

# Cervical disc-level canal diameter predicts spinal injury

June 13 2013

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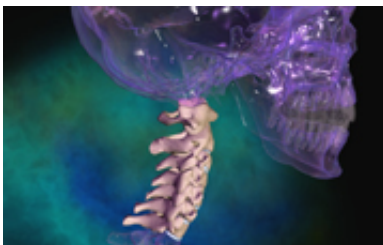


Image courtesy of Blausen Medical

Disc-level canal diameter determined from magnetic resonance imaging can identify patients at risk for acute spinal cord injury after minor trauma, according to a study published in the June issue of *The Spine Journal*.

(HealthDay)—Disc-level canal diameter determined from magnetic resonance imaging (MRI) can identify patients at risk for acute spinal cord injury (SCI) after minor trauma, according to a study published in the June issue of *The Spine Journal*.

Nikolaus Aebli, M.D., Ph.D., from the Swiss Paraplegic Centre in Nottwil, and colleagues retrospectively studied conventional lateral radiographs and sagittal T2-weighted MRIs (C3 to C7) of 52 consecutive patients with acute cervical SCI and 131 patients showing no neurologic deficits after a minor trauma to the cervical spine.

The researchers found that all investigated MRI parameters in the SCI

group, including [spinal canal](#) to vertebral body ratio, the space available for the cord, and the canal-to-cord ratio, were smaller compared with the control group. Among the different American Spinal Injury Association impairment score groups there were no significant differences. The largest [positive predictive value](#) and likelihood ratio for predicting SCI came using a cut-off value of 8.0 mm for the minimal sagittal disc-level canal diameter.

"Patients at risk of acute SCI after a minor trauma to the cervical spine can be identified by applying a disc-level canal diameter cut-off value (measured on MRI) of 8 mm," the authors write. "Additional factors (e.g., trauma mechanism) to the radiological characteristics of the cervical spinal canal affect the severity of acute SCI after a minor trauma to the cervical spine."

**More information:** [Abstract](#)  
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