

# Newsletter

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## BOSU BALLS AND WOBBLE BOARDS

The Globe and Mail, April 24, 2009 JOCKOLOGY By ALEX HUTCHINSON

### **THE QUESTION**

Should I be using Bosu balls and wobble boards to improve my balance?

### **THE ANSWER**

No gym is complete these days without an assortment of oddly shaped and surprisingly expensive balance-training gadgets. Unlike many fads, this one really does have its roots in solid medical research: Wobble boards earned their stripes decades ago in aiding the rehabilitation of ankle sprains.

The purported benefits of balance training now extend much further, promising injury prevention and the strengthening of countless small stabilizer muscles that would otherwise be left flaccid. For those who play court sports involving lots of running and rapid changes of direction, the benefits are increasingly clear; for the rest of us, the verdict is murkier.



Two recent studies by University of Calgary physiotherapist Carolyn Emery and her colleagues followed more than 1,000 high-school basketball players and physical education students in randomized trials of balance training using a wobble board. In both cases, balance training reduced injuries: The rate of ankle injuries among basketball players, for instance, was 36 per cent lower in the balance training group.

Critics have pointed to a pair of studies that associated balance training with increased injury risk. The first was a 2000 study of Swedish soccer players that observed four knee ligament injuries in the balance-training group compared with one in the control group. The second was a 2004 study of Dutch and Norwegian volleyball players that saw an increase in knee injuries for players with a prior history of knee problems.

"These results are somewhat surprising, and we do need to be mindful of them," says Con Hrysomallis, a researcher at Victoria University in Australia who reviewed 21 similar studies across a variety of sports in a 2007 article in the journal *Sports Medicine*. The two negative studies were the only ones that had subjects throwing and catching balls while on a wobble board; as opposed to simpler exercises, he notes.

But the overall conclusions are positive, Dr. Hrysomallis says: Balance training, along with other "neuromuscular" exercise such as jumping and agility drills, can reduce injury risk in sports such as soccer, basketball and volleyball. There's also some evidence that simple balancing drills can reduce the risk of falls in older people.

That doesn't mean you should start doing all of your exercises on unstable surfaces. The problem is that if you do a bench press while lying on a Swiss ball, you won't be able to lift as much weight, so you'll gain less strength. As a 2007 study of soccer players at the University of Connecticut concluded, training on unstable surfaces "may create a hesitant athlete for whom stability is gained at the expense of mobility and force production."

Interestingly, moderately unstable platforms such as Bosu balls and Dyna Discs don't appear to stimulate any additional muscle activation compared with stable surfaces for subjects who already have a lot of experience training with free weights. David Behm's lab at Memorial University in St. John's published this finding last year, suggesting that free weights alone effectively trigger your balance muscles.

Add up the evidence, and you're left with a familiar message: moderation. Balance training can be a useful tool to help prevent lower-leg injuries, and perhaps to ward off falls as you get older. But if you spend too much time on the Swiss ball, you'll be missing out on other training benefits.

There are different types of balance training devices that promise injury prevention and the strengthening of small stabilizer muscles:

Dyna Disc: (moderately unstable) good for dynamic exercise stepping on and off

Bosu Ball: (moderately unstable): good for dynamic exercise stepping on and off (both sides)

SWISS Ball: (highly unstable): best for core exercise; leg training, only for advanced users