ClinicalClues

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# Quick Fall Risk Assessment and Suitable Exercise

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In last month's HandLab newsletter, we discussed the Jansen, Hendrick, and Ellis article on laxity and instability of the thumb CMC joint, using knee hyperextension as an example of instability. This example recalled an interesting article by Nevitt, et al (1), where the authors examine the patient's report of knee buckling/instability as a predictor of falls in the next year. Their findings showed a 1.6- to 2.5-fold greater likelihood of having recurrent falls or a fall-related injury if a patient self-reported the feeling of knee buckling/instability. A fall can have a significant impact on patient health. Knowing we can screen for fall risk with a single subjective history question may allow more patients to benefit from fall prevention programs.

When treating a patient who complains of knee buckling/instability, it is important to determine what is generating the problem: for example, ligament tear, ligament elongation, pain avoidance, or weakness.

If weakness is the driving cause of the instability one productive exercise can be a modified sit-to-stand exercise. The sit-to-stand exercise can be modified by placing a heavy resistance band around the patient's upper calves with the band anchored from a pole or wall. (Figure 1) The addition of the resistive band achieves two goals:

1. It increases the patient's knee joint proprioception during a loaded activity, producing the accurate neuromuscular response around the knee joint.
2. It increases the power required of the knee and hip extensors to complete the task.

If the buckling/instability is from a ligament tear or anticipation of pain, use of an external support via a brace or taping during the modified sit-to-stand exercise may be useful.





*Figure 1a, 1b*

*Nevitt MC, Tolstykh I, Shakoor N, Nguyen U-SDT, Segal NA, Lewis C, Felson DT, Multicenter Osteoarthritis Study Investigators. Symptoms of knee instability as risk factors for recurrent falls. Arthritis Care & Research 2016; 68:1089–97*

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