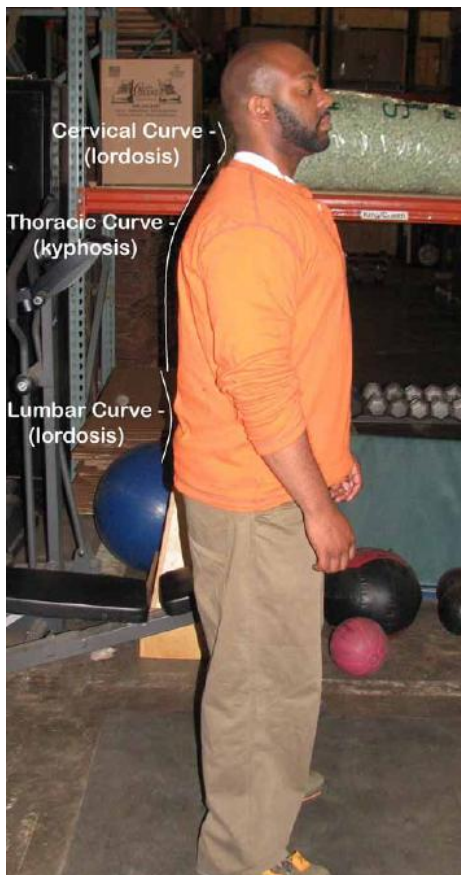


Posture for Performance

“Your form sucks!” This harsh statement is something I politely announce on a regular basis, along with telling the athlete he or she is pulling with the arms or has muted hip function, and it usually comes in response to myriad questions that are either injury- or performance-related.

- “Why does my shoulder hurt when I do push press?”
- “Why does my back hurt when I deadlift?”
- “Why do my knees hurt when I squat?”
- “Am I doing this right?”



The quick answer is always easy: “Your form sucks.”

When it comes to good form, the same fundamentals that apply in the gym still hold once we set down the sandbag and leave the park. Bootcamp stresses midline stability—chest up, weight back on the heels.

But what happens when we head home? The first thing that happens is we lose this great positioning.

The first chain of events starts when we lean our head toward what we are looking at.

Watch anybody sitting at a computer and you’ll see a head drawn toward the screen, anterior of our midline stability. (I bet you are doing it right now.) If you sit like this for eight hours at a time, you are setting yourself up for injury.

Look at the posture of most people as they sit in a car. Is the head’s centre of gravity in line with the centre of their hips, or are they leaning forward toward the steering wheel? Is the low back stable in extension, or rounded forward in a weak position? Sitting like this for hours at a time can be worse than bad form during a workout.

Bad posture puts undue pressure on the lower neck, the upper back, the shoulders and the lower back. It can also cause uneven joint pressure and strain, leading to less than optimal performance and even injury when the body is stressed under a heavy weight moved quickly over a long distance.

Let’s look at the squat as an example. What is the main thing during this exercise that keeps you from falling forward or backwards? It is your core strength and your ability to keep your torso upright. What if you had spent the last eight hours sitting at your desk with your torso slumped forward? Maybe it would leave your core muscles well rested and ready for a heavy front squat ... not!





Poor posture is training your body over an extended period of time to have bad positioning.

If your body is slumped forward or off to one side, then you have trained muscles, tendons and ligaments to be tighter on one side and more slack on the other, and your squat (among other things) will surely suffer.

Your muscles and tendons may not explode into a ball of fire or contract into an immovable spasm, but you are not putting your body into the best position for success.

A Brief Review of the Anatomy of Posture

When discussing posture it is helpful to talk about the spine. The spine is made up of seven bones in the neck (cervical spine), 12 bones in the mid-back (thoracic spine), and five bones in the low back (lumbar spine).

There are 24 freely moveable vertebrae that are able to rotate, flex and extend to the left, right, front and back. Ideally in the neck, the first cervical vertebra is centred in line over the seventh and lowest cervical vertebra, with the cervical curve having its apex in the front.

The curve from the neck leads into the mid-back, a long curve with the apex at the back of the torso. This curve towards the back of our body is also called a kyphotic curve, or kyphosis. This leads to a strong curve in the low back.

Like the neck, the low back curves toward the front of the body, also known as a lordotic curve or lordosis.

Never tell someone to “sit up straight.” That could give people the mental image of straightening out their neck and the rest of the spine. We need these strong curves from front to back in our spine because they give leverage and mechanical advantage to the muscles of the spine.

They also help spread pressure throughout the joints of the spine so increased pressure isn't concentrated at a few joints.

Here is a helpful posture check:

- Stand up.
- Now reach behind your low back and put your hands on the muscles along the spine just above your belt line.
- Lean your head back until these muscles feel relaxed. (You might have to lean back more than you are used to in your regular standing posture.)
- Now lean your head forward just a couple of inches until you feel these muscles completely contract.
- Lean your head back again until you feel these muscles completely relax again.
- Notice where your head is resting in this position as the muscles in your low back are relaxed. If you sit or stand with your head in this position, you are likely putting your body in better posture.
- Instead of “sitting up straight,” attempt to put the body's centre of gravity in the best position.
- Many of the cues that we hear in the gym are helpful:
 - “Chest up!”
 - “Weight back!”
 - “Heels and midline stability!”



Remember: posture is dynamic. If someone were to sit or stand with excellent posture, he or she would still need to move. Take, for example, the seats for pilots in space flight. NASA has engineered seats that essentially have four balloons underneath them. These balloons inflate and deflate individually in a slow and subtle manner.

They shift the person sitting to different positions to keep muscles and joints from fatiguing from sitting in the exact same position.

We may not have million-dollar technology in our chairs and seats, and as Bootcampers we know that we don't need it. We can start by sitting with the head over the centre of gravity, similar to having the bar in plane over the front of our ankles (the mid-foot) during a front squat. To add dynamism to this posture, we can sit in intervals broken up not only by shifting in the chair but also by standing, stretching, walking, bending, lifting, etc. You can be as creative as the confines of your office will allow.

The point is not to sit with "perfect posture" for the eight hours that you are at work or to stand with "perfect posture" for the entire day, even if such a thing is possible. Posture is a dynamic. It incorporates structure *and* function, mobility *and* stability

The first step is to break up the patterns of bad posture and to avoid holding those positions for long periods of time. When you find yourself slumped into your chair with your head leaning forward and curving toward your computer screen, ask yourself, "What would happen if I did a Thruster in this position? Would you maintain the rifle on the shoulders or would it dump forward (like my posture)?"

When you are training, get feedback on your form from a coach or workout partner with a keen eye for motion, and film some of your reps and sets during your practice. Any inexpensive handheld camera with a video function will do.

Those seemingly hidden lapses in form will become painfully obvious when you hit play.

Form *and* Intensity

I am not a total "form Nazi." When it is game day, I have a huge appreciation for all-out effort at end ranges of strength, power and speed, where form not only breaks down but can also become an abomination.

I am not denouncing a nearly exhausted marathon runner's lack of midline as he struggles through the last mile of the race. I am cheering the effort.

But if you practice with this "get 'er done" sense of wild abandon and lack of form, you are limiting your own success. Never be afraid to take a step back and focus on the fundamentals. Build the base of your pyramid as wide as you can that one day you can build it higher.

