

Good posture for distance runners: a case history

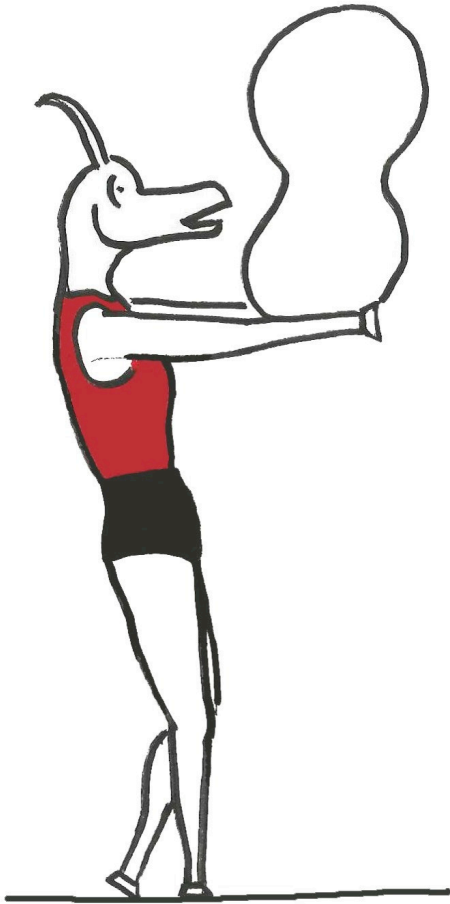


**Johnny Miles winning the 2014
Antelope Amble 10K in 9:01.8.**

Johnny Miles is the best distance runner the world has ever seen. He has established antilocanthropoid world records for all distances over which records are kept. Let's take a look at one of the keys to his success: posture.

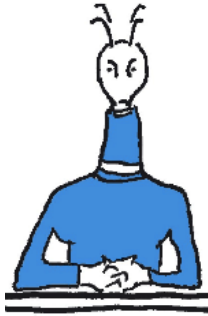
Suppose someone put two bowling balls in a duffle bag, filled the space that remained with sand, zipped it up and handed it to you to hold for a while. You would pretty much have to grab the bottom bowling ball in order to hold it tightly enough to have any shot at keeping the top one from falling over. This would quickly get tiring.





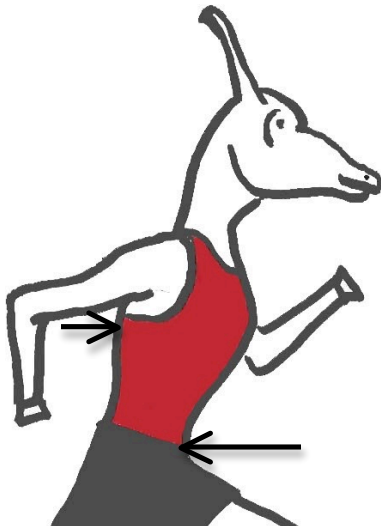
Now suppose that somehow the bowling balls could balance themselves, reducing your task to supporting their weight, rather than controlling it. This would be a lot less tiring.

“Two bowling balls in a duffel bag” is a reasonable model for your torso, and controlling your torso during locomotion is the job of your lower abdominal and mid-back muscles. If they don’t do this job, it will be done by the muscles which connect the torso to the legs, which in addition have as their proper work the task of propelling you down the road. You’ll get tired quickly and be at an increased risk of injury.



Coach Elton Spree

Johnny could not run as fast as he does for as long as he does without continuous work by muscles in his lower abdomen and mid-back. These muscles do not themselves propel Johnny down the road, but they minimize the load on those that do.



When Johnny is running well, the muscles in his mid-back and lower abdomen are continually active, so that there is very little extra motion in his torso.



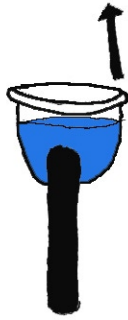
When Johnny gets tired, his shoulders slump, his chest drops, his hips tip forward, and the small of his back tightens up. This causes him to slow down considerably.

Lower back tight,
Lower abs not
doing their job



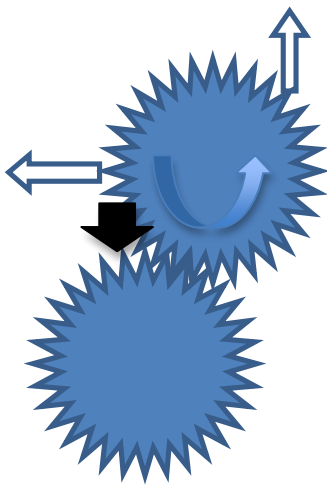
Hips tipped
forward

Lower back relaxed,
Lower abs doing their job

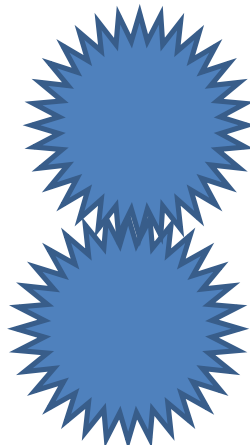


Hips upright

Johnny's running causes the muscles in the lower back to get tight. If he isn't careful, his lower abs become weak. This causes his hips to tip forward. We have to work on stretching the lower back and strengthening the lower abs to keep this from happening. I tell Johnny to think "relax the back, relax the back" when he is running, to keep the lower back from tightening up, and the hips from tipping forward.

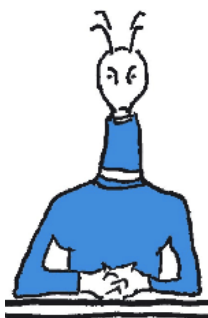


**Slumped posture
(and how to fix)**



Good posture

To keep from slumping, I gave Johnny a visual cue: he imagines his ribcage is a sprocket, and when he slumps, it rolls forward and down. When this happens, he must roll it backwards and up, until it balances again, and then relax. This makes him feel taller. It is the muscles in the mid-back (about the level of T7) that are doing the work, but Johnny finds it more useful to imagine the front of his chest rising up, and the back of his back moving back.



Johnny has done enough form drills that he knows what good posture feels like.

When he runs, he continually monitors his posture, and when he senses it is starting to become bad, he uses the images above to help him correct it.

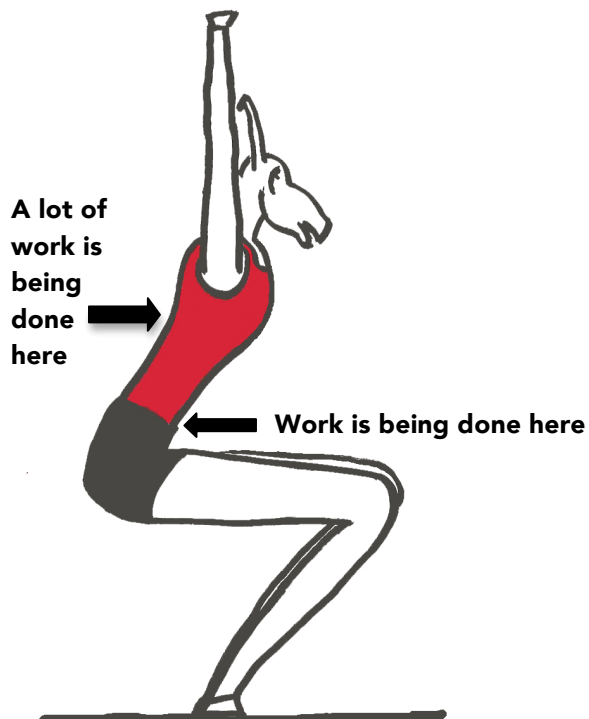
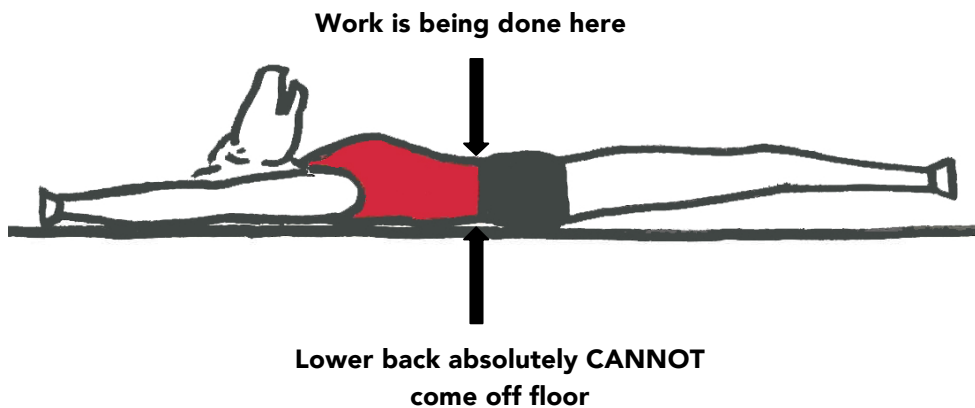
Once his posture is correct, he tries to relax as much as possible the muscles that are not maintaining the good posture.



Weight Coach Audrey Spree

Johnny's already pretty fast, so we introduce weights carefully. Working with weights can help him run faster, but he doesn't have a lifting background. Before he started a lifting program, there were two things he had to learn to do.

First, he had to learn to hold a leg lift for 30 seconds, using just his lower abs.



Second, he had to learn how to do an overhead squat (without the bar).

Now that Johnny has learned these two movements, we feel it is worth his time to ask him to do weight training.



We are starting with squats and Turkish get-ups.

With squats, there are many decisions to be made, such as:

--front squat or back squat?

--move weights slowly or quickly?

--feet hip width apart and pointed forward, or further apart, and pointed outward?

--descend to thigh-parallel, or further, or not so far?

--keep knees stationary and have hips move backwards, or have knees move forwards and hips move backwards by roughly equal amounts?

The principle we use to guide these decisions is that the purpose of weight training for a distance runner such as Johnny is to allow him to hold good posture when running fast, even when he is tired.

What does Johnny Miles think of all this?

I like to run, but I don't mind lifting.

I'm glad I have coaches I can trust, and who listen to me when I tell them what I want to do.

I am noticing a difference at the end of races—the last lap still hurts, but now I hold pace and can even speed up.

