

A Brief History of Spinal Cord Injury Treatments

by *John Demas* on 01/13/11 at 1:43 pm

Although promising advances are regularly made in various medical fields, spinal cord injury (SCI) patients are among those in greatest need of new research breakthroughs. Faced with daily mobility challenges and frequent pain issues, these patients deserve the fullest measure of hope regarding new treatment programs.

This article will briefly review how far medicine has come in the treatment of **spinal cord injuries**. Hopefully, it will help many SCI patients and their families persevere until even greater scientific and technological discoveries can improve their lives.

Early Treatment Approaches

As early as **1700 B.C.**, an Egyptian manuscript referenced two SCI patients afflicted with paralysis due to neck vertebrae injuries. After their examinations, it was determined that there was no viable treatments available to them. At a later date, the Greek physician Hippocrates (460-377 B.C.) pronounced a similar prognosis for other SCI patients who were paralyzed. Unfortunately, people long ago just assumed that SCI patients would die soon after their injuries. However, spinal cord injury patients who had not developed paralysis were given better prognoses. These individuals were frequently offered a rather unsophisticated form of traction.

Hippocrates was among the first to develop a traction device (a special type of ladder) for these patients. It involved tying the patients upside-down to the ladder's rungs before shaking them very hard. Some believed that this motion might actually minimize their spinal curvatures. Hippocrates also created another spinal cord treatment device called "the **Hippocratic Board**." He used this board to administer traction to immobilized patients by using his hands and feet or by using some type of wheel and axle contraption.

Years later, Hindu, Arab and Chinese doctors created their own traction devices to heal spinal problems. Today's doctors still rely on some of their same approaches to treatment.

New Treatment Insights and Discoveries Since 200 A.D.

Current **SCI patients** owe some level of debt to Roman doctor Galen who treated patients back in 200 A. D. He was the first to explain how the central nervous system, brain and spinal cord worked together. Galen further noted how physical sensations traveled between an SCI patient's brain and their limbs and backs.

During the seventh century A.D., Paulus of Aegina introduced the idea that if you operated on patients with spinal column fractures and removed their broken bone fragments, you might be able to prevent the onset of paralysis.

Perhaps some of the most impressive early work was that done by Vesalius, a Renaissance doctor and teacher. His anatomy textbook, published in 1543, provided excellent illustrations of the entire spinal column based on his own firsthand observations. He was the first to use the terms "cervical, thoracic, lumbar, sacral and coccygeal."

New strides were later made during the latter part of the 19th century, when antiseptics and sterilization greatly lowered the chances of infection during spinal cord surgeries. Shortly thereafter, in the 1920s, X-rays made it possible for doctors to pinpoint where specific spinal cord injuries were located before deciding whether surgery was advisable.

By the time the 1950s rolled around, a certain protocol for treating SCI patients had been established. Doctors would usually first reposition an injured person's spine (if doing so would not cause further injuries) and then correct its problems through surgery or other means.

Various exercise and rehabilitation regimens were then used to help strengthen the spine while the patient tried to regain lost mobility skills.

Once the 1990s rolled around, doctors frequently began administering a drug called *methylprednisolone* to patients shortly after they were injured. This often helped limit the damage to the nerve cells in their spinal columns. In 2009, the **Los Angeles Times** published a story about a new study involving SCI patients and stem cell treatments being conducted by the **Geron Corporation** in Menlo Park, California.

At this time, new stem cell treatment programs are being offered around the world. One facility in **Germany** claims that 60% of its SCI patients treated with stem cells experience some functional improvements. Extensive studies are also being conducted in various parts of **China**.

Now that new scientific and biological breakthroughs (along with technological advances) are helping some SCI patients learn to walk again, it's clear that more promising SCI rehabilitation and treatment programs are just around the corner.

Fortunately, the old days marked by slow treatment progress have ended. Today's SCI patients have every reason to resurrect mobility dreams that would have been thought unreasonable just a decade ago. (Note: A significant amount of this article's information was gleaned from the Web pages of the National Institute of Neurological Disorders and Stroke (NINDS.) Please leave this info in italics in for legal reasons!!

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