Wobble, Rock, and Roll for Improved Performance!

balance training for added agility and stability

OPTP *Tools for fitness • Knowledge for health*

The Many Facets of Equilibrium

Before reading any further take a moment to perform the following test.

Looking straight ahead, stand with feet together, hands at your sides. Raise one leg, bending at the knee, so that your heel is level with your knee and hold for 30 seconds. (Arms can be down or slightly raised.) Now, lower your leg and try again with your eyes closed. Notice a difference? You just experienced the phenomenon known as proprioception.

Proprioception, simply put, is the body's communication of where its parts are in space. A more thorough definition from Suzanne Nottingham's article, *Training for Proprioception & Function*, states that "Proprioception is an automatic sensitivity mechanism in the body that sends messages through the central nervous system (CNS). The CNS then relays information to rest of the body about how to react and with what amount of tension."[1]

Increasing proprioceptive awareness leads to improved performance through added balance, agility, and coordination. Leon Chaitow, ND, DO states in his book, *Maintaining Body Balance, Flexibility and Stability,* that "Agility is balance in action and it is as important to normal function as strength, flexibility and stability."[2]

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>
> *-Leon Chaitow, ND, DO*

Restoring Balance and Proprioception- Post Injury

The following excerpt from Jennifer Swanson's, DPT, article, *The Missing Link*, illustrates the importance of post injury balance/ proprioceptive training.

"Impairments in the ability of an individual to sense joint position following injury are often overlooked in rehabilitation programs. Consequently, it is often considered to be a major risk factor in the development of recurrent injuries, despite restoration of the integrity of the affected muscles, ligaments, and tendons. ... Restoring proprioception after an injury is critical to allow the body to maintain stability and orientation during both static and dynamic activities related to sports and daily living. Specific exercises must be incorporated in order to reestablish normal proprioception. The goal of these proprioceptive exercises should be to increase the reaction time and improve the awareness of the injured joint during functional and sport activities."[4]

Wobble, Rock, and Roll for Balance

Balance, the body's ability to stabilize itself, is both a means and end of increased proprioception. Balance training is an effective way to increase proprioceptive feedback and, in turn, improve balance skills for enhanced performance. There are many tools available that provide significant balance challenges- most notably wobble/rocker boards, foam rollers and Swiss exercise balls. Wobble boards such as **OPTP's Multi-Challenge Board** are excellent for dynamic, progressive balance challenges in multiple planes. For example, an exercise program ideally suited for the wobble board is progressive range-of-motion

(ROM) challenges for the post injury ankle patient. The dynamic environment created by the instability of the wobble board allows for the building of ankle strength and flexibility, ultimately leading to increased range-of-motion. For those needing more stability, rocker boards offer an easier challenge in two planes.

Foam rollers are quite possibly the hottest functional training tools on the market today. Used by both rehab and fitness professionals, the popularity of these tools stems from their versatility. (Along with balance, they're also ideal for strength/stretching exercises, and for releasing muscle tension.) Standing or lying on these unstable rolls creates a balance challenge that forces recruitment of 'weaker' stabilizing muscles and the central nervous system. "The foam roller's design provides sensory motor challenges on two planes and enhances balance reactions, body awareness, muscle reeducation, motor planning, dynamic strengthening, and neural muscular flexibility."[5] – Caroline Corning Creager, PT

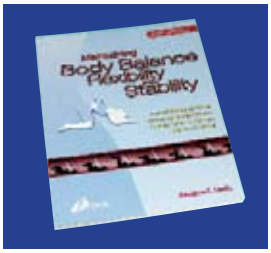
Another extremely popular, versatile tool is the **Swiss exercise ball**- also known as a stability ball, balance ball, or Swiss ball. According to Marci Landsmann in her article, *Getting on the Ball*, "By providing an unstable base, balance balls engage the core muscles to work together. ... Training on an unstable environment elicits changes in postural and neural activation, which enhances strength."[6]

Putting it All Together

"Using these pieces of equipment will help train your body to function as a unit, with muscles firing sequentially to produce a desired movement. Performing a **push-up on a stability ball**, for example, requires that some muscles contract to help produce the movement, others contract to help balance the body, while others contract to stabilize the spine and keep it in a neutral position. Each time your body recognizes a shift in position, or detects a loss of balance other muscles will be activated."[3]

Balance Resources

OPTP AXIS™ Roller (#AXR366, AXH363, AXH123, AXR126)
Fitness and rehab professionals will love the durability and lasting power of this roller. Geared for moderate to heavy users, the exclusive **OPTP AXIS Roller** gives all the benefits of traditional rollers without breaking down.



Maintaining Body Balance, Flexibility and Stability (#8707)
Leon Chaitow, ND,DO, encourages a balanced partnership between individuals and trainers. The exercises in the text are explained by a combination of step-by-step instructions, illustrations and self-assessment tests to measure progress. Topics discussed include: muscle energy techniques (METs), trigger points, self mobilization, strength, stability, balance, breathing and positional release techniques. Illustrated. Softcover, 197 pages.

BOSU Balance Trainer Pro Pack (#471PRO)
BOSU (BOth Sides Up) has two functional surfaces to integrate dynamic balance with functional or sports specific training. The burst resistant dome can be used for balance, core stability, cardio and proprioception training. It can be used platform side up for push-ups or seated exercises. Includes, pump, Integrated Balance Training Video (60 Min) and 120 page illustrated Instructor Training Manual.

Product Mentions

All products mentioned in this newsletter can be purchased from OPTP. Shop online at www.optp.com to see all of our balance products & resources, or talk to one of our knowledgeable customer service representatives Monday-Friday from 8AM-5PM CST. Call us today at 1-800-367-7393, and we'll be happy to assist you with all your health and fitness needs.

References:
1) Nottingham, Suzanne. "Training for Proprioception & Function." Fitness Management, February 2001. Pp. 28-29.
2) Chaitow, Leon, ND, DO. "Maintaining Body Balance, Flexibility and Stability." Churchill Livingstone, © 2004. P. 164.
3) Concannon, Mary, MA. "Balance Training." Fitness News: September/October, 2002. www.nvo.com/upandmoving/fitnessmonthlyprinterfriendly
4) Swanson, Jennifer, DPT. "The Missing Link." Orthopedic Technology Review, Vol. 7 No. 3, March/April 2005. www.orthopedictechreview.com/issues/marapr05/pg36.htm
5) Creager, Caroline, PT. "Therapeutic Exercises Using Foam Rollers." Caroline Corning Creager, © 1996. P. 2.
6) Landsmann, Marci. "Getting on the Ball." Healthy Aging, Jan/Feb 2006. P.31.