

# BACK FACTS

★ Most back problems are **not due to any serious injury or disease.**

★ The acute pain usually improves within days or a few weeks, at least enough to get on with your life. The long-term outlook is good. Sometimes aches and pains can last for quite a long time. But that doesn't mean it's serious. It does usually settle eventually – even though it's frustrating that no one can predict exactly when! Most people can get going quite quickly, even while they still have some pain.

★ Back pain may come from the working parts of your back – the muscles, ligaments, and small joints. No one knows for sure. For a while your back is simply not moving and working, as it should. You can think of it being 'out of condition and not moving properly.' Back spasms tend to set in which further restricts and alters your movement pattern. **The initially goal of physio treatment aims at reducing the inflammatory and pain symptoms and starting as soon as possible to regain normal movement patterns and joint mechanics!**

★ What you do in the early stages is very important. Resting for more than a day or two usually does not help and may actually prolong pain and disability. Your back is designed for movement: it needs movement – a lot of movement. **The sooner you get moving and regaining normal body mechanics, the sooner you will feel better.**

★ The people who cope best with back pain are those who stay active and get on with life despite the pain. "Compared to those simply given advice to rest, early physiotherapy intervention led to significantly better outcomes in every area (Wand 2004)."

★ Your spine is one of the strongest parts of your body. It is made of solid bony blocks joined by discs to give it both strength and flexibility. It is reinforced by strong ligaments, and surrounded by large and powerful protective muscles. Terms like "back strains" or "back sprain" do not mean ligament or muscle tears nor do they mean there is any serious injury or damage. Others mention 'degeneration' which sounds frightening, but it's not damage or arthritis. These are the normal changes with age – just like gray hair.

★ Not everyone is equal: In reality, there are many different causes for acute and chronic LBP and the treating clinician must use sound clinical reasoning to determine the most likely clinical syndrome and then decide on the most effective treatment approach for that individual. Some common treatments may include mobility exercises, trunk stabilization exercises, extension or flexion exercises, manual mobilizations and manipulations, traction, neural mobilizations, soft tissue massage, posture correction and modalities. **Physios, unlike other health care providers, offer a wide range of treatment options that they determine to be the most effective in resolving the LBP. There is no single magical exercise that cures mechanical LBP!!!**



## REOCCURRING LBP SYMPTOMS:

- ★ Most acute low back pain (LBP) resolves in a few weeks, but research shows that following the first episode of LBP, **the pain reoccurs in up to 80% of the patients within one year**. Rapidly following an episode of LBP, the multifidus muscle, a main stabilizing muscle of the lumbar spine undergoes dramatic atrophy and weakness localized to the level of dysfunction. Without this muscle working properly, the lumbar spine is susceptible to more injury. **With localized, specific and isolated multifidus retraining, the multifidus muscle does increase in size and strength, demonstrates an improved recruitment pattern and the chance of pain reoccurrence is decreased!**

## LIMITATIONS OF RADIOGRAPHY:

- ★ *Patients randomly receiving radiographs, had more doctor visits, more disability and more likely to report of LBP three months later compared to those not receiving radiographs.* A systematic review of radiographic findings in LBP observed that disc degeneration, osteophytes, and sclerosis were “**weakly associated**” with the presence of LBP. **The appropriate use of plain radiography (x-rays), is to clear the presence of a serious condition requiring timely and specific medical or surgical intervention (i.e. bone disease, infection or other systematic disease.)**
- ★ **Limitations of MRI:** Although MRIs have significantly improved the differential diagnosis of serious conditions causing LBP; there is significant controversy whether this relatively expensive imaging technique has actually improved the diagnosis or the treatment outcome of non-specific mechanical LBP. *Asymptomatic individuals (those with no LBP) had the following MRI results:*

- 83% had moderate to severe dehydration of one or more discs
- 64% had one or more bulging discs
- 56% had loss of disc height
- 32% had at least one disc protrusion (severe bulge)
- 6% had one or more disc extrusions (disc has burst)

Many “pathological” MRI findings have a high prevalence in people without LBP, but yet, ***almost everyone with LBP often requests an MRI to help accurately diagnosis their dysfunction! WHY?***

## REGULAR ‘MAINTENANCE’ SPINAL MANIPULATION



It is important to note that significant contradictory beliefs and controversy exists with respect to this topic. Some clinicians believe in the benefits of regular spinal manipulations for general health and the prevention of low back pain (LBP), others strongly believe that regular manipulations have detrimental and negative effects on the recurrence of LBP and may even add to the potential socio-economic costs of LBP

and disability. Some argue that regular manipulations promote patient dependency and encourage the belief that control over their LBP is outside of their locus of control.

**Conclusion:** There is, however, absolutely no current literature to support any benefit of the use of spinal manipulations once symptoms have resolved and the patient has returned to normal functional status. A maintenance program is therefore pointless!

## Effectiveness of Early Physical Therapy in the Treatment of Acute Low Back Musculoskeletal Disorders.

Ever wonder why professional athletes, who have a salary of a few million dollars per year, receive immediate physical therapy and rehab following let's say a back injury, while normal citizens with low back injuries are often made to wait several days or weeks before receiving physical therapy and rehab? Is it fair for physician not to refer patients to physio when they are acute...afraid physio will do more harm. Is this "let's wait and see" attitude towards LBP appropriate? Is a rapid return to function and not as important for an average worker?

This retrospective study evaluated the effects of early physical therapy intervention on treatment outcomes for workers with acute low back injuries. Over 3800 patients with acute low back pain were assigned to one of three groups:

**Group I: Very Early PT (1-2 days post-injury)**

**Group II: Early PT: (3-7 days post-injury)**

**Group III: Delayed PT (8-197 days post-injury)**

**"Initiating therapy early in the course of treatment was associated with significantly fewer physician visits, earlier discharge from care, fewer restricted workdays, and fewer days away from work!"**

**Result #1:** Patients in Group I had the fewest physician visits (3 days)... significantly fewer than group II ...further more, Group II had significantly fewer physician visits than Group III ( $p < 0.001$ ).

**Result #2:** Patients in Group I had the shortest length of therapy (10 days)...significantly shorter than group II ...further more, Group II had significantly shorter case length than Group III ( $p < 0.001$ ).

**Result #3:** Patients in Group I had the least number of restricted workdays (8 days) ...significantly less than group II ...further more, Group II had significantly less number of restricted workdays than Group III (p<0.001).

**Result #4:** Patients in Group II & I had significantly fewer days away from work than those in Group III (p<0.05).

**"The results of this study provide clear and strong indications that the sports medicine approach to rehabilitation, with the emphasis on early intervention and function restoration, could provide a cost-effective way to treat work-related back injuries!"**

J Occup Environ Med. 2000 Jan;42(1):35-9.

## **CERVICAL SPINE JOINT DYSFUNCTIONS**

One will get **inhibited** muscles over dysfunctional joints.



Manual muscle testing will be positive, and there will be some sort of **dynamic instability**



The active / muscular system will be unable to control **excessive** articular motion!



Manual therapy alone will not increase strength or motor recruitment,

**One needs specific “cervical muscle recruitment exercises”!**



Because of large neutral zone in the cervical spine, joint stability is largely dependent upon the dynamic control of the **active muscular system**.



Even with intact ligamentous system, weakness of the deep stabilizers will result in lack of dynamic stability.



**Focused physiotherapy treatment** will address this impairment, and help regain a painfree, mobile and fully functional cervical spine!