



INJURY PREVENTION

Reduce Low Back Pain Now!

by Brian Bradley

In the following series of articles, I'm going to take you through a process designed to help you rediscover, restore and return your body to its original pain-free blueprint without the use of drugs, surgery and/or manipulation. This puts your health back into your control. You'll be provided with personalized exercises that will retrain your muscles, realign your posture, reduce your pain, and increase your running efficiency! These simple exercises will also alleviate pain associated with knee injuries, shin splints, Plantar Fasciitis, IT Syndrome and more. Today, we'll focus on back injuries and you'll discover why 80% of the population suffers from lower back pain. More importantly, you'll uncover 9 simple exercises that can prevent or cure your lower back pain.

A runner with a bad back is nothing new these days. If anything, in talking to our running colleagues, it's more like an epidemic. In a sport that is continually growing with the young and old alike, it is important that the act of running is not viewed as being the direct cause of your pain. One should remember, when your spine and pelvis are aligned and functioning properly, you should be able to move, sleep and run on a daily basis, pain free!

Back pain to a runner spells disaster. It can lead to shortened runs or, if bad enough, end your running regimen and career entirely. However, it is not the act of running that should be noted as the root cause of your lower back pain. The root cause is the imbalance in your biomechanics; this

leads to movement compensations that cause the pain. When you're running, the initial point of contact is the center of your heel. This creates a ground reaction force or "shock" that is transferred up your legs to your hips and spine. Any imbalance in your structure can cause lower back pain as the shock is construed as a negative stressor by your joints. When your body is aligned and your joints are part of the load bearing equation, the shock is actually a positive force and your body will react accordingly. In other words, running is beneficial to your overall structure, as long as your postural deviations are addressed.

If your joints are not aligned correctly, the consequences are numerous. It begins with that tired feeling in your lower back that quickly morphs into a dull ache. After a couple of hours it becomes quite uncomfortable. A fear creeps in that it will only get worse and force you to stop exercising altogether. Your friends don't get it. They want to help you with this pain, and tell you to stop running in order for the pain to go

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away. They may try to convince you that running is hard on the body. You look at them in disbelief, thank them for their support and then quietly wonder why their back still hurts when they don't exercise at all?

So, exactly how much exercise is too little and how much is excessive? Completely halting all activity does not help. Studies have shown that if your spine is not moving, toxins build up and initiate the pain cycle.

However, in addition to inactivity, an *overly* stressed spine will also trigger the toxins that lead to pain. The answer is to exercise moderately and cross train at a level that is not too extreme for your abilities. By exercising moderately and cross training, you create a state of homeostasis that causes your spine and the soft tissues surrounding it to receive the needed nutrition that aids in healing. This prevents toxic build up in your lower back and prohibits potential pain.

The truth is your lower back is an amazing anatomical design and consists of many structures, any of which could be responsible for the pain you experience. Along with: the strong ligaments that connect your vertebrae to the adjacent vertebrae, the discs that lie between the vertebrae and allow for movement and provide cushioning, the facet joints, which help to ensure smooth movement and stability of the spine, the vertebral bones, blood vessels, and the nerves that originate from the spine, the most obvious cause of your pain are the muscles in and around your spinal column. In fact, recent studies support the theory that increasing low back flexibility, strengthening the lumbar spinal muscles, and exercising coordination drills will not only decrease a runner's current back pain symptoms, but also reduce their consumption of pain medications or NSAIDS.

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Test Your Posture

The running and rehab experts tell us that we have flat feet, that one leg is longer than the other, or that we have too much or not enough of an arch in our low back. You should be asking the following questions if you have heard any of the above: Why are my feet flat? Why is one leg longer than the other? Why is the arch in my back excessive? These are great questions that we all should be asking and, unfortunately, you will probably hear that you were born this way and there is nothing you can actively do to correct these deviations. This is simply not true. As for fixing the root cause of your pain, it is a matter of figuring out which of the many possible factors is ultimately responsible.

With an overwhelming majority of people suffering from lower back pain at one time or another, an athletic lifestyle offers no guarantee against the problem. These simple postural tests will give you a baseline of where your body ranks on the functional scale.

1. Standing Relaxed Posture. Change into a pair of running shorts and no shirt (males), running bra (females). Stand in front of a full-length mirror and visually assess your standing relaxed posture. Ask yourself two simple questions: 1. Are your shoulders level with each other? 2. Are your feet pointing straight ahead? (5 points for both feet pointed straight ahead; 5 points for shoulders being level.) If you scored a 10, your deviations are minor. If not, you can be assured that these postural deviations will eventually lead you down a path to pain.

2. Balance Relative to Hip Stability. Stand on one leg with your eyes open

and try to hold the balanced position for 20 seconds. Any gross arm movements away from the side of your body demonstrate hip instability. This hip instability will eventually cause an improper strike of your foot during running and lead to muscle and joint pain.

3. Flexibility. How far can you reach when trying to touch your toes from a standing position? Try not to bounce or bend your knees. This test will give you a baseline of your low back, hip and hamstring flexibility. More importantly, it is a test of how your pelvis moves during the forward bending flexion demand. Remember the old sit-n-reach test from junior high school? You could either touch your toes or you couldn't. How is your range of motion now?

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Take Care of Your Upper Back and Lower Extremities

What about abdominal training? What about direct low back muscle training? What about “core” training? These are the questions posed to today's running experts by fellow runners attempting to run pain free and with more efficiency. They've tried it all. They've done crunches and sit-ups and low back arches for the last decade to little avail. What are they missing?

They're missing the idea that low back and abdominal work must be accompanied with specific upper back and specific lower extremity leg work in order to be effective. In the past, you've been told to keep your shoulders relaxed down and your chest up and out. Did you ever wonder why your shoulders automatically begin to elevate and your upper back is rounded from the onset?

In order for your abdominals and your lumbar muscles to effectively work together, your mid and upper spinal position must be correctly aligned and your hips and legs must be able to flex and extend efficiently. This is not guaranteed by running alone and it surely is not guaranteed by abdominal and low back training. Remember, the human body works as a unit and, likewise, it breaks down as a unit. This is not surprising when you consider the upper body compensations you likely used to balance on one leg. Those same dysfunctional movements that make up for your pelvic and hip instability are happening to a lesser degree on a daily basis. Over time, the stiffening and imbalance process occurs and you begin to habitually partake in inefficient movements.

The first time you attempt these simple, pre-run exercises, pay attention to how different you feel from one side to another. You may find that your upper back is not allowing you to rotate or that one calf muscle is tighter than the other. These all are muscular compensations that have occurred in your body, resulting in postural imbalances and running gait deviations. Remember, you can reverse these imbalances—all it takes is adjustments in your belief system and a little effort to protect the one piece of equipment that cannot be replaced...your body.

By performing the four corrective exercises on page 7 and the remaining 5 exercises at the provided URL (end of article), you can begin the reversal process to a more correct standing posture, which will translate into a more efficient running gait. It is best to perform these exercises for 20 minutes, daily and preferably before you run.

“By performing these exercises, you can begin the reversal process to a more correct standing posture and efficient running gait.”

Hip Flexor Abdominals w/Pillow

Sets: 2

Reps: 25



How to Perform this E-cise™:

Lie on your back with your knees bent and your feet straight. Place a pillow between your knees and hold it there. Interlace your fingers together behind your head and keep your elbows back throughout the entire motion. Look back and use your abdominal/stomach muscles to pull your upper body up off the floor about 3 inches - at the same time, lift your feet 3 inches off the floor with the muscles in the front of your hips. Return back to the floor and REPEAT. Keep constant pressure inward to the pillow throughout the entire exercise.

What this E-cise™ does:

This exercise takes the hip through the full range of flexion and works the trunk flexors.

Upper Spinal Floor Twist

Sets: 1

Duration: 1 Minute (each side)



How to Perform this E-cise™:

Lie on one side in the fetal position with your arms straight out ahead of you on the floor. Open the top arm to the other side and look in the same direction. Do NOT let your knees come apart while moving the arm to the other side. You can take your bottom arm over to hold the knees together. HOLD this position and allow your body to open up.

What this E-cise™ does:

This exercise promotes upper torso rotation to engage the pelvic girdle stabilization response.

Cats & Dogs

Sets: 1

Reps: 10



How to Perform this E-cise™:

Get on your hands and knees. CAT: Pull your hips under, pull your head under and push your upper back to the ceiling. DOG: Roll your hips forward to put the arch in your back, collapse your shoulder blades together and look up. REPEAT and remember to drop your shoulder blades together in the dog position.

What this E-cise™ does:

This exercise promotes bilateral spine flexion and extension while loading the shoulder and hip joints.

Gravity Drop

Sets: 1

Duration: 3 Minutes



How to Perform this E-cise™:

Wearing rubber soled shoes for traction (tennis shoes, etc.) stand on a step or stairway as though you were climbing upward. Feet are parallel, and hip-width apart. With one hand or both, hold onto railing or other object for support. Edge your feet backward until the heels are off the stairs and you're hanging onto the stair with the balls of your feet. Make sure feet remain pointed straight ahead. Let the weight of your body drop your heels off the stair. You will feel a great stretch in your lower leg musculature. The key is to keep your hips over your heels and your shoulders in line. Hold.

What this E-cise™ does:

This exercise forces proper loading of all the load joints of the body by physically stacking them one atop the other.

Don't miss out on the remaining 5 Pre-Run Lumbar Exercises. Relieve more back stress now, log onto the address provided below.

<http://www.egoscue.com/htdocs/ppperformance/backpain.asp>

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