

Driving and Spinal Cord Injury

ADED – The Association for Driver Rehabilitation Specialists

After a spinal cord injury has occurred, a person may no longer be able to drive an automobile in the previous manner. There are several types of adaptive equipment and vehicle modifications that can allow an individual with a spinal cord injury to drive. Depending on the level of injury and functional ability, either a sedan or van may be an appropriate vehicle choice. The following are considerations for selecting a vehicle.

Driving a sedan

- When considering the use of a sedan, the individual must be able to do the following:
- Operate primary vehicle controls with or without assistive technology
- Operate secondary vehicle controls with or without assistive technology
- Open, close, and secure the door
- Transfer to and from the wheelchair (with or without a transfer assist device)
- Store, secure, and retrieve the wheelchair (either independently or with a wheelchair loading device)

Since characteristics and dimensions of vehicles vary, it is important that the individual performs these functions in the vehicle being considered prior to purchase. A driver rehabilitation specialist can provide recommendations for sedan selection.

Driving a van

If an individual is unable to drive a sedan, there are several options available for driving a van. Specialized modifications can allow a person to transfer to the driver seat or to drive from the wheelchair.

There are several levels of driving control technology to compensate for the loss of strength and/or range of motion. Some of these include:

- Horizontal, reduced diameter or deep dish steering systems to position the steering wheel within functional range of motion and maximize available strength
- Mechanical hand controls for those driving from a wheelchair or transfer seat base with adequate strength
- Reduced effort steering and braking systems to compensate for reduced strength
- Servo brake and accelerator control to compensate for reduced range of motion and strength
- Joystick driving systems, allowing one-hand operation of brake, accelerator, and steering

Adaptive equipment and vehicle modifications for wheelchair access are available for some full-size vans and minivans. All vans, however, are not suitable for modifications. A driver rehabilitation specialist can assist in making the correct van choice. He/she can provide a comprehensive evaluation to determine a person's ability to drive.

The assessment should include:

- Vision/perception
- Functional ability
- Reaction time
- Behind-the-wheel evaluation