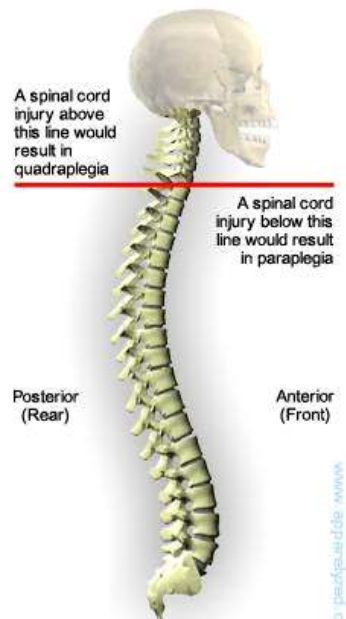


Spinal Cord Injury (SCI) Fact Sheet

Spinal Cord Injury:

- is damage to the spinal cord that results in a loss of function, including mobility and/or sensation
- is frequently caused by trauma (i.e. car accident, fall, gunshot) or disease (i.e. polio, spina bifida)
- can occur even if the spinal cord is not completely severed
- is divided into two types of injury
 - **Complete**– results in no sensory or voluntary motor function below the level of the injury
 - **Incomplete**– results in some functioning below the primary level of the injury
 - A person with an incomplete injury may be able to move one limb more than another or may be able to feel parts of the body that they can't move.
- is often described by the level of the injury
 - **Quadriplegia**– refers to varying levels of functional deficits from approximately the shoulders down that are a result of neck injuries
 - **Paraplegia**– refers to varying levels of functional deficits effecting the trunk and/or legs that are a result of injuries to the thoracic area or below
- effects approximately 450,000 people in the United States
- most commonly involves males (82%) between the ages of 16-30 and usually results from motor vehicle accidents (36%), violence (28.9%) or falls (21.2%)



Potential Deficit Areas:

- Effects depend on the type and level of the injury; in general the higher the injury the greater the loss of function
- Paralysis and sensory loss at or below the level of injury
- Loss of autonomic reflexes
- Bowel and bladder problems
- Exaggerated reflex reactions or spasms
- Pain
- Respiratory Problems

Impact on Driving/Transportation:

- A modified vehicle, wheelchair stowage lift or transfer seat may be needed for a person who now requires a scooter or wheelchair for mobility or has difficulty transferring into an unmodified vehicle.
 - Depending on their injury, they may or may not need a van with a conversion.
 - There are many types of adaptive equipment and vehicle modifications that may allow someone to drive after a spinal cord injury.
 - Prior to driving with adaptive equipment, the person will need a driving evaluation (www.aded.net).
 - This driving evaluation will determine if the individual will be able to drive or not and what if any type(s), of driving equipment they will need.
 - For more information, read the article “Back on the Road Again”.
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Spinal Cord Injury (SCI) Fact Sheet

Possible Vehicle Equipment Needs:

- Wheelchair or scooter stowage lift
- Transfer seat
- Lowered floor minivan or full size van with a lift
- Adaptive driving equipment specifically recommended for their individual physical abilities and custom fit by a certified technician
- Equipment will vary widely person to person
- For more information read the article “Back on the Road Again”.



ABOUT RIDE-AWAY:

Ride-Away is America's largest provider of modified vehicles and adaptive equipment for people with disabilities. Ride-Away products are used by individuals with minor to profound disabilities requiring additional assistance while traveling and range from hand controls and lifts to raised door and lowered floor vehicle modifications. Founded in 1986, Ride-Away's 11 East Coast locations are committed to offering a broad selection of specialized vehicles and services to meet the needs of every customer. All of Ride-Away's locations are also QAP (Quality Assurance Program) certified through the National Mobility Equipment Dealers Association (NMEDA), resulting in Ride-Away being held to the highest standards in the industry. For more information, call (888)-RIDE AWAY or visit our website at www.Ride-Away.com.



“Back on the Road Again”

By Staci Frazier, Manager of Training and Development for Ride Away and Past President of the Association for Rehabilitation Driver Specialists (ADED)

As you and your family already know, life after a spinal cord injury is never the same. Often one of the final steps to regaining your independence is to return to driving because driving frequently leads to being able to return to work, school and leisure activities. As with other activities of daily living that you have had to learn to do in a new way, you will need training and adaptive equipment to be successful.

Following a spinal cord injury, if you want to learn to drive or return to driving, the first step is to have a driving evaluation. A driver rehabilitation specialist will determine if driving is a realistic goal for you since not everyone is able to drive again. If driving is not possible, they will assist you in finding alternative modes of transportation or you can contact a mobility equipment dealer who will assist you in finding an appropriate vehicle for passenger purposes.

Your driving evaluation should ideally be completed by a certified driver rehabilitation specialist. To find an appropriate driver rehabilitation specialist, visit The Association of Driver Rehabilitation Specialists (ADED) website, www.ADED.net, where you will be able to locate ADED members in your state and identify if there is a certified driver rehabilitation specialist near you.

The driving evaluation should include both a clinical assessment that assesses your visual, perceptual, cognitive and physical abilities as well as a behind the wheel assessment. Following this evaluation, the driver rehabilitation specialist will be able to recommend if driving is a realistic goal, and if so, what driver training and adaptive driving equipment you will need in order to achieve this goal.

There are multiple types of driving equipment that can allow a person with a spinal cord injury to drive. The driver rehabilitation specialist will specify what type of adaptive driving equipment you will need. The amount and type of equipment will vary depending on your strength, range of motion, coordination, balance and functional use of your arms.

Most individuals who have sustained a spinal cord injury will need, at a minimum, a set of manual hand controls and a spinner knob. There are multiple types of manual hand controls and knobs. Your driver rehabilitation specialist will determine which type works best for you, taking into account your functional ability, size and vehicle type.

If you have decreased functional use of your arms, more complex equipment may be needed for you to safely accelerate, brake and steer the vehicle. The greater the strength and range of motion loss the more high-tech the equipment that will be needed.



“Back on the Road Again” continued

If you require the higher tech equipment, you will most likely also need equipment to operate your secondary vehicle controls, which includes all functions other than gas, brake and steering, such as turn signals, temperature controls and the radio. This equipment can be as simple as adding a toggle switch or making a knob larger to as complex as a system which electronically operates all the secondary controls by voice prompting.

Once the driver rehabilitation specialist determines your driving equipment needs, they will send the recommendation to a mobility equipment dealer. The mobility equipment dealer is an individual or business that installs equipment or modifies vehicles for individuals with disabilities for use as a passenger or driver.

Whether you are able to return to driving or not, choosing the appropriate vehicle to meet your needs is critical to regaining your independence. The mobility equipment dealer will assist you with this process. It is very important that you consult with them prior to buying a vehicle since not all vehicles are suitable for modifications and some may not work for your needs. The type of vehicle you need is dependent on many factors, including the following:

- Your ability to transfer in/out of a vehicle.
- The type of wheelchair you use.
- Your weight and height in your wheelchair.
- Your ability to store and retrieve your wheelchair.
- Whether you will be a driver or passenger.

Vehicle modifications that address getting in and out of the vehicle, handling the wheelchair stowage, and driving or riding in an appropriate vehicle or safely secured wheelchair include:

Lifts - to stow and retrieve the wheelchair.

Specialized transfer seats – allowing someone to move in and out of the vehicle safely and easily.

Lowered Floor Minivans- the floor of the minivan is lowered and the rear of the vehicle lowers (kneels), to allow someone in a wheelchair to enter and exit the vehicle easily using a ramp. These vehicles also have removable driver and passenger seats to allow someone in a wheelchair to drive, ride in the front passenger area or in the mid-ship space.

Full Size Vans- A lift is needed for individuals in a wheelchair to enter a full size van. These vehicles can also have a raised door, raised roof, and lower floor added for someone who sits tall in their wheelchair.

Remember to always consult a qualified driver rehabilitation specialist and mobility equipment dealer prior to making any decisions or purchases regarding a vehicle or driving equipment -- failure to do so can result in significant functionality, economic and safety problems.