

## Healthy Back Care, The Smart Way

Hurt your back? Having difficulty bending, turning, or rising from a chair? Confused about what exercises to do? Not sure if you should exercise or not? Do you want to prevent back pain and improve your flexibility, but not sure how? These are problems experienced by countless men and women who struggle to find the best treatment for their difficulty.

Much of modern life contributes to this issue. Our sitting postures often cause the back to remain rounded for a sustained period and the muscles of the back become weak; or conversely, some people are overarched in their low back and their abdominals become weak from poor use. Either situation creates an imbalance between the muscles of the front and back of the spine, leading to a loss of mobility and control. Over time, this imbalance can lead to increased pressures on the spinal disks, muscular strain, joint deterioration and arthritis. Taken individually, each of these conditions requires a different approach to restore normal function, particularly if you are exercising.

Traditionally, the approach has been to isolate individual muscle groups and develop a program for strengthening or stretching each area deemed important. If you've worked out at a gym or with a personal trainer, you have probably exercised on machines that aim to strengthen your deltoids, rhomboids, quadriceps, hamstrings, gluteals, gastrocnemius and more. However, some of the latest research with athletes reveals that muscles don't respond well to only isolated stretching or strengthening; and in fact they may even make the muscles less ready to perform. This is why though many people strengthen and stretch in their daily exercise routines, they then injure themselves when doing a normal functional activity, like bending over to pick something up, getting out of a chair, or lifting something. Terence Mahon, a coach with Team Running USA says "You need range of motion exercises that activate all of the joints and connective tissue that will be needed for the task ahead." This same "function-specific" approach to training is what we need to develop a healthy back that is able to engage its full power.

Though strengthening individual muscle groups is indeed an important element in rehabilitation following injury or deconditioning, it doesn't necessarily mean it will improve any of the essential motions you must perform throughout your daily activities. This is because our ability to move without back pain is not so much dependent on the strength of individual muscle groups, but on the ability to easily sequence motion through long chains of muscular and skeletal activity. For example, to easily bend over to pick something up off the ground, your pelvis must tilt, and your low back muscles must lengthen. However, if the chest and ribs are held rigidly, they will actually provide resistance to the low back muscles lengthening, and you may have to exert excessive effort and strain as you bend forward.

Even a well-designed exercise program, unknowingly performed with misplaced muscular effort can have limited benefits at best, and may induce further injury at worst. An effective program should enable a person to learn how to alter the movement habits that have contributed to their problem.

This process of efficient coordination is actually more a function of the nervous system than just the muscular system. It is the nervous system that actually organizes the movement of your joints and calibrates your movement, choosing the amount of muscular force to generate for a given task, arranging the initiation, timing and direction of the movement. This is especially true if the exercise also combines active awareness with movement, thereby enabling one to learn to use oneself more efficiently.

Try this exercise, which is derived from the movement-based approach advocated by Moshe Feldenkrais. *Please follow the instructions closely.* Read through them entirely before beginning. Don't strain or push beyond the point where you are comfortable, as this will not help you to do the movement better. You want to learn to move better, with less strain. To do this, you must move slowly to interrupt old habits of movement that actually form the substrate for discomfort or pain. If you are experiencing back pain, numbness or tingling in your legs, please

seek the advice of a qualified professional before attempting this exercise. If you do not have back pain but wish to prevent it, or you simply would like to move more fluidly, then try this movement:

- Lay on your back with the legs out long and arms by your sides. First, notice how your back is contacting the floor. Notice the parts that sink into it and the parts that seem to rise away from it. Is the contact the same on the left and right sides of your body?
- Bend your knees and cross one thigh completely over the other, so the back of the top knee fits over the bottom knee. If this is not possible for you or if it is uncomfortable, simply place the top foot or any part of your lower leg on the knee.
- Very slowly begin to tilt the knees in the direction of the top thigh (if the right thigh is on top, tilt to the right); then return the legs to upright. Repeat this motion very slowly 10 times while paying close attention to these aspects of your experience:
- Each time you tilt the knees down, notice how more weight gradually shifts towards one side of the trunk – while the other side releases away from the floor and your low back begins to arch some. If you feel comfortable with this motion, you may also roll the head in the opposite direction of the knees tilting. In this way, you are gently rotating your lower trunk in one direction while your head and neck roll the other way.
- Each time you bring the knees back to upright, notice how the abdominal muscles begin to engage to assist this process. If you wish, you can place your hands gently on your lower abdominals and see if you can feel them working.
- Lay on your back again with the legs out long and rest a moment. Compare how your right and left sides contact the floor. Do they feel different? Is one side closer to the floor?
- Then repeat the same process with the other leg crossed over, repeating slowly 10 times.
- After you've finished, again slide the legs down and compare how you experience your contact with the floor after doing the exercise. Are more parts of you touching than when you first laid down? Is your back more comfortable now with the legs out long? Is your breathing easier?
- Now slowly roll to your side, come up to sitting and then up to standing. Stand for a moment and sense how you're standing. Do you feel differently now than before? Do you feel taller, lighter or longer? Is your back more comfortable in standing?

This exercise balances the control of the flexors and extensors of the spine, the muscles of the front and back of the trunk. If you followed the instructions carefully, and moved slowly enough, you may have noticed that what you paid attention to while you moved actually improved the way in which you performed the motion. In moving in this way, you will not only improve your flexibility and strength, but you can gradually release unnecessary tensions and acquire more comfort in your daily activities. As you become more aware of your habits of coordination, you will improve your ability to self-regulate your bodily tensions. In essence, you will become smarter about how you move.

Sometimes when people notice that they have improved from the exercise, they comment, "I feel better, but I have to think about what I'm doing." Thinking is good, especially when it improves your quality of movement and quality of life! It's also helpful to remember that when you first learned to ride a bicycle or drive a car, you had to think quite a lot, but eventually the task became automatic. In the same way, as you shed unnecessary tensions and learn to coordinate your movement more effectively, your back will support you in your daily activities in the way it was naturally designed to do. Combining selective awareness with active movement of your muscles and joints is the smart way to healthy back care!

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