

# Neurological testing limited in diagnosing disc herniation

June 17 2013

---



Neurological testing procedures have limited diagnostic accuracy for detecting disc herniation with suspected radiculopathy, according to a review and meta-analysis published in the June issue of *The Spine Journal*.

(HealthDay)—Neurological testing procedures have limited diagnostic accuracy for detecting disc herniation with suspected radiculopathy, according to a review and meta-analysis published in the June issue of *The Spine Journal*.

Nezar H. Al Nezari, P.T., M.Phty., from the University of Otago in New Zealand, and colleagues conducted a [literature](#) review to examine the diagnostic accuracy of neurological examination to detect lumbar disc herniation with suspected radiculopathy. Fourteen studies that investigated three standard neurological examination components (sensory, motor, and reflexes) were included.

The researchers found that, using pooled data from sensory testing, there was low diagnostic sensitivity for surgically and radiologically confirmed disc herniation (0.40 and 0.32, respectively) and for identification of a specific level of disc herniation (0.35), while specificity was moderate for all three reference standards (0.59, 0.72, and 0.64, respectively). Pooled diagnostic sensitivities were similarly low with motor testing for paresis (0.22 for surgically and 0.40 for radiologically determined disc herniation), while specificity was moderate (0.79 and 0.62, respectively). For surgically determined disc herniation, motor testing for [muscle atrophy](#) resulted in a pooled sensitivity of 0.31 and specificity of 0.76. For surgically and radiologically confirmed levels of disc herniation, the pooled sensitivities for [reflex](#) testing were 0.29 and 0.25, respectively, while the specificities were 0.78 and 0.75, respectively. For all [neurological examination](#) components the pooled positive likelihood ratios ranged from 1.02 to 1.26.

"This systematic review and meta-analysis demonstrate that neurological testing procedures have limited overall [diagnostic accuracy](#) in detecting disc herniation with suspected radiculopathy," the authors write.

**More information:** [Abstract](#)  
[Full Text \(subscription or payment may be required\)](#)

[Health News](#) Copyright © 2013 [HealthDay](#). All rights reserved.

Citation: Neurological testing limited in diagnosing disc herniation (2013, June 17) retrieved 2 May 2024 from <https://medicalxpress.com/news/2013-06-neurological-limited-disc-herniation.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.
---