

Many patients consider this newsletter as a reminder to come in for their spinal health check up. Now is a good time to book your "tune up" appointment.

Clinic Hours

Mon	10am	-	7pm
Tues	9 am	-	12pm
Wed	10am	-	6pm
Thurs	3pm	-	7pm
Fri	9am	-	4pm
Sat 9	:30 am	-	12:30pm

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The advice in this newsletter is to be used in conjunction with chiropractic care and not as a substitute to professional care.

We offer:

- Chiropractic spinal manipulation
- Western acupuncture
- Fascial therapies and
- training • CBP structural
- rehabilitation
- McKenzie method
- Ultrasound
- Microcurrent
- Laser
- Whole body vibration
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Newsletter

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Educated - Safe - Effective Spine Care

Low Back Pain is the Number One Cause of Disability World Wide

In 2013 the Lancet medical journal rated severe low back pain (LBP) as the number one cause of disability world wide. After LBP related disability, the top causes of disability were major depression (mental health), iron deficiency, HIV, diabetes and war. Back in 1961 heart disease was the number one cause of disability followed by neurological disorders, mental health, cancer and low back pain. This newsletter grapples with the increased incidence of LBP related disability, the predictors and preventers of LBP disability.

Most of us start life with a healthy spine. It is rare, apart from major trauma, for someone to be fine one day and permanently disabled the next. Typically, there is a clinical and anatomical downward progression from having a healthy spine to suffering chronic severe LBP related disability. Scientists have tried to discover the predictors of developing LBP. So far they have discovered that a decrease in the ability to bend sideways while standing (laterally flexion) and a flattening (loss) of the lumbar lordosis are associated with an increased risk of developing LBP.

The average person loses 50% of their lumbar lordosis while sitting. Sitting for long periods immobilizes the back and causes a thickening of the thoracolumbar fascia and a reduced ability of the muscle and fascia layers to slide over each other. This immobilization reduces the back's ability to bend. So sitting for long periods of time and the lack of general movement are major predictors for the development of LBP.

Experiencing an episode of LBP is the number one predictor for who will suffer future episodes of LBP. In other words, once you experience one episode of LBP you are likely to experience recurring episodes of LBP. Initially, the episodes of pain may be far apart and you may feel good for long durations. If, however, each episode of pain is not managed well the episodes of pain become more frequent, more intense and last for longer. Once you start suffering recurring episodes of LBP you are on the road to developing mild chronic LBP, LBP that never really goes away. You wake up stiff and stay that way for part or most of the day. You are able to do most of the things you need to do but start to cope with life by taking pain killers and avoiding some of your regular activities of day living. You don't exercise as much, you dread long drives and don't sleep well. The pain killers seem to help 1/3 of LBP sufferers but the pain comes back as soon as the drug wears off.

If left untreated or inadequately treated chronic mild LBP may develop into severe disabling LBP. This is when your lifestyle dramatically changes. You can't do much physical work, your cash flow suffers, your social and personal relationships suffer, and you become like a grumpy old man or woman. Disability due to severe chronic LBP is not much fun.

This downward progression from a normal spine to experiencing recurring episodes of LBP to developing mild chronic LBP to suffering severe chronic disabling LBP is correlated with visible changes on x-ray and MRI. In healthy spines all tissues look normal . Spinal images of people with recurring episodes of LBP do not look much different than images of healthy asymptomatic spines. Likewise the degenerative changes of patients with mild chronic LBP do not look much different than images of asymptomatic spines. The development of mild chronic LBP is, however, associated with biomechanical changes. The lumbar curve deviates from ideal as chronicity sets in, figure 1. The white line is the ideal and the dark line is the patient's curve. This patient has lost 59.5% of their overall lumbar curve. She suffers chronic mild LBP and with acute flare ups of severe

disabling LBP. She requires corrective structural rehabilitation to prevent the development of a chronic severe LBP related disability.

Figure 1





Loss of the lumbar lordosis, a flattening of the lower back, is associated with an increased incidence of LBP due to lumbar disc herniation. 40% of the asymptomatic (pain-free) adult population has a bulging disc. Within three years most of these discs bulge further and become symptomatic. The greater the size of the herniation the more likely the individual will suffer severe LBP and develop leg pain, with a loss of sensation and weakness in the extremity. While most of these cases can be managed with conservative chiropractic care some cases become candidates for spinal surgery. Spinal surgery is performed for leg pain, weakness and the loss of sensation /numbness in the leg. There is a high incidence of "Failed Back Surgery" if the surgery is performed for back pain alone. Even if the spinal surgery successfully relieves the leg pain many patients still suffer chronic LBP and benefit from a course of chiropractic biophysics structural rehabilitation to restore the shape and function of their spine.



Figure 2



Figure 3

LBP is a multifactorial problem. Therefore, a multimodal treatment approach is more effective than any individual treatment. In other words the combination of traction. dry needling, soft tissue manipulation, spinal manipulation and exercises are likely to give a better outcome than the application of one treatment alone. Your best option is to find a chiropractor skilled in all of the above treatment modalities. A less skilled provider is likely to provide poorer outcomes.

The x-rays and MRIs of patients with chronic severe LBP look different than

normal healthy spines. There is severe disc space narrowing and the disc blackens on MRI, figure 2. There is thickening and shortening of the thoracolumbar fascia, figure 3. There is fatty infiltration of the multifidus and erector spinae muscles, figure 4, as depicted by the increased whiteness in the muscle on the right.



MRI of lower lumbar spine

Figure 4

Once the spine is degenerated to this point the individual is left with a degree of permanent disability. The window of opportunity for appropriate intervention, must be initiated before the spinal curves deviate significantly from normal, before the discs severely degenerate, and before the pain becomes chronic, severe and disabling.

Healthy lifestyle behaviours to reduce the risk of long duration debilitating LBP

Non-smoking: The incidence of LBP is higher in current smokers than in former smokers and never-smokers. **The prevalence of back pain increases with an increased exposure to smoking.** While the mechanisms are not completely understood there is a definite correlation indicating that the more cigarettes you smoke per day the more likely you are to suffer low back pain.

Adequate quality sleep: Pain and sleep measures are significantly correlated. Sleep disturbance is found in the majority of subjects with chronic LBP. The loss of sleep induces a disruption immune response and may damage the natural healing mechanisms. Patients with good sleep quality have a significantly greater spontaneous regression of the size of herniated discs than patients with poor sleep quality. To improve the quality of sleep: go to bed at regular times; do not play with electronic games, your phone / Facebook or watch TV for 2 hours before bed; make sure that your pillow and mattress are comfortable; consciously allow yourself to relax when going to bed and turn off the stress of the day.

Sit less: In 1961 we did not sit around as much. A small percentage of the population had desk jobs, few homes had a TV and nobody had a home computer. Currently, a much higher proportion of the population has a desk job requiring them to sit for 8 hour per day. Most homes have one or more TVs or computers. We sit on our way to and from work. It is not uncommon for people to sit for 16 hours per day. Sitting for long periods is considered the new "smoking" health hazard. Prolonged sitting causes a loss of the lumbar lordosis, thickening of the thoracolumbar fascia and disuse atrophy and fatty infiltration of the muscles. It is important to get up and move around every 1/2 hour. Go for a 20 minute walk or some other form of exercise each day to maintain muscular strength and endurance. Do whole body stretches for 5 minutes daily as per the youtube video fascial shortening and thickening. Fascial Fitness - Fascial Stretch www.youtube.com/watch?v=ayTHtiYWORU

Better drug management: 1/3 of the population experiences a temporary mild to moderate short-term reduction of pain with pain killers. 2/3 of the population experiences only minimal relief. Paracetamol, for the treatment of chronic low back pain, according to current medical research, is considered to be no more useful than a placebo tablet. Painkillers and nerve block injections may be helpful but are best considered as temporary solutions for persistent or chronic pain. They are not a substitute for long term exercises or corrective spinal rehabilitation to prevent fatty infiltration of the muscles. The period of temporary relief achieved by drugs should be used as a window of opportunity to obtain the physical and psychological care you need to manage your pain and improve your ability to function at a higher level.

The absence of pain does not mean all is well. Aging and degeneration continue even when we are relatively pain free. The best lifestyle options for staving off or reversing the aging / degenerative process include: don't smoke, get adequate (8+) hours of sleep, keep your body moving (don't let it seize up on you), get adequate exercise (high intensity / short duration endurance exercises with and without weights), eat well (good nutrition) but not too much (don't get fat). If you seize up, see your chiropractor. They will help you to keep your body strong and flexible.