



PREVENTION & REHABILITATION: SELF-MANAGEMENT: PATIENT SECTION

The Modified Bear exercise[☆]



Craig Liebenson, D.C.*

L.A. Sports & Spine, 10474 Santa Monica Blvd, #304, LA 90025, United States

Received 18 February 2014; accepted 18 February 2014

Most people have a tendency to overactivate their quadriceps during squatting and bending manouvres which can lead to various knee pain syndromes. Similarly, it is common to see back muscle overactivity during leg extension tasks which can result in low back pain. Quadriceps overactivity is usually termed “quad dominance” (Hewett et al, 2001, Myer, 2006, Liebenson, 2007, Claiborne et al., 2006, Pollard, 2010, Powers, 2010). Back muscle overactivity is usually associated with the lower crossed syndrome of Janda, or the scissor posture of the low back (Janda et al., 2006; Kolar et al., 2014). The common denominator in both of these situations is “gluteal amnesia” which is defined as slow or inadequate activation the gluteal muscles (Freeman et al., 2013).

There are many exercises to facilitate better gluteal activity –bridges, dead lifts, hip airplanes, Tai Chi Qua, etc. (McGill, 2004; Liebenson, 2006, 2007, 2009, 2013, Weingroff, 2014). A novel gluteal exercise from Yoga, called ‘The Modified Bear’ is presented here (Fig. 1).

The Modified Bear

Start Position

- Stand tall and slowly lean forward until your hands are used for support laying flat on a 1–2 inch/ 2.5–5 cm thick block or pad (see Fig. 1a)

- Be sure to keep your heels on the floor & arch your back by sticking your chest out

Movement

- Use your hands and fingers evenly to actively push off the support
 - You should feel your rib cage move back into your shoulder blades as your entire core engages automatically
- Slowly lower your buttocks just short of a point where you feel your lower back would round upwards
 - Feel your feet being “rooted” to the floor (i.e. as if you were about to jump (see Fig. 1b))

What you should feel

- Notice that your weight shifts towards your heels (but keep your toes “rooted” anyway)
- Feel your gluteal muscles working more than your quadriceps

Repetitions

- Hold reach repetition for 5–8 s (a relaxed breath or two)
- Return to start position
- Repeat 5–10 times
- Perform 1 set as a movement preparation

Modification

- If your hip and spine mobility is restricted utilize a higher block or pad (see Fig. 1c)

[☆] This paper may be photocopied for educational use.

* Tel.: +1 31047 02909; fax: +1 31047 03286.

E-mail address: craigliebenson@gmail.com.

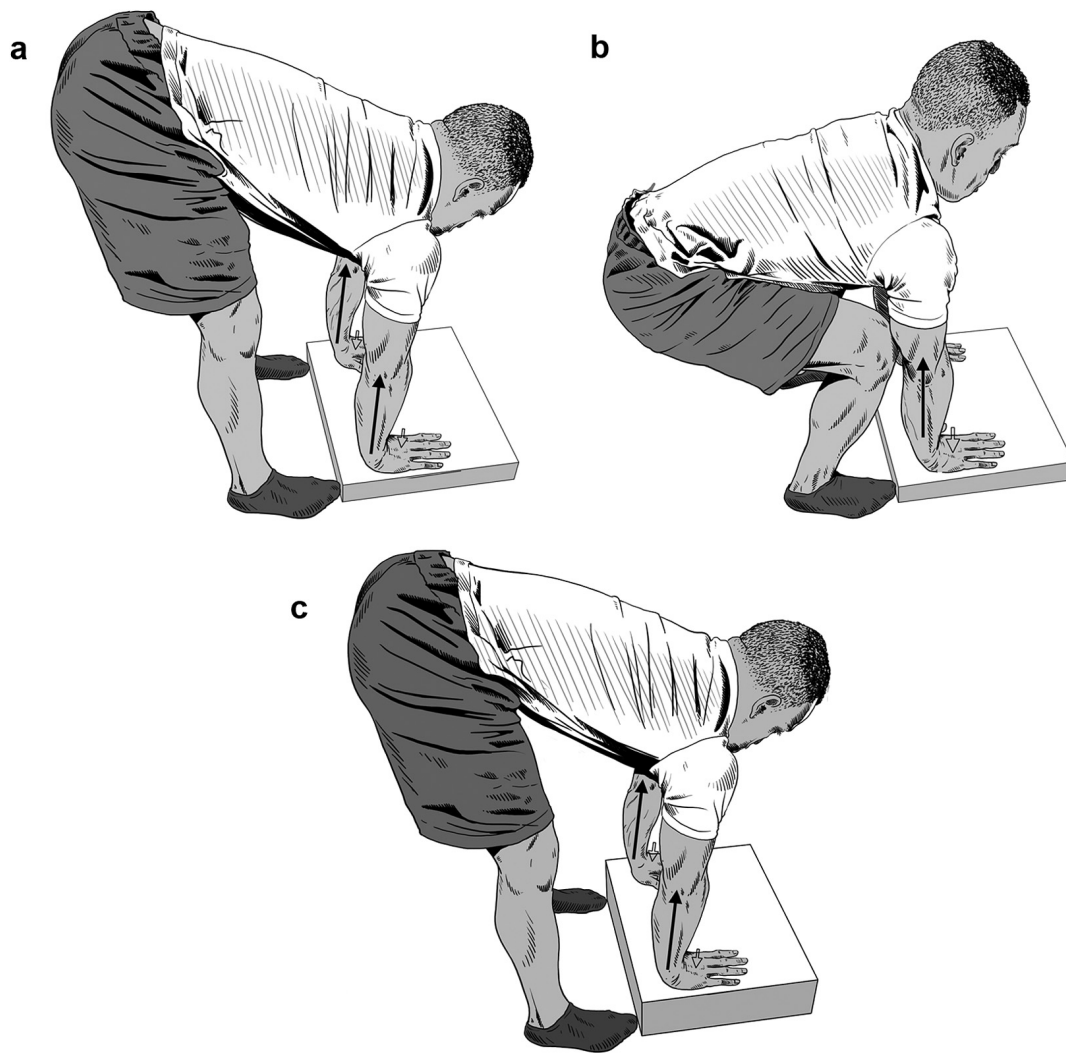


Figure 1 The Modified Bear. a) Start position. b) Final position. c) Modified support.

Acknowledgment

Thanks to Jiri Cumpelik, P.T. for teaching me this exercise and to Ida Norgaard, D.C. for consulting on this article.

References

- Claiborne, T.L., Armstrong, C.W., Gandhi, V., Pincivero, D.M., 2006. Relationship between hip and knee strength and knee valgus during a single leg squat. *J. Appl. Biomech.* 22, 41–50.
- Freeman, S., Mascia, A., McGill, S., 2013. Arthrogenic neuromuscular inhibition: a foundational investigation of existence in the hip joint. *Clin. Biomech.* 28, 171–177.
- Hewett, T.E., Myer, G.D., Ford, K.R., 2001. Prevention of anterior cruciate ligament injuries. *Curr. Women's Health Rep.* 3, 218–224.
- Janda, V., Veverokova, M., Herboneva, M., Liebenson, C., 2006. Sensory-motor training. In: Liebenson, C. (Ed.), *Rehabilitation of the Spine: a Practitioner's Manual*, second ed. Lippincott/Williams and Wilkins, Baltimore.
- Kolar, P., Kobesova, A., Valouchova, P., 2014. Dynamic neuromuscular stabilization. In: Liebenson, C. (Ed.), *The Functional Training Handbook*. Lippincott/Williams and Wilkins, Philadelphia (sched pub).
- Liebenson, C., 2006. Functional stability training. In: Liebenson, C. (Ed.), *Rehabilitation of the Spine: a Practitioner's Manual*, second ed. Lippincott/Williams and Wilkins, Baltimore.
- Liebenson, C., 2007. Functional problems associated with the knee – part two. Rehabilitation fundamentals for common knee conditions. *J. Bodyw. Mov. Ther.* 11, 54–60.
- Liebenson, C., 2009. Functional training of the gluteal muscles. *J. Bodyw. Mov. Ther.* 13, 202–204.
- Liebenson, C., 2013. Training the hip: a progressive approach. *J. Bodyw. Mov. Ther.* 17, 266–268.
- McGill, S.M., 2004. *Ultimate Back Fitness and Performance*. Wabuno Publishers, Waterloo.
- Myer, G.D., Paterno, M.V., Ford, K.R., et al., 2006. Rehabilitation after anterior cruciate ligament reconstruction: criteria-based progression through the return-to-sport phase. *J. Orthop. Sports Phys. Ther.* 36 (6), 385–402.
- Pollard, C.D., Sigward, S.M., Powers, C.M., 2010. Limited hip and knee flexion during landing is associated with increased frontal plane motion and moments. *Clin. Biomech.* 25, 142–146.

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.

Weingroff, C., 2014. Dead lifts. In: Liebensohn, C. (Ed.), *The Functional Training Handbook*. Lippincott/Williams and Wilkins, Philadelphia (sched pub).