

Making Adjustments

(The often-used phrase 'putting your back out' is really not an accurate explanation of what is going on when you find yourself suffering with back pain. The subject is much more accurately described in terms of control systems than the position of bones. It is a complicated system but the operating principles are actually quite easily understood.)

You bend over to pick up a pencil and feel a hard twinge in your low back – you can't straighten up. There's a knot in the muscle at the top of your shoulder sending a dull throb to your temple- and it just won't go away. You trip and stumble going up the stairs – you recover your balance but two days later you wake up and can't move your neck.

What do these scenarios have in common (besides the fact that you need to see your chiropractor)? They are about muscle spindles gone bad. You can be forgiven if you're uncertain what muscle spindles are – but you've seen them in action when your doctor elicits a kick reflex with the tap of a hammer on your knee.

Muscle spindles are also known as stretch receptors. After the eye and the ear, they are the third most complex sensory ending we have. And, while we have only two eyes and two ears, there are millions of these tiny sensors imbedded within our muscles. They work just like a thermostat does – an ideal temperature is set and if the room is too cold, the furnace kicks in. Once the temperature reaches the set point the furnace stops.

This kind of control system is much more efficient than having to pay constant attention and manually turn the furnace on/off. We know what room temperature is comfortable and how to set the thermostat to just the right point – that's an easy task. Setting our muscle spindles to control the proper contraction of our muscles is much more complicated. Thankfully it's a job that our nervous system takes care of automatically because if we had to consciously monitor the fine details of our muscle activity (even to do something as straightforward as reaching for a cup of tea) we'd be far too busy to think about anything else.

In order to keep our muscles operating properly, our nervous system must constantly monitor information from our joints about where things are from moment to moment. It must also correctly anticipate what's coming next.

This truly elegant system allows us to walk and chew gum at the same time or dance a graceful ballet but it is also prone to malfunction. Spindles can, like thermostats, get stuck on high. And when that happens, muscles will contract continuously, unable to turn themselves off. The result is spasms that won't let you straighten up or turn your head or massage away that gnawing tension in your shoulder.

What causes muscle spindles to go bad like this? Essentially, one of two things – chronic static overload or surprises. Too long sitting at your desk in a slumped posture can gradually turn up the set point of the spindles in your low back and shoulder muscles until they are caught in a vicious cycle of tension. Related joints become locked up (subluxated) and segments of the spine are misaligned by the abnormal muscle tension, which reflexly keeps the spindles set too high.

The same thing can happen in an instant if you fail to anticipate a sudden jolt. The momentary loss of control can upset muscle spindles - it may take a day or two for the increased muscle tone to produce the inflammation and pain that let you know something is wrong.

So how can a Doctor of Chiropractic help? If, after taking a thorough history and doing a physical exam, the problem is determined to be a mechanical one, spinal adjustments work very directly to reset those dysfunctional muscle spindles and restore normal joint play – muscle tension is reduced and misalignments are corrected. Along with suggestions for exercise and preventive care, your chiropractor may also recommend other complementary therapies such as massage and acupuncture.

If you are suffering with pain and stiffness, don't mask your symptoms with medications. See a chiropractor. They are the specialists when it comes to making adjustments and helping you to set things right.

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This article appeared in the Winter 2013 Issue of the Comox Valley Health and Recreation Guide <http://www.comoxhealthandrecguide.com/>