



Back in Control: Walking

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If walking is thought to be so healthy for low back pain, why do so many people hurt when they walk?



I would like to differentiate between effective gait and efficient gait. Effective gait means that one is successful in moving from here to there. The posture could be horrible, the person could be filled with pain and still have an effective gait. Efficient gait however is very difficult. It optimizes the musculo-skeletal system and fascial system to minimize energy expenditure, minimize destructive forces through the body and maximize endurance and strength over time.

So how does one determine if gait is efficient? I have many patients that suffer from back pathologies that lead to inefficient gait, limiting their ability to exercise and the benefits that accompany exercise like weight management, cardio vascular and psycho-emotional benefits. These pathologies if not treated, can lead to impaired gait postures consisting of shortened hamstrings, hip flexors, slouched thoracic spine, rounded shoulders and forward head posture, all leading to increased inefficiencies in gait and the unwanted side effects of not being able to walk well.

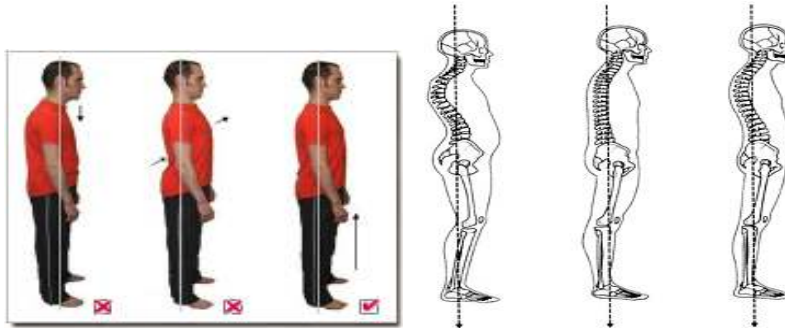
I had a patient who was diagnosed with a substantial narrowing of the foramina in his lumbar vertebrae (This is the opening where the nerve root passes through to supply sensory and motor to the lower extremity). His pain only occurred when he stood up for any length of time or walked any distance, classical diagnosis of STENOSIS. When we observed his posture in standing and walking, we realized he stood with a sway-back posture, increasing the sheer force of the stenotic segment in his low back, putting pressure on the nerve root to his legs. When I asked him to correct his posture he noted that his pain completely disappeared. By axially elongating his lumbar spine and shifting his weight forward, he was able to decrease the sheer force on his back and the nerve root and he was able to return to walking and standing without pain. NO SURGERY!!!

So how do you walk? Here are a few things to look for when assessing your own gait.

1. IN standing do you have more weight on the ball of the foot or the heel?
2. Which muscles do most of the work in standing; quadriceps, hamstrings or neither?
3. Are your feet close together or far apart(like John Wayne)?
4. Do your arms move when you walk or just hang at the side?
5. Do your hips sway a little side to side, a lot or not at all?

(Correct Answers: 1. ball of foot, 2. neither, 3. close together, 4. arms should move, 5. hips should sway side to side like a figure 8.)

Well even in normal healthy gait as mentioned before, there is great variance. Posture plays a very important role in efficient gait. If you think of the body as a stack of bones balancing in space and a plumb line descending from your ears to the ground would look like the pictures below



Notice the position of the head in relationship to the shoulders and the thoracic cage. Is it stacked up vertically? The thoracic cage should be directly in alignment with the pelvis. The plumb line now passes through the anterior one-third of the knee and lands just anterior to the ankle. This means that you should be feeling about 60% of the weight in the balls of the feet and 40% in the heels of the feet.

Suggested exercises to improve your standing and waling postures:

1. Pretend that your head is suspended by an elastic band from the ceiling.
2. Rise up onto your toes and find your balance.
3. Slowly lower your self until the hell barely touches the floor.
4. Notice the anterior lean and the increased tension of the abdominals, this is a good thing!
5. Make sure that you are not compensating by thrusting hips forward.
6. Slowly lean back until the muscles in the thigh relax.
7. Now pretend the wind is blowing from behind and allow the first step to come forward decelerating you from the wind at your back and continue.
8. One more thought that can help is to pretend that the elastic band is still gently lifting you as you walk.

You might notice that you feel lighter and that you have a little more bounce to your step. You will also notice a decrease in the stress in your joints and muscles. Walking can become enjoyable and efficient again by working on your alignment. Put the bounce back in your step and take the pain out of your back.