# Ergo Insights

## Stability Balls in the Office

### Why Stability Balls?

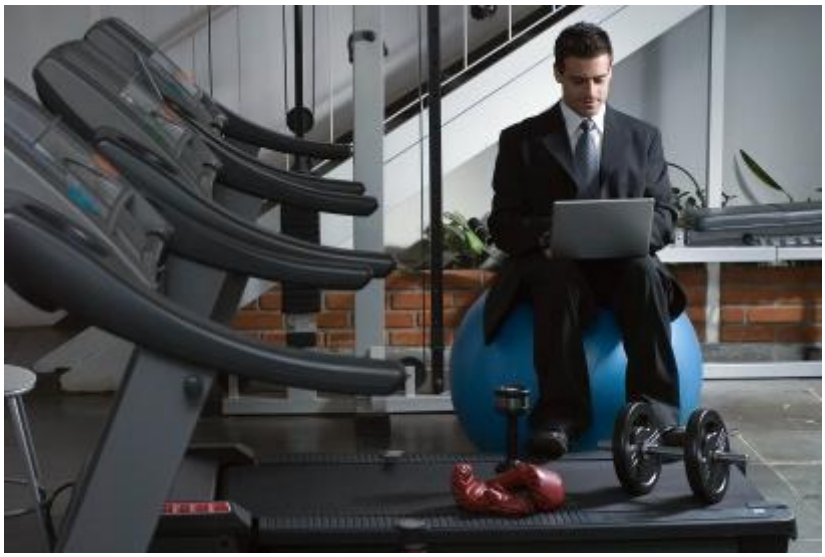
Low back pain is one of the most prevalent reported injury site for workplace injuries. Two major contributors that are thought to be related to increased reports of low back pain are:

1) Stationary sitting postures maintained over prolonged periods of time

2) Sustained lumbar flexion

When asked to sit for prolonged periods, people tend to shift postures frequently rather than maintain one single comfortable position. This along with other findings has lead researchers to believe that it is more beneficial to adopt varied seated positions rather than static positions while sitting.

Stability balls have been marketed as a replacement for office chairs with claims to increase spinal motion and improve posture, balance, and reduce pain through “dynamic sitting”. Very few quantitative studies have provided scientific proof of these claims.



### Stability Ball Manufacturer’s Claims Debunked!

**Claim**:
*Stability balls increase comfort while working in the office.*

**Evidence:**

- Participants in laboratory comparisons office versus exercise ball chairs reported increased discomfort with exercise balls after just 1 hour
- Increased contact area of the exercise ball with the buttocks and legs may compress soft tissues in the area and contribute to discomfort

**Claim**:
*Stability balls improve core strength by increasing muscular activity through a dynamic (unstable) seat*

**Evidence**:

- Several studies have compared trunk muscular activity while sitting on exercise balls versus chair, majority did not find any difference in muscular activity
- Studies who have seen differences in trunk muscular activity across seating types have inconsistent findings across studies.

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## Stability Balls in the Office

### The Importance of Fit

International Organization for Standardization (ISO) and the Canadian Standards Association (CSA-International) state that office seating should be designed to provide a stable support which allows a person to move and be comfortable over prolonged periods of time. A chair should have a proper fit in order to promote circulation in the lower limbs, allow easy maintenance and change in posture, support the spine while seated, and have sufficient friction to avoid slipping but also be a permeable surface for breathability and comfort .

### Safety Concerns

The risk of falling when sitting on a stability ball is significantly increased by:

- Unstable base of support
- Tripping hazard when not in use
- Risk of bursting

Overall, stability balls may in fact be helpful to some individuals and have been used in rehabilitative settings. It is recommended that they remain being used in the home while watching television or during a time when the individual can focus on the exercise and is not distracted by everyday work tasks.

| | | |
|---|---|---|
| Seat Height | Must adjust to allow user to sit with thighs parallel to floor, with feet supported on the floor. | Lacks height adjustment. Can be sized for height (minimal adjustment) |
| Seat Depth | Must adjust to prevent pressure behind the knees and allow the user to sit back in the chair | No depth adjustment. Only sized for height requirements. |
| Back Support | A backrest should be present to prevent muscular fatigue. | No back support is present. |
| Arm Support | Armrests are used to help user stand up and sit down safely. Used to support arms during working breaks. | No armrests present. |