



| RYGG MÄRGS | SKADA

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The following text is a selection from the website.

Author: Claes Hulting.
Professor, M.D., CEO of the Spinalis Foundation



Translation: funded by Allmänna Arvsfonden & project RG Integration.

<http://www.rgintegration.se/en/>

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The Spinalis Foundation is a charitable foundation with the mission to promote research and develop treatments for people with SCI.

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What is a spinal cord injury?

A spinal cord injury is an injury to the spinal cord, usually caused by severe external force (trauma) to the neck or back. The damage means that the nerve connections between the brain and the body outside the central nervous system — which includes the spinal cord — have been completely or partially destroyed. The somatic motor nervous system ceases to function properly and a person's ability to feel sensations disappears.

The spinal cord is protected in the vertebral column and can be likened to a small finger — thick cable consisting of nerve cells and nerve connections. From each segment, nerves (spinal nerves) go out to the different muscles of the body that control muscle activity. In the same way, impulses from sensory receptors are conveyed to the brain via these nerves.

The spinal cord is divided into different segments:

8 neck segments (cervical) = C1-C8

12 chest segments (thoracic) = Th1-Th12

5 back segments (lumbar) = L1-L5

5 pelvic segments (sacred) = S1-S5

Spinal nerves from the cervical segments go mainly to muscles in the arms, spinal nerves from the thoracic segments go to the muscles of the torso, while spinal nerves from the lumbar segments go to the legs. The nerves from the sacral segments are important for bladder and bowel function.

Below the end of the spinal cord, a bunch of spinal nerve roots, known as the horse tail (cauda equina), continue down the vertebral column.

THE DIFFERENCE BETWEEN TETRAPLEGIA AND PARAPLEGIA

Tetra is a Greek word that means four. Tetraplegia means that you have a spinal cord injury that affects both the arms and the legs. Depending on where in the cervical spine the injury is located, you



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will have varying degrees of paralysis in your arms. If you have an injury to the upper three cervical vertebrae, you cannot breathe and need a respirator to help you breathe. If you have an injury to the lower cervical vertebrae, you will have varying muscle strength in your arms and in some cases can manage without help. The degree of independence is also determined by whether the damage is complete or incomplete.

Para is a Greek word that means two. A paraplegic has an injury that involves two extremities, i.e. the legs, and has all the musculature and sensory systems intact in the arms and many times in most of the torso. A person with paraplegia has every opportunity to live an independent life.