

Pel ot Performance Coaching

Training on Unstable Surfaces

There is a ton of information out there that talks about training on unstable surfaces (swiss/physioballs) and how great it can be for training of average/everyday/ordinary individuals (not athletes). Unstable surface training has a place in the training process for improving athletic performance, but it is important to know that high performing athletes that train on unstable surfaces to increase strength and power will become weaker and less explosive. When training on an unstable surface athletes are limiting their ability to produce maximal strength and power. There is a ton of research in the field of sports performance enhancement on this topic and for the sedentary/non-high performing athlete, swiss/physio balls can be a great way to activate the core and increase body awareness, control and coordination, but for the high performance athlete, these unstable training tools limit an athlete's strength and power potential.

After sustaining an injury or when in the rehabilitation process, unstable surface training can be a great tool to help accelerate tissue function, but for the non-injured athlete and who has performance based training goals such as maximal speed and explosion, these unstable surfaces will be detrimental for performance enhancement.

When training on unstable surfaces, resistances are 10-40% lower when compared to resistances that can be used when training on a stable surface. For example: squatting 225lbs on a stable surface would be close to 135lbs on unstable surface, benching 200lbs on stable surface would be close to 120 lbs on unstable surface. Although there is a positive training adaptation that can come from these types of exercises on unstable surfaces, the extra resistance from training on a stable surface will lead to significantly greater gain in athletic performance.

If the goal is to train for increase in balance, swiss/physio balls and balance discs/pads are great, but it is important that if an athlete tries to train maximal strength while on one of these items, the athlete will get weaker or strength gains will be limited. I highly advocate never standing or squatting on a physio/swiss ball; doing so does take a great deal of balance and coordination, but in my professional opinion the likelihood of injury is far too great from performing such movements and that is a risk that any athlete should not be willing to take. Numerous athletes every year are injured from trying to perform movements in such ways. The typical injuries that are sustained in these incidences are related to knee.

Athletes perform and compete in unpredictable situations and it is a must that athletes must possess good balance, control and coordination to meet the demands of sport, but the sports are not played on unstable surfaces. Training for improved sport specific balance, control and coordination should come from drills and exercises that are going to incorporate the same challenges of momentum and forces that an athlete must experience in sport.

Additionally, research has found that when training the abdominal region/core on an unstable surface; there is a great deal of abdominal recruitment, studies have provided evidence that proves that unstable surfaces do increase core activation but not while under resistance. It is important for athletes to be aware that the resistances that come from training on a ball alone do not nearly compare with the same resistances and torques that the torso must withstand on the playing field when sprinting, cutting, decelerating, twisting and jumping.

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For athletes that are looking for a good burn in the core, training the core on an unstable surface will prove to be a good tool for your training goal, but core training alone on an unstable ball is not a sufficient way to solely train your torso for the demand of explosive sport movements that require maximal speed and changes of direction. In multiple research studies done with swiss ball training, athletes improved core endurance on a swiss ball when tested on a swiss ball, but from training on a swiss ball, athletes saw zero benefit in sprint speed, vertical jump and other athletic performance based tests.