

# Quick Review of Model System Research

### Surgical and Nonsurgical Treatment of Penetrating Spinal Cord Injury: Analysis of Long-term Neurological and Functional Outcomes

### What is the study about?

This study examined neurological and functional outcomes for individuals with penetrating spinal cord injuries (PSCI) following surgical and nonsurgical treatment. Researchers looked at both complete and incomplete spinal cord injury. A complete injury is one in which there is a total lack of sensation and movement below the level of injury.

### What did the study find?

### Surgery for patients with complete PSCI is associated with longer acute hospital length of stay when compared to people not receiving surgery. Furthermore, with appropriate assessment and medical management, surgery for patients with complete or incomplete PSCI has similar results as non-surgical treatment regarding improvement in neurological or functional outcomes at up to 1-year follow-up.

### Who participated in the study?

The SCIMS national database was used to identify 1052 PSCI admissions to SCIM rehabilitation facilities from 1994 through January 2015. Of those, 212 received surgical treatment and 840 received non-surgical treatment.

### How was the study conducted?

To measure outcomes, this study used the International Standards for Neurological Classification of Spinal Cord Injury and the Functional Independence Measure motor scores. The outcomes for patients with complete and incomplete PSCI were analyzed separately.

### How can people use the results?

These findings can be used by clinicans, individuals with PSCI, and their families to help them understand the neurological and functional outcomes for individuals with penetrating spinal cord injuries (PSCI) following surgical and nonsurgical treatment.

### Reference

Kelly, M. L., Roach, M. J., Nemunaitis, G., & Chen, Y. (2019). Surgical and Nonsurgical Treatment of Penetrating Spinal Cord Injury: Analysis of Long-term Neurological and Functional Outcomes. Topics in Spinal Cord Injury Rehabilitation, 25(2), 186-193. doi:10.1310/sci2502-186

### Disclaimer

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