

The Power of Posture

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Good posture is vital to overall health and well-being.

Brintell et al. (2005) define **posture** as a state of skeletal and muscular balance and alignment that protects the supporting structures of the body from progressive deformity and injury.

Maintaining good posture with a neutral spine position impacts:

- the musculoskeletal system,
- breathing,
- digestion,
- concentration,
- cognition,
- energy levels, and
- confidence.

Good posture also plays a crucial role in fall prevention (Freeman, et al., 2009).

Neutral spine posture in sitting and standing is essential in supporting the body's weight against gravity. Neutral spine refers to the natural curve of the lumbar spine.

Good posture occurs when the body maintains muscular and skeletal balance so that joints and muscles don't experience over stretching or excessive tightening resulting in decreased range of motion.

Breathing is positively affected when sitting and standing in a good posture (neutral spine position), with shoulders lifted up and back, shoulder blades squeezed together behind the back and core muscles engaged. Sitting with good posture gives the diaphragm and lungs room to do their work. Rounded shoulders and slumped shoulders along with weakness of core muscles cause poor posture and prevent maximal thoracic expansion limiting breathing capacity.

Good posture positively impacts the functioning of internal organs. Each organ has a natural position in the body that can be maintained by good posture. Poor posture changes the position of internal organs, cramping the lungs, stomach and intestines leading to faulty digestion and sometimes constipation (Drury, 1984).

Poor posture puts excess stress on muscles and joints and can lead to discomfort, pain, and musculoskeletal issues, particularly in the neck and lower back. If body segments are not in good alignment for extended periods of time, the muscles adapt by shortening or lengthening. These



adaptations often lead to musculoskeletal imbalances and ultimately injury.

Poor posture can present with rounded and elevated shoulders and a pushed-forward head position. This position places stress on the spine between the top of the neck and skull and the base of the neck and upper shoulders. There is a reduction in the stability of the shoulder blades resulting in changes to the movement pattern of the upper extremities. It can present with a forward tilting of the hips, an increase in the curve of the lumbar spine and a protruding stomach. This position places stress over both the hip joints and lower back.

The average person spends a minimum of eight hours a day sitting (Kendall, 2005). It has been determined that sitting is hazardous to health. Sitting in good posture can help to alleviate a significant amount of postural discomfort and prevent some of the issues related to excessive sitting.

When a person moves in poor posture, the body isn't as balanced over its base of support (Brintell et al., 2005). This imbalance and inefficiency of movement can increase the risk for falls.

Other postural concerns related to poor posture include:

- difficulty standing in one place for about 15 minutes,
- difficulty stooping, crouching, and kneeling,
- difficulty getting in and out of a car,
- difficulty walking,

- difficulty putting on socks, and
- difficulty reaching.

Consciously practicing good posture and strengthening postural muscles can greatly benefit execution of these movements and can prevent falls.

Concentration, focus, and cognition are affected by the flow of blood to the brain. The brain uses 20% of the body's oxygen and glucose (Ratey, 2008). Misalignment of the spine negatively impacts the flow of oxygenated blood to the brain.

Individuals with poor posture are more likely to have poor self-image and less self-confidence (Watson & MacDonncha, 2000). Brinol, Petty, and Wagner (2009) found that sitting in a confident position was related to positive thoughts and sitting in doubtful posture was associated more with negative thinking. Feeling depressed is often associated with having less subjective energy. Peper and I-Mei Lin (2012) found by changing posture, subjective energy level can be increased and decreased.

The following cues may sound familiar if you have been participating in my ongoing Virtual Fitness classes. As a physiotherapist and certified Pilates instructor, posture is integral to my teaching and exercise promotion. In my article, "The Power of Posture" published in the *Journal on Active Aging* in 2017 I described the following:

Verbal Cues for standing in good Posture

- Visualize a rope attached to the crown of your head.
- Someone is pulling up on that rope toward the ceiling.
- Keep the length in your spine—feel it elongating you.
- Your head is centered between your shoulders.
- Your shoulders are above your hips.
- Connect your navel to your spine.
- Soften your knees.
- Keep your feet hip distance apart.

Verbal Cues for sitting in good Posture

(on a chair with a stable surface or on a stability ball with an unstable surface)

- Visualize a rope attached to the crown of your head.
- Someone is pulling up on that rope toward the ceiling.
- Keep the length in your spine.
- Your head is centered between shoulders.
- Lower the shoulders.
- Think of keeping distance between your ear lobes and shoulders; i.e., do not let shoulders creep up towards your ears.

- Shoulders are above hips.
- Hips are weighted equally on chair or ball.
- Notice if you are shifting into one hip more than the other.
- Centre your weight between both hips.
- Draw the navel to the spine.
- Without compromising breathing visualize pulling up a zipper on a tight pair of pants. Feel the tightening sensation in lower abdomen.

Verbal Cues for lying on the back in good Posture

- Knees bent, feet on the floor with feet and knees hip distance apart
- Allow the mat/floor to provide feedback. Think about how your body is contacting the mat from your head to your tailbone.
- How is your body feeling?
- Is your head centered between your shoulders?
- If there were a headlight facing up from your chin it should shine straight to the ceiling.
- Compare left and right shoulders. Are they weighted equally on mat?
- Anchor shoulder blades down on mat as you visualize length in your collar bones.
- Scan down your spine. Compare left and right sides of your spine/trunk. Are they weighted equally on the mat, or are you feeling heavier on one side of your trunk?
- Let your tailbone be heavy on mat.
- Compare left and right hips. Are you weighted equally in your hips or feeling heavier in one hip vs. the other?

A Power of Posture Exercise series will create a mind-body connection and mental focus that enhances alignment and awareness of where the body is in space, establishing ideal standing, seated, and lying posture.

The Power of Posture will provide participants with a postural training program that is easy to implement, encouraging simple yet effective exercises to improve not only your well-being but also to empower you on many levels and in multiple dimensions: physically, mentally and emotionally.

The Power of POSTURE exercise series can be integrated into your daily routine. The focus of the series is on body alignment and awareness, flexibility, strength, balance, breathing and relaxation, including functional movement patterns to encourage and develop optimal posture and bone building.

Watch for the upcoming Power of Posture Seminar and classes to follow!