

PREVENTION & REHABILITATION: SELF-MANAGEMENT: PATIENT SECTION

# The Windowpane Squat<sup>☆</sup>



Craig Liebenson, D.C

L.A. Sports & Spine, LA, USA

Back and knee pain are both very common causing much disability and discomfort. Very often different symptomatic approaches are tried from physical therapy, massage, acupuncture, chiropractic, osteopathy, medications, and injections. When treating the symptoms is unsuccessful, X-rays or M.R.I.'s may be performed, and possibly surgery, to address apparent structural pathologies.

However, there is another option. Besides symptomatic or structural approaches a functional approach can be considered. In the functional approach the triggers of pain are identified by a thorough history of what movements reproduce or irritate the symptoms. For example patients may report that knee or back pain is worse after bending, squatting or lifting.

A functional approach teaches sparing strategies which distribute forces into neighboring joints above or below the problem area such as the hip (McGill, 2007; Liebenson, 2006; Peters and Tyson, 2013; Powers, 2010). The windowpane squat is an example of such a sparing strategy called the hip hinge. It has the additional benefit of being "reactive" in that it requires minimal coaching cues. Such exercises "make the hard easy" and are more likely to "wire" new movement patterns which will be transferred from the rehab or gym floor to activities of daily living and the playing field.

The Windowpane Squat (see Fig. 1)

- Stand facing a wall (or door) with your toes barely touching it
- Place the palms of your hands on the wall at shoulder height

- Squat down without letting your knees touch the wall
- As you squat down your hands should slide with your torso
- You should feel that your weight is shifting back towards your heels
- You won't be able to squat as deep as normal, but the arch in your low back will be maintained thus helping you avoid the tendency to slouch or slump

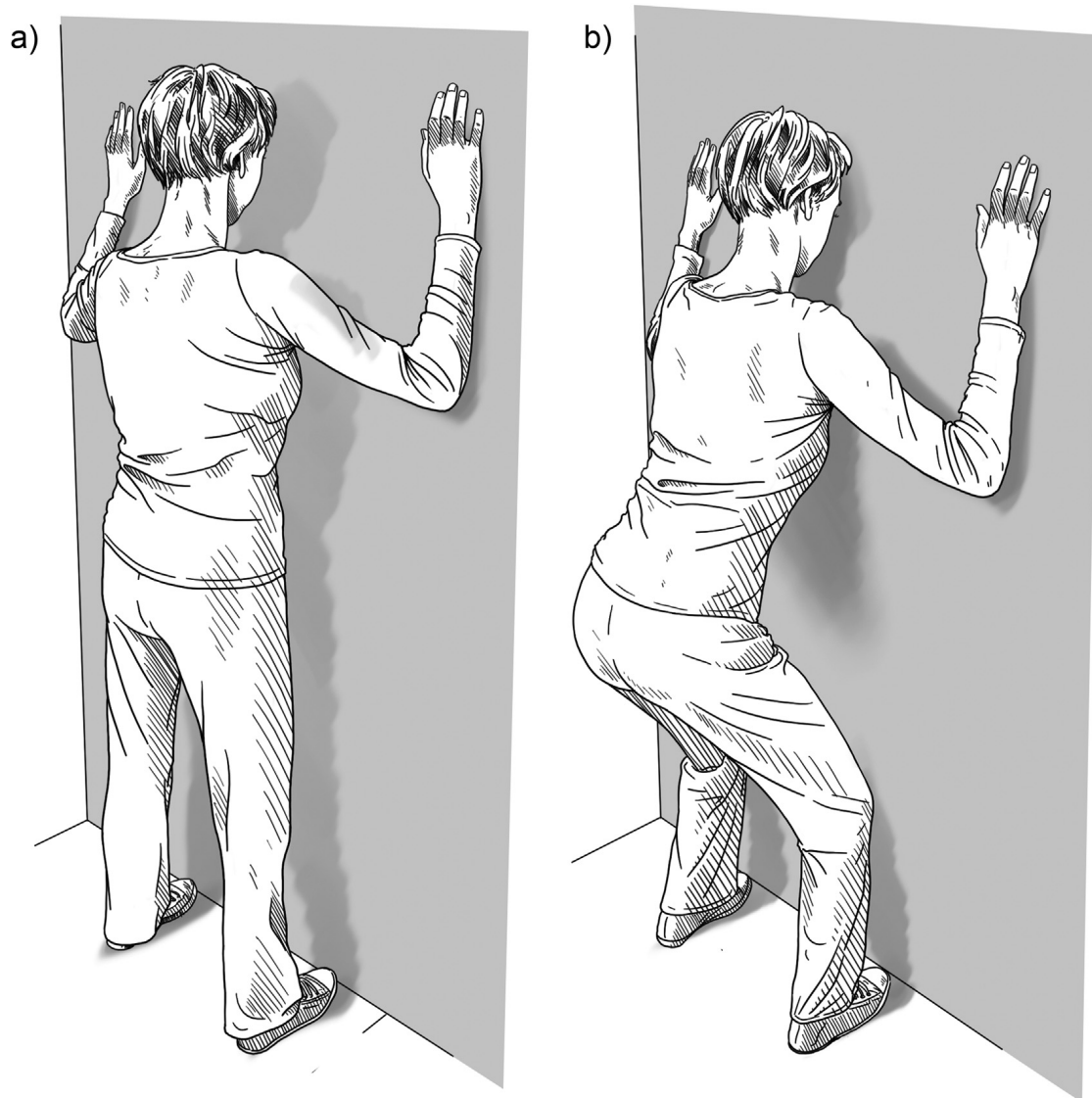
## Common mistake

- Letting your knees touch the wall
- Leaving hands overhead

## Conclusion

Learning how to avoid pain triggers is a valuable, but often ignored functional approach to addressing the source of persistent pain. In contrast, symptomatic or structural approaches usually involve interventions such as imaging, prescription medications (i.e. steroids, opioids), injections, and long-term physical therapies (i.e. massage, chiropractic, physical therapy) each of which carries with it the unintended risk of an escalating cascade of more aggressive and costly treatments and even promoting disability (Carragee et al., 2009). Therefore, learning to address the source of pain by avoiding perpetuating factors such as overloading the knee(s) or spine when squatting is an essential first step in man-

<sup>☆</sup> This paper may be photocopied for educational use.  
E-mail address: [craigliebenson@gmail.com](mailto:craigliebenson@gmail.com).  
URL: <http://craigliebenson.com>.



**Figure 1** Windowpane Squat. a) Start position. b) End position.

agement. Learning to hinge from the hips via the windowpane squat is an example of just such a patient-centered approach with minimal downside risk and great upside benefit.

## References

- Carragee, E., Deyo, R.A., Kovacs, F.M., Peul, W.C., Lurie, J.D., Urrutia, G., Corbin, T.P., Schoene, M.L., 2009. Clinical research: is the spine field a mine field? *Spine* 34, 423–430.
- Liebenson, C. (Ed.), 2006. *Rehabilitation of the Spine: a Practitioner's Manual*, second ed. Lippincott/Williams & Wilkins.
- McGill, S.M., 2007. *Ultimate Back Fitness and Performance*, Wabunu, second ed.
- Peters, J.S., Tyson, N.L., 2013. Proximal exercises are effective in treating patellofemoral pain syndrome: a systematic review. *Int. J. Sports Phys. Ther.* 8 (5), 689–700.
- Powers, C.M., 2010. The influence of abnormal hip mechanics on knee injury: a biomechanical perspective. *J. Orthop. Sports Phys. Ther.* 40 (2), 42–51.