

# Quick Review of Model System Research

### Comparing Blunt and Penetrating Trauma in Spinal Cord Injury: Analysis of Long-Term Functional and Neurological Outcomes1

### What is the study about?

Spinal cord injuries (SCI) can be divided into two categories: 1) blunt spinal cord injury (BSCI) and 2) penetrating spinal cord injury (PSCI). The aim of this study was to compare BSCI and PSCI trauma to describe differences in the long-term functional and neurological outcomes for these two injury categories.

### What did the study find?

This study found significant differences between individuals with BSCI and PSCI. In terms of participant characteristics, individuals with PSCI were more likely to be male, African American, and Hispanic. Individuals with PSCI were also more likely to have complete injuries as measured by the American Spinal Injury Association Impairment Scale (AIS). Individuals with PSCI were also more likely to have government insurance, less likely to be married or employed, and less likely to have a college education. Individuals with BSCI were more likely to undergo surgery during acute care hospitalization.

### Who participated in the study?

Participants included individuals with BSCI (n = 5,316) and PSCI (n = 1,062) and were identified using the Spinal Cord Injury Model Systems database from January 1994 to January 2015.

### How was the study conducted?

Outcomes for this study were measured using the International Standards for Neurological Classification of Spinal Cord Injury and FIM motor scores. Complete injuries were evaluated separately from incomplete injuries using the AIS at acute hospitalization, SCI rehabilitation, and 1-year follow-up.

### [How can people use the results?](file:///C%3A%5CUsers%5Cccai%5CAppData%5CLocal%5CMicrosoft%5CWindows%5CTemporary%20Internet%20Files%5CContent.Outlook%5C4WHR71C4%5CBogner_CER-1403-13476_DFRR_Professional%20and%20Public%20Abstract_SME%20Review_102918%20ccai.docx#Note)

These findings can be used by clinicians, individuals with SCI and their families to help them understand the differences in long-term functional and neurological outcomes between BSCI and PSCI.

### Reference

Roach, M. J., Chen, Y., & Kelly, M. L. (2018). Comparing Blunt and Penetrating Trauma in Spinal Cord Injury: Analysis of Long-Term Functional and Neurological Outcomes. Topics in Spinal Cord Injury Rehabilitation, 24(2), 121-132. doi:10.1310/sci2402-121

### Disclaimer

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