

## **Update on pharmaceutical trials in acute spinal cord injury.**

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### **Source**

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### **Abstract**

#### **OBJECTIVE:**

To review the major pharmacological trials in acute spinal cord injury (SCI) that have been conducted over the past 25 years.

#### **METHODS:**

Review article.

#### **RESULTS:**

The publication of the first National Acute Spinal Cord Injury (NASCIS) trial in 1984 ushered in the era of pharmacological trials of therapies intended to improve neurologic outcome in acute SCI. Subsequent trials of methylprednisolone sodium succinate (MPSS) and GM-1 have added to the evidence basis that informs the current management practices for acute SCI.

#### **CONCLUSION:**

The last 50 years have seen a conceptual shift from the pessimism of the past to a cautious optimism that the meager prognosis for neurologic recovery in acute SCI will yield to the progress of medical science. Major advances in the understanding of primary and secondary injury mechanisms have led to the preclinical study of many promising pharmacological therapies, all with the goal of improving neurologic outcome. A few of these drugs have stood the test of animal model experiments and have made it to the forum of human clinical trials. The NASCIS trials of methylprednisolone have been acknowledged widely as the first human studies to claim improved neurologic outcome. Although the results of these trials remain controversial, the MPSS therapy that they reported has been adopted widely by clinicians around the world as the best currently available, even if not a consensus "standard of care." Clearly, the challenge for medical science remains. The search for effective treatment has only begun.

