury.

Source: American Association of Neurological Surgeons, Craig Hospital, Christopher and Dana Reeve Foundation, The National Institute of Neurological Disorders and Stroke

## Web Sites

### *Websites for Choosing a Rehab Facility:*

<http://www.carf.org>

#### **CARF International (Commission on Accreditation of Rehabilitation Facilities)**

6951 East Southpoint Road

Tucson, AZ 85756-9407

Phone: 520-325-1044, 888-281-6531 (Toll-free voice/TTY)

E-mail: [medical@carf.org](mailto:medical@carf.org) for medical rehabilitation

CARF is an independent, not-for-profit accrediting body promoting quality, value, and optimal outcomes of services through a consultative accreditation process that centers on enhancing the lives of the persons receiving services. CARF establishes customer-focused standards to help providers measure and improve the quality, value, and outcomes of their services. CARF has accredited more than 3,500 organizations in the United States, Canada, and Sweden in the areas of Adult Day Services, Assisted Living, Behavioral Health, Employment and Community Services, and Medical Rehabilitation. CARF develops and maintains practical and relevant standards of quality for such programs.

To locate an accredited rehabilitation facility near you contact CARF. They have information on rehab facilities accredited in spinal cord injury, brain injury, and pain management. The CARF website has a provider search tool at <http://carf.org/advancedProviderSearch.aspx> where you can look for rehab programs by location (18 countries). You can also narrow the focus by program type, program focus (including Brain Injury Spinal Cord System of Care), and/or age group or special population served.

<http://www.msktc.org/>

**Model Systems Knowledge Translation Center (MSKTC)**

MSKTC is a national center that works to put research into practice to serve the needs of people with traumatic brain injuries, spinal cord injuries, and burn injuries. The site lists contact information for the 14 model SCI centers in the U.S. The 14 model centers are currently located in the following states: Alabama, California, Colorado, Florida, Georgia, Illinois, Kentucky, Massachusetts, Michigan, New Jersey, Pennsylvania, and Washington.

[http://search.naric.com/research/redesign\\_record.cfm?search=2&type=all&criteria=choosing%20a%20high%20quality%20medical%20rehabilitation%20program&phrase=no&rec=97986](http://search.naric.com/research/redesign_record.cfm?search=2&type=all&criteria=choosing%20a%20high%20quality%20medical%20rehabilitation%20program&phrase=no&rec=97986)

**Choosing a High-Quality Medical Rehabilitation Program: An NRH Field Guide for People with Disabilities.** National Rehabilitation Hospital, Medstar Research Institute, 2004. For copies call 866-380-4344 (Toll-free).

This guide addresses what medical rehabilitation is, insurance coverage, and how to choose a medical rehabilitation program.

***General Websites:***

<http://www.aan.com/pressroom/home/getdigitalasset/9284>

**American Academy of Neurology: Monitoring the Spinal Cord During Surgery**

This fact sheet describes spinal cord monitoring procedures and how they may help prevent paralysis related to surgery.

<http://www.aan.com/pressroom/home/getdigitalasset/9283>

**American Academy of Neurology: Intraoperative Spinal Monitoring with Somatosensory and Transcranial Electrical Motor Evoked Potentials**

This fact sheet presents a summary of the evidence that intraoperative spinal monitoring with somatosensory and transcranial electrical motor evoked potentials reduce the risk of adverse neurologic outcomes during surgery.

<http://www.aans.org/en/Patient%20Information/Conditions%20and%20Treatments/Spinal%20Cord%20Injury.aspx>

**American Association of Neurological Surgeons: Spinal Cord Injury**

This page has general information on spinal cord injury, including the number of people in the U.S. with SCI, types and levels, treatment, prevention, safety tips, and mortality.

<http://www.asia-spinalinjury.org/>

**American Spinal Injury Association (ASIA)**

2020 Peachtree Road, NW

Atlanta, GA 30309

Phone: 404-355-9772

E-mail: [ASIA\\_Office@shepherd.org](mailto:ASIA_Office@shepherd.org)

ASIA's mission is to promote and establish standards of excellence for all aspects of health care of individuals with SCI; to educate members, other healthcare professionals,

patients and their families as well as the public on all aspects of spinal cord injury and its consequences; to foster research; and to facilitate communication among members and other physicians, allied health care professionals, researchers and consumers.

[www.BackBonesOnline.com](http://www.BackBonesOnline.com)

**BackBones**

A non-profit organization that provides peer support in person and by phone as well as web support to people with spinal cord injuries.

<http://www.brainandspinalcord.org/>

**Brain and Spinal Cord Injuries**

201 South Orange Ave., Suite 1500  
Orlando FL 32801

Phone: 855-979-4407 (Toll-free)

This site was created and sponsored by the Newsome Law Firm as a knowledge-base for brain injury and spinal cord injury survivors to help answer questions involving a wide spectrum of issues: health, rehabilitation, hope for recovery, current research, financial, legal, and more. The site includes blogs, in-depth articles, links to resources, and commentary on developments in research and recovery. There is also a video library with basic information that survivors need to know about and videos of other brain injury and spinal cord injury survivors and their families talking about lessons they have learned and telling their personal stories about hope and coping.

<http://sci.rutgers.edu>

**CareCure Community**

An online moderated community with some answers from Dr. Wise Young of Rutgers's W.M. Keck Center. Please be sure to register and then post your issues in the appropriate forum. The caregiver forum is specifically designed to provide support for family members. You may receive replies from others in similar situations. You can also post in the Care Forum and the SCI nurses may be able to assist with any specific medical questions. The Cure Forum is excellent in outlining new advances and promising treatments. In contacting any of the moderators, please indicate in the subject line that you were referred by the PRC.

<http://fescenter.org/>

**Cleveland FES Center**

10701 East Boulevard  
Cleveland, OH 44106  
Phone: 216-231-3257

The FES Center is a consortium of three Cleveland-based institutions founded to introduce FES into clinical practice. FES, or functional electrical stimulation, is the application of electrical currents to either generate or suppress activity in the nervous system. It can produce and control the movement of otherwise paralyzed limbs. The Center's information specialists can provide fact sheets, references, and background on FES and its other applications.

<http://www.craighospital.org/Primary-Nav/Resources/Spinal-Cord-Injury-Nurse-Advice-Line/>

**Craig Hospital: Spinal Cord Injury Nurse Advice Line**

Phone: 303-789-8508, 800-247-0257 (Toll-free)

The Nurse Advice Line provides a dedicated nurse to answer non-emergent calls from people with SCI, caregivers, and health care professionals. The service is open Monday through Friday from 9 am to 4 pm MST.

<http://www.determined2heal.org/>

**Determined to Heal**

8112 River Falls Dr.

Potomac, MD 20854

Phone: 703-795-5711

E-mail: [determined2heal@aol.com](mailto:determined2heal@aol.com)

The Determined2heal Foundation offers educational and health related information relevant to persons with spinal cord injuries, their families, and others of interest. The Foundation was created by Josh Basile, injured at C5, to help others with new spinal cord injuries.

<http://www.facingdisability.com>

**Facing Disability: For Families Facing Spinal Cord Injury**

Hill Foundation

737 N. Michigan Avenue, Suite 1560

Chicago, IL 60611

Phone: 312-284-2525

E-mail: [info@facingdisability.com](mailto:info@facingdisability.com)

Facing Disability is designed to provide Internet-based information and support for people with spinal cord injuries and the members of their families. The site has over 1,000 videos drawn from personal interviews with people who live with spinal cord injuries and their caregivers and families as well as experts in the field. It also offers a peer counseling service.

<http://www.fscirc.com/>

**Florida Spinal Cord Injury Resource Center**

c/o Tampa General Rehabilitation Center

6 Tampa General Circle - Room R212

Tampa, FL 33606

Phone: 813-844-4711, 866-313-2940 (Toll-free)

A resource information clearinghouse that provides ready access to the most recent magazines, books, videos and reference materials related to SCI. It also provides listings of Florida's designated SCI treatment centers, independent living centers and support groups. The center serves spinal cord injured individuals, their families, support groups and rehabilitation professionals. They list some pediatric resources and materials, which can be downloaded. Many of their information sheets are excellent and the information is the same regardless of where you live.

<http://www.makoa.org/sci.htm>

**Makoa: Spinal Cord Injury and Disease Resources**

This page has links to resources for information, treatment and rehabilitation, research, online discussions, newsletters and magazines, articles and pamphlets, fact sheets, books, and more.

<http://www.medicinenet.com/script/main/art.asp?articlekey=82660&pf=3&page=1>

**MedicineNet.com: Spinal Cord Injury Treatments and Rehabilitation**

This page has general information on the spinal cord and spinal cord injuries, including treatments, rehabilitation and research.

<http://www.nlm.nih.gov/medlineplus/spinalcordinjuries.html>

**MedlinePlus: Spinal Cord Injuries**

This page has links to general information on spinal cord injuries, including treatments, prevention, rehabilitation and recovery, coping and research.

<http://www.nlm.nih.gov/medlineplus/tutorials/spinalcordinjury/htm/index.htm>

**MedlinePlus: SCI Interactive Tutorial**

This tutorial has general information on spinal cord injuries, including anatomy, causes, symptoms, treatments, and prevention. It can be viewed as an interactive program, a slideshow presentation, or text.

<http://www.naric.com>

**National Rehabilitation Information Center (NARIC)**

8400 Corporate Drive, Suite 500

Landover, MD 20785

TTY: 301-459-5984

Toll-free: 800-346-2742

Email: [naricinfo@heitechservices.com](mailto:naricinfo@heitechservices.com)

NARIC's site has over 75,000 resources collected and organized according to topic, including organizations, agencies, Internet resources, reports, and research projects. The Center provides a computerized listing of commercially available products for rehabilitation and independent living. In addition, they will provide a computerized listing of rehabilitation literature and materials.

<http://www.spinalcord.org>

**National Spinal Cord Injury Association**

75-20 Astoria Boulevard

Jackson Heights, NY 11370

Phone: 718-803-3782

Resource Center helpline: 800-962-9629 (Toll-free)

E-mail: [info@spinalcord.org](mailto:info@spinalcord.org)

The NSCIA is the nation's oldest and largest civilian organization dedicated to improving the quality of life for hundreds of thousands of Americans living with the results of spinal cord injury and disease (SCI/D) and their families. The NSCIA Resource Center provides information and resources to meet the needs of individuals with SCI/D; their families and



friends; the medical and scientific community; service and business professionals; the media; students; government; elected officials; and the public.

<http://www.ninds.nih.gov/disorders/sci/sci.htm>

**National Institute of Neurological Disorders and Stroke: Spinal Cord Injury Information Page**

This page has general information on spinal cord injury, including treatment, prognosis, research, and links to other organizations and publications.

[http://www.ninds.nih.gov/disorders/sci/detail\\_sci.htm](http://www.ninds.nih.gov/disorders/sci/detail_sci.htm)

**National Institute of Neurological Disorders and Stroke: Spinal Cord Injury – Hope Through Research**

This page has general information on the spinal cord and spinal cord injury, including anatomy, immediate treatments, effects on the rest of the body, the benefits of rehabilitation, and research.

[http://www.ninds.nih.gov/news\\_and\\_events/proceedings/sci\\_report.htm](http://www.ninds.nih.gov/news_and_events/proceedings/sci_report.htm)

**National Institute of Neurological Disorders and Stroke: Spinal Cord Injury – Emerging Concepts**

This report from a scientific workshop sponsored by the National Institutes of Health on September 30 - October 1, 1996, covers topics related to spinal cord injury including current understanding and treatment, secondary damage, current interventions, and new therapies.

<https://www.nscisc.uab.edu/life-expectancy.aspx>

The NIDRR-funded **National Spinal Cord Injury Statistical Center (NSCISC)** has created a Life Expectancy Tool for individuals with SCI, clinicians, practitioners, and caregivers. The tool provides an estimate as to the life expectancy of a person with a spinal cord injury who is at least two years post-injury, has access to good-quality health care, is not on a ventilator, and has not regained all normal feeling and movement. The Life Expectancy Tool was developed from data collected and research conducted by the NIDRR-funded Spinal Cord Injury Model System Centers.

<http://www.neurotechnetwork.org/>

**NeuroTech Network**

P.O. Box 27386

Tampa, FL 33623

Phone: 727-321-0150

E-mail: [info@neurotechnetwork.org](mailto:info@neurotechnetwork.org)

Neurotech Network of The Society to Increase Mobility is a non-profit organization focusing on education about and access to neurotechnology devices, therapies and treatments for persons with neurological and psychiatric disorders or impairments. Neurotechnology is the application of medical electronics to improving and restoring the function of the human nervous system.

<http://www.pva.org>

**Paralyzed Veterans of America (PVA)**

National Headquarters

801 18<sup>th</sup> Street NW

Washington, DC 20006-3517

Phone: 800-424-8200 (Toll-free), 800-795-4327 (TTY)

Health Care Hotline: 800-232-1782 (Toll-free)

E-mail: [info@pva.org](mailto:info@pva.org)

PVA is a federally chartered national veterans' service organization. In addition to a strong national presence in the areas of legislation, advocacy, research and education, they have chapter and service offices located throughout the United States. PVA has many excellent publications available in areas of interest to people with spinal cord injury. PVA also publishes two nationally distributed magazines, Paraplegia News and Sports 'n Spokes.

<http://www.spinalcordcenter.org/consumer/manual.html>

**Regional Spinal Cord Injury Center of the Delaware Valley: Spinal Cord Injury Manual**

This manual is designed to provide information on the many aspects of spinal cord injury and dysfunction to patients and family members.

<http://www.tbi-sci.org>

**Santa Clara Valley Medical Center Rehabilitation Research Center**

751 South Bascom Avenue

San Jose, CA 95128

Phone: 408-793-6433

The Rehabilitation Research Center at Santa Clara Valley Medical Center conducts research to better understand and improve outcomes after traumatic brain injury and spinal cord injury. It also strives to meet the information, education and support needs for injured persons and their families through a resource center and peer support programs. There are excellent fact sheets that can be downloaded from this site.

<http://www.bu.edu/sciguide/>

**The SCI Guide**

The SCI Guide was created to give the SCI community a place to go to get trusted, peer-reviewed information. The site brings together the best websites on SCI as rated by a team of people with SCI on things like quality of information and user-friendliness.

<http://www.sci-info-pages.com/>

**SCI Info Pages**

This site is a free and informative resource for those living with a spinal cord injury or other disabling injuries or diseases of the spine. It is meant to be a "best of the web" site for SCI health and caregiver information.

<http://www.spinalcord.uab.edu/>

## **Spinal Cord Injury Information Network (SCIIN)**

The Spinal Cord Injury Information Network, sponsored by the University of Alabama at Birmingham Spinal Cord Injury Model System, provides a comprehensive and organized source of SCI information and resources from recognized centers, organizations, researchers and educators.

<http://www.uab.edu/medicine/sci/uab-scims-information/secondary-conditions-of-sci-health-education-video-series>

### **SCIIN: Secondary Conditions of Spinal Cord Injury Health Education Video Series**

This series includes 11 videos on functional goals, life with SCI, sexuality and sexual function, bowel management, bladder management, pressure sores, pain management, spastic hypertonia, respiratory management, cardiovascular health, and bone health. Each video can be streamed online or downloaded.

<http://images.main.uab.edu/spinalcord/SCI%20Infosheets%20in%20PDF/Understanding%20SCI%20and%20Functional%20Goals%20and%20Outcomes%20-%20Basic.pdf>

### **SCIIN: Understanding Spinal Cord Injury & Functional Goals (Basic)**

This InfoSheet provides a brief summary of the changes that take place after a spinal cord injury. It tells how the spinal cord works and what some of the realistic expectations are for what a person should eventually be able to do following a spinal cord injury. Included is a chart of functional goals for specific levels of injury as well as additional information resources.

<http://images.main.uab.edu/spinalcord/SCI%20Infosheets%20in%20PDF/Understanding%20SCI%20and%20Functional%20Goals%20and%20Outcomes%20-%20Professional.pdf>

### **SCIIN: Understanding Spinal Cord Injury & Functional Goals (Advanced)**

This InfoSheet provides a brief summary of the anatomy and physiology of the spinal cord as well as additional information resources.

<http://www.scireproject.com/>

## **Spinal Cord Injury Rehabilitation Evidence (SCIRE)**

The SCIRE Project

Janice Eng PhD BSc (PT/OT)

Department of Physical Therapy

Friedman Building

212-2177 Wesbrook Mall

University of British Columbia

Vancouver, BC

Canada V6T 1Z3

Phone: 604-714-4105

The SCIRE project is a Canadian research collaboration between scientists, clinicians and consumers on best rehabilitation practices following SCI.

<http://www.spinalistips.se/>

**Spinalis Tips**

Has tips from the people with spinal cord injuries on adapting your environment, self-care, travel, and wheelchair life among others. Spinalistips is run by Spinalis Foundation.

<http://www.spineuniverse.com/conditions/spinal-cord-injury>

**Spine Universe: Spinal Cord Injury**

This page has information, articles and videos on spinal cord anatomy and spinal cord injury.

<http://www.unitedspinal.org>

**United Spinal Association**

75-20 Astoria Boulevard

East Elmhurst, NY 11370

Phone: 718-803-3782

E-mail: [info@unitedspinal.org](mailto:info@unitedspinal.org)

United Spinal is dedicated to helping people living with spinal cord injury and disease. The organization provides information, peer support and advocacy that empower individuals to achieve their highest potential in all facets of life.

<http://unite2fightparalysis.org/>

**Unite 2 Fight Paralysis**

3078 Eliot Dr

Hood River OR 97031

Phone: 888-202-1992 (Toll-free)

E-mail: [unite@u2fp.org](mailto:unite@u2fp.org)

Unite 2 Fight concentrates on advocacy, education and support for research.

<http://calder.med.miami.edu/pointis/>

**University of Miami: PoinTIS - Point of Care, Team Information System**

PoinTIS provides comprehensive information on spinal cord injury rehabilitation and traumatic brain injury rehabilitation for health care providers, patients and patient's families.

**Internet Discussion Forums:**

<http://sci.rutgers.edu>

**Care Cure Community**

The online home of neuroscientist Wise Young, Ph.D., M.D., Professor II and Director at the W. M. Keck Center for Collaborative Neuroscience at Rutgers University. This site offers lively Internet forums with news and comment on spinal cord injury care, caregiving, cure, funding, active living, pain treatment, sexuality, biomedical research, clinical trials and more.

<http://www.christopherreeve.org/community>

### **The Reeve Foundation Paralysis Community**

Is an online community and social networking website from the Christopher & Dana Reeve Foundation Paralysis Resource Center. The Paralysis Community is a place for dialogue about spinal cord injury or disease, and about all issues related to paralysis. Members of The Paralysis Community will be able to connect with other members who have spinal cord injuries and/or paralysis or care for those who do. You may participate in discussion groups, post personal profiles with an optional photo, invite members to be friends, and build your own online support network.

Please ask for our list of SCI chat rooms if you would like the names of additional online forums, chat rooms and e-mail discussion groups.

### **Print Magazines: Consumer**

[www.newmobility.com](http://www.newmobility.com)

#### **New Mobility**

United Spinal Association

75-20 Astoria Boulevard

East Elmhurst, NY 11370

Phone: 800-404-2898 (Toll-free)

This monthly magazine encourages the integration of active-lifestyle wheelchair users into mainstream society and covers topics such as travel and relationships.

<http://pvamag.com/pn/>

#### **PN: Paraplegia News**

PVA Publications

2111 East Highland Avenue, Suite 180

Phoenix, AZ 85016-4702

Phone: 602-224-0500, 888-888-2201 (Toll-free)

*PN* (formerly *Paraplegia News*) is a monthly magazine that provides practical news and information to wheelchair users, family members, and medical professionals.

### **Print Magazines: Professional**

<http://www.nature.com/sc/index.html>

#### **Spinal Cord**

The official journal of the International Spinal Cord Society, *Spinal Cord* is a monthly, multi-disciplinary forum covering basic science, clinical and applied studies, and the psychology and epidemiology of spinal injury and disease from around the world.

<http://www.thomasland.com/about-spinalrehab.html>

### **Topics in Spinal Cord Injury Rehabilitation**

Quarterly peer-reviewed journal published by Thomas Land that discusses functional approaches and innovative techniques for spinal cord injury rehabilitation. Each issue focuses on research papers with the latest clinical developments as well as an in-depth review of a single key topic.

### **E-mail and Online Newsletters:**

<http://www.shepherd.org/news/publications/1>

#### **Spinal Column**

*Spinal Column* is a quarterly magazine from the Shepherd Center in Atlanta, Georgia, that features patient profiles, medical and treatment news, upcoming events, research features, volunteer and donor recognition and more.

<http://sci.washington.edu/info/newsletters/index.asp>

#### **Spinal Cord Injury Update**

This is a free publication from the Department of Rehabilitation Medicine at the University of Washington in Seattle, Washington. It is published three times a year and is also available in print.

The following books and videos are available for free loan from the PRC library. For more information, please see [www.paralysis.org](http://www.paralysis.org) and click *Borrow from Our Lending Library* under PRC Quick Links.

### **Books**

**There is a separate list for autobiographies and biographies of people with SCI.**

- **After and Beyond Spinal Cord Injury: Resource Manual to Help Guide You From Rehabilitation Back into the Community.** Richmond Hill, Ontario, Canada: Canadian Spinal Research Organization, 2005.  
Note some resources and advice may apply only to Canadians.
- Alpert, Michelle J. and Saul Wisnia. **Spinal Cord Injury and the Family: A New Guide.** Cambridge, MA: Harvard University Press, 2008.
- **Autonomic Dysfunction After Spinal Cord Injury.** New York: Elsevier, 2005.  
Progress in Brain Research volume 152.
- **Back on Track: A Basic Introduction for Those Learning to Live with a Spinal Cord Injury.** Julian Verkaaik, editor. Christchurch, New Zealand: New Zealand Spinal Trust, 2004.

- Boyles, Carolyn. **A Complete Plain-English Guide to Living with a Spinal Cord Injury**. New York: iUniverse, 2007.  
Part autobiography, part guidebook.
- Christian, Adrian. **Living with Spinal Cord Injury: A Wellness Guide**. New York: Demos, 2004.
- Glass, Clive A. **Spinal Cord Injury: Impact and Coping**. Leicester: British Psychological Society, 1999.
- Holtz, Anders and Richard Levi. **Spinal Cord Injury**. New York: Oxford University Press, 2010.  
Textbook for clinicians.
- Johnston, Laurance. **Alternative Medicine and Spinal Cord Injury: Beyond the Banks of the Mainstream**. New York: Demos Medical Publishing, 2006.
- Karp, Gary. **Life on Wheels: The A to Z Guide to Living Fully with Mobility Issues**. New York: Demos Health, 2008. 2<sup>nd</sup> edition
- Kennedy, Paul. **Coping Effectively with Spinal Cord Injuries: A Group Program Workbook**. New York: Oxford University Press, 2009.
- Kirshblum, Steven and Denise I. Campagnolo. **Spinal Cord Medicine**. Philadelphia: Wolters Kluwer, 2011. 2<sup>nd</sup> edition.  
Textbook.
- **Litigating Spinal Cord Injuries: Law, Medicine and Economics**. Mark R. Kosieradzki, editor. New York: John Wiley and Sons, 1995.
- Maddox, Sam. **Paralysis Resource Guide**. Short Hills, NJ: Christopher & Dana Reeve Foundation, 2013. 3rd edition.  
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This is a series of 8 books (divided by level of injury). To download for free go to [www.pva.org](http://www.pva.org), click on *Publications* at the top, then click on *Guidelines and Publications* on the left, then click *Download CPGs and Consumer Guides*, and then click *Consumer Guides*.
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This resource manual presents information that will allow SCI survivors and those close to them to be informed about acute care and the rehabilitation process and to have some sense of control over their life. It can be downloaded for free at: <http://www.rtcil.org/products/RTCIL%20publications/Health%20Issues/CHOICES.pdf>
- **Spinal Network: The Total Wheelchair Resource Book.** Corbet, Barry, Jean Dobbs, and Bob Bonin, editors. Horsham, PA: Leonard Media Group, 2002. 3<sup>rd</sup> edition. Order information: [www.newmobility.com](http://www.newmobility.com)



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Stewart was a chaplain at Craig Rehabilitation Hospital, a model spinal cord injury facility in Colorado.
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32 people talk about various aspects of living with a spinal cord injury.
- **Yes, You Can! A Guide to Self-Care for Persons with Spinal Cord Injury**. Hammond, Margaret C. and Stephen C. Burns, editors. Washington, DC: Paralyzed Veterans of America, 2009. 4th edition. Order information: <http://www.nxtbook.com/nxtbooks/pva/yesyoucan4/>

#### Videos:

- **Understanding Spinal Cord Injury: What You Should Know About Spinal Cord Injury and Recovery**. Atlanta: Shepherd Center, 2011. DVD. (50 minutes)  
Produced by the Shepherd Center in collaboration with the American Trauma Society, the National Spinal Cord Injury Association, and the Christopher and Dana Reeve Foundation. Visit [www.SpinalInjury101.org](http://www.SpinalInjury101.org) to view the video online and download a copy of the companion booklet. Free copies of the DVD can be obtained from the Reeve Foundation, 800-539-7309 (Toll-free).
- **The Spinal Cord Injury Handbook: The Video** by Richard Senelick, M.D. (85 minutes) Order information: [www.amazon.com](http://www.amazon.com).
- **The Toughest Break: Christopher Reeve on Spinal Cord Injury**. Princeton, NJ: Films for the Humanities and Sciences, 2000. (57 minutes)  
Narrated by Christopher Reeve. This videotape records Martin Schmiege's spinal cord injury from reenactment of injury to release from the hospital. Order information:
- **Never Give Up! Success in Life Is an Attitude**. <http://www.ronheagy.com/shop-books-videos.php>  
Documentary of Ron Heagy who broke his neck in a surfing accident the day before his 18th birthday. He became an inspirational speaker, mouth painter, author, husband, father, founder of a special needs camp in Oregon, and founder of Life Is An Attitude LLC.
- **After Spinal Cord Injury: The Return to Yourself**. (28 minutes)  
This documentary interviews many people with SCI on how they have adapted to life after their injuries. It has a positive attitude and theme. The video also interviews doctors on some of the clinical changes to expect in the body after SCI. It is free to individuals with spinal cord injury and is produced by the Paralysis Care Network.

- **Understanding Spinal Cord Injuries.** Henrico County, Va., 2009. DVD (33 min.)

For a more complete list of videos on SCI, please ask for our list called SCI Videos.

The following video can be streamed or downloaded online.

<http://www.spinalcord.uab.edu/show.asp?durki=97417>

**Spinal Cord Injury Information Network: Secondary Conditions of Spinal Cord Injury Health Education Video Series**

The 26-minute video “Understanding Spinal Cord Impairments and Functional Goals” offers a basic understanding of the normal function of the spinal cord and the impact of impairment at different types and levels of injury. In addition, functional goals are addressed for levels of impairment.

**The information contained in this message is presented for the purpose of educating and informing you about paralysis and its effects. Nothing contained in this message should be construed nor is intended to be used for medical diagnosis or treatment. It should not be used in place of the advice of your physician or other qualified health care provider. Should you have any health care related questions, please call or see your physician or other qualified health care provider promptly. Always consult with your physician or other qualified health care provider before embarking on a new treatment, diet or fitness program. You should never disregard medical advice or delay in seeking it because of something you have read in this message.**