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"treating the cause of your problem, not just the symptoms"

Why Do Back *Strengthening* Exercises?

Weak Muscles Cause Back Pain.

Weak muscles are often at the root of back pain, especially lower back pain. The muscles of the back, the abdomen, and the buttocks all support the spine - these muscles are called the "core" muscles. Muscles are the spine's main defense against gravity. Strengthening the muscles that support the spine with back exercises, abdominal exercises and buttocks exercises, can prevent, reduce and even eliminate back pain. Strong abdominal muscles are as crucial as strong back muscles for supporting the lower back and preventing lower back pain. Strong quadriceps (front of thigh muscles) is important to prevent back injuries when lifting. Proper lifting techniques involve using your legs and if your legs are weak, you may end up using your back.

Strengthening exercises should be done three or four times per week - the days off give your body a chance to recover. It may take 6 weeks to 8 weeks to notice results. Just as in stretching exercises, it is important to always do some warm-up exercises before attempting any strengthening exercises. Five minutes of walking, exercise bike, elliptical trainer, or even marching on the spot is enough. Not warming up before stretching leaves your back susceptible to injuries causing back pain. Warm muscles are more flexible than cold muscles and are less likely to be injured.

Many people tend to over do it when starting strengthening exercises for the back, resulting in back strain. Back pain caused by doing too much too soon sets one back even farther. But the ultimate goal is to be able to do the back strengthening exercises regularly and safely. Strengthening the back can't be rushed. It takes patience but it is well worth the effort.

To prevent back pain, keep your back fit by doing the following *strengthening* exercises (do you recall that last week I discussed *stretching* exercises? –the article is on my website: www.merrittchiro.com, under "weekly articles"). Start with five repetitions of each exercise. If you can handle five repetitions without post exercise pain the next day, then slowly add a couple of repetitions each week until you reach 15 repetitions. If you are experiencing back pain or suffer from a back condition, ask your chiropractic doctor if the following exercises are appropriate for you to do.

Be sure to warm up before doing back exercises with five minutes of walking, or using an exercise bike or elliptical trainer, or even marching on the spot. Warm-up exercises prepare your back for strength exercises or stretching exercises by increasing circulation to the muscles. Do some stretching exercises after you strength train as contracting your back muscles tightens them up a little.

The Bridge: *Strengthening exercises for several core muscle groups*

Lie flat on back; bend knees at 90-degree angle, feet flat on floor. Raise buttocks off floor, keeping abs tight. Shoulder and knees should be in straight line. Hold for a count of five. Slowly lower buttocks to floor. Repeat five times.

The Plank: *Strengthening exercises for back and abdomen (also strengthens arms and legs)*

Lay on stomach, place elbows and forearms on floor. In a push-up position, balance on your toes and elbows. Keep your back straight and legs straight. (Like a plank) Hold position for 10 seconds. Relax. Repeat five to ten times. If this exercise is too difficult, use balance on your knees instead of your toes.

The Wall Squat: *Strengthening exercises for back, hips and legs.*

Stand with your back against a wall, heels about 18 inches from the wall, feet shoulder-width apart. Slide slowly down the wall into a crouch with knees bent to about 90 degrees. If this is too difficult, bend knees to 45 degrees and gradually build up from there. Count to five and slide back up the wall. Repeat 5 times.

Leg lifts: *Quad Strengthening Exercise*

Lie flat on back. Bend left knee at 90-degree angle, keeping foot flat on floor. Keeping the right leg straight, slowly lift it to the height of the left knee. Hold for a count of 3. Repeat 10 times. Switch sides. Work up to 10 sets of 10 over several weeks.

***Safety Tip for Leg lifts:**

Lifting both legs at the same time causes excessive stress on your lower back so only lift one leg at a time; the opposite leg should be kept slightly bent with foot on floor.

Crunches: *upper abdominal exercise:*

Lie on back, knees bent. Do not anchor feet. (Anchoring the feet or keeping the legs straight along the floor can strain the lower back). Keep the lower back flat on the floor. Exhale when raising your torso off the floor and inhale when lowering. Just raise your head and shoulder off the floor - three to six inches is enough. Sitting up all the way is hard on your lower back. Keep chin tucked in. You can use your hands to support your neck but be **very careful** not to pull your neck or you could strain a neck muscle. To eliminate any chance of straining your neck, keep your arms at your side or folded on your chest. Do ten repetitions.

Reverse Crunch: *lower abdominal exercise:*

Lie flat on back, feet in the air. Bend knees 90 degrees. Place hands under buttocks for support and make sure your lower back remains flat on the floor. Tightening your lower abdomen, lift your buttocks a few inches off your hands. Hold for a moment and lower back down. Do 5 to 15 repetitions.

Rotational Crunch: *obliques exercise: (sides of the stomach)*

Rotational crunch is a slight variation of the regular crunch. (The variation - the direction you raise your head and shoulders off floor is diagonal). Lie flat on back, knees bent, feet flat on floor. Do not anchor feet. Rotate your body so that the weight rests on left

shoulder. Then, keeping chin tucked in, bring your head and shoulders upward and raise your right shoulder higher than the left.

Backward Leg Swing: *Gluteal exercise:* (The muscles of the buttocks help support the spine)

Stand, holding onto the back of a chair for support. Slowly swing leg back at a diagonal until you feel your buttocks tighten. Tense muscles as much as you can and swing leg back a couple more inches. Return leg to floor. Repeat 10 times. Switch sides.

Remember, if any of these exercises cause pain, stop and see Dr. Gage or Dr. Bortolon at Nicola Valley Chiropractic before attempting them again. Any questions? Feel free to contact them directly for a more in depth explanation.