

Eli's Rehab Report

Clinical Rehab Roundup: Tune Up Your Older Patients' Stooping, Crouching, Kneeling Difficulties

Decreased muscle strength relates to self-reported stooping, crouching, or kneeling difficulty in older adults. Hernandez ME, Goldberg A, Alexander NB. Phys Ther. 2010 Jan; 90(1):67-74.

Strength measurements are even more important to document for your elderly patients. Research published in the January issue of Physical Therapy suggests that decreased muscle strength is linked to difficulty performing functional activities such as stooping, crouching, or kneeling (SCK) in older adults. The study's purpose was to compare trunk and lower-extremity muscle strength differences in older adults who had difficulty with stooping, crouching, or kneeling with older adults who did not have these difficulties.

"As with standing up from a chair, stooping, crouching, and kneeling movements require coordination of the whole-body center of mass over a wide range of postures in order to prevent a loss of balance or fall," said researcher **Allon Goldberg, PT, PhD**, assistant professor in the Department of Healthcare Sciences, Program in Physical Therapy, Mobility Research Laboratory, at Wayne State University in Detroit. "More research is needed, but it is reasonable to predict that a physical therapy program to improve strength in older adults who have difficulty performing basic stooping, crouching, or kneeling movements could lead to improvements in performing these activities, and these improvements could be associated with reduced number of falls."

Findings: Results suggest that older adults who reported trouble with basic stooping, crouching, or kneeling also had decreased strength in their legs, according to a press release from the American Physical Therapy Association on the study. Researchers also discovered a relationship between SCK difficulty and both the level of strength and the ability to maintain proper balance. And distal leg musculature appeared to be a major contributor to SCK difficulty in the study. Future investigation will examine how other trunk and lower-extremity muscle strength may be related to these daily tasks, according to the release.

Specifics: For now, researchers found that adults with SCK difficulty had significant decreases in adjusted strength measurements of trunk extensor, knee extensor, and ankle flexion muscles.

Other researchers have suggested that older adults with SCK difficulty are more likely to have limitations in other lower-body functional tasks, such as lifting and prolonged standing, APTA reported.

"The results of this study may have important implications for clinicians working to reduce falls risk in older adults," Goldberg explained. "Rehabilitation or intervention programs aimed at addressing deficits in self-reported performance in stooping, crouching, or kneeling should focus on improving distal strength."

So if you have patients who present with SCK difficulties, address their strength deficits, but even more importantly, consider a comprehensive physical therapy program that addresses balance confidence, coordination, leg joint limitations such as stiffness and pain, and sensory capacities, Goldberg suggested.