

## Chiropractic and Recreational Sports

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### **Definition of chiropractic**

**Chiropractic is the clinical science that is based upon a law of biology that states that inborn into all living things is the ability to be well.**

**Chiropractic draws on the theory of physiology stating that the nervous system (consisting of the brain, spinal cord, peripheral nerves and special sensory organs) controls and coordinates all other organs and structures in the body and relates it to its environment.**

**Chiropractic clinical science also hypothesises an association between this governing system, the nervous system, and the existence of health in the body.**

**Chiropractic was originally conjectured, by its founder DD Palmer, as that science that primarily investigates interference to the nervous system's control of all other organs and structures by the human frame (ie: the spine, skeleton and joints). This interference is called a subluxation.**

**Today this conjecture has been elevated to hypothesis by a growing volume of research supporting it.**

### **Input to the nervous system**

One of the reasons chiropractic is effective in enhancing wellness, and for a wide range of conditions, is that all body movement requires input to the brain via receptors in all joints. If this input is altered by improper joint function or misalignment (subluxation), then input to the brain is altered. The brain may instead be receiving poor information, altered information, or pain. This is bad news for the sportsperson.

In view of the above, it may be understood why chiropractic would help the golfer's swing, the athlete's balance, or the dancer's steps.

### **The effects of Recreational Sports**

Recreational sports are an essential part of the activities of people who not only want to keep fit, but enjoy the challenge of competition, and take a break from busy daily schedules – whether it be work, family or study. Hence as the word hints, the “re-creation” of the person is an important part of health recognised by chiropractors.

It is also evident that people generally do very little preparation before engaging in sports, particularly recreational. Stretching is probably the single most important preparation. Also, to exercise regularly, not just on the weekend.

The most neglected preparation, from the chiropractor's perspective, is *a properly functioning neuro-spinal system*. This means that, as chiropractors, we commonly find imbalances in the body, postural asymmetry, and spinal irritation in people that are suffering health problems, or in some cases may be totally symptom free!

Common problems seen are:

1. Diminishing *wellness* due to poor spinal function
2. Diminishing *performance* in chosen sport because of pain syndromes
3. Headaches from poor neck *function*
4. Pain syndromes related to poor *spinal* function
5. Shoulder pain syndromes related to poor spinal function, and strain in tendons and ligaments of the shoulder, and muscles of the forearm. Examples are tennis and golfer's elbow type conditions
6. Any activity which promotes *asymmetrical* action is bound to carry a risk of affecting the neuro-musculo-skeletal (NMS) system.

#### Definition of spinal dysfunction: **Subluxation**

The spinal segment, or motor unit, consists of two adjacent vertebrae, the disc between them, the nerve that goes through them, and surrounding soft tissues. The chiropractic subluxation hypothesises that a misalignment, or improper function or movement in the spinal joints will cause altered input into the nervous system. This may affect health and body performance.

#### Definition of wholistic treatment: **Adjustment**

The adjustment is the primary intervention of the chiropractor. It is the distinguishing feature of chiropractic. It is a specifically directed force, at a specific segment of the spine or joint, by hand or by an even quicker, very low force instrument.

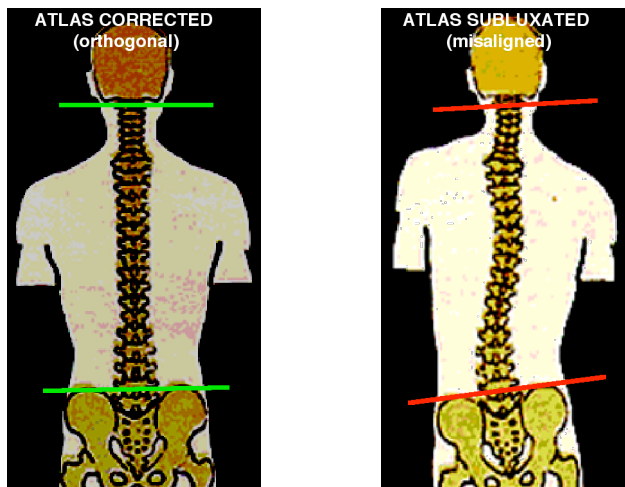
#### **Some sports types that commonly see chiropractors**

- **Golfers** will benefit from having a *balanced spine* due to the importance of body balance for stance, swing and merely getting around the course! Sometimes the stance requires a lean to one side which, over time, can irritate spinal joints.
- **Dancers** I would consider to be athletes. Many dancers suffer conditions related to unrealised poor spinal function such as neck, shoulder and foot problems. Tight muscles such as calves and upper shoulders are often an indication that body balance is less than optimal, or that spinal subluxation is affecting muscle tone. Without a doubt, all dancers need a properly functioning spine.

- **Softball/Baseball** can cause all sorts of injuries with the swing of the bat, pitching and even sliding to bases.
- **Netball** has its obvious strain on the *knees* but also on the pelvis, which quite often is found to be out of balance or even twisted.
- **Tenpin Bowling** is another sport that promotes *asymmetrical* activity. That is, the ball is always thrown with the same arm. Repeated swinging has its share of strain on the spinal structures.
- **Lawn Bowls** is commonly played by senior people. This is a sport that requires bending, and thus the strain on the back is obvious. What is less obvious is that senior citizens are at high risk of adverse drug interactions. Simply because the aches and pains are aplenty, if they can benefit from chiropractic care, which uses no drugs, this would be a wiser form of pain relief in many cases. It's wise to use as many non-drug forms of health care at any age.
- **Soccer** places strain on just about every part of the body; from ankles in the kick to the neck from heading the ball. The spine is an important part in co-ordination of this type of activity.
- **Rugby** has produced many of the more serious cases of injury seen in chiropractic offices. Frequently, the injury goes undetected, particularly in the neck. And usually there have been many instances of being dumped on the head or even blackouts. The misalignments produced escape normal imaging such as x-ray, CT or MRI, if the patient is unlucky enough to warrant these medical tests. Commonly fractures or dislocations are ruled out, but unfortunately, some problems may not become symptomatic immediately. Chiropractic functional examination usually quite readily reveals injury to the spine or soft tissues.
- **Tennis** is likely to be associated with health problems, particularly when many players are very enthusiastic and competitive. Not only elbow and shoulder, but spine and foot injuries.
- **Cycling** is an excellent sport because it does not jar the spine, especially good when an injury already exists.
- **Cricket**, whether indoor or outdoor, has considerable effect on shoulder, neck and back.
- **Skating, Skateboards** are a continual source of injury. On the other hand, if you want to be good at it, your body balance and function, controlled by the nervous system through the spine, better be in good shape.

- **Walking** may not be considered a sport, but it is one of the best exercises and recreational activities imaginable. Low impact, gives the heart, head, lungs, limbs, and the whole body a good work out.

### Importance of spinal alignment



As the diagram above illustrates, the function of the entire spine can be affected by one misaligned (subluxated) spinal segment. This in turn can affect whole body function and performance. Hypothetically, as shown in the diagram, if the top vertebra is misaligned it leads to postural changes that may be seen at the hips, low back, or even in the feet. The reverse also is true.

### What a chiropractor does

1. Conducts thorough history
2. Examination, including orthopaedic and neurological and x ray examination if indicated.
3. Referral to other professionals if necessary
4. Other special testing and diagnosis may be carried out
5. Distinguishing feature is the **adjustment**. Other procedures such as soft tissue, cranial, or rehabilitative techniques may be used.

The chiropractor is a type of doctor with at least 5 years of university study. Hours and types of subjects are comparable to that of medical the medical degree. No referral is needed. The chiropractor is trained in diagnosis to be able to refer to medical treatment where indicated.

### Research

There is a lack of research into chiropractic. The profession is in need, as is medical practice, of substantiating a lot of what it does.

There are, however, a few studies that illustrate the effects of chiropractic on the athlete.

1. Lauro<sup>1</sup> evaluated the effect of spinal manipulation on athletic ability in a group of 50 asymptomatic athletes by performing 11 tests. In the control group (no chiropractic) there was a 4.5% improvement in 6 weeks, and scores improved in 8 out of 11 tests. In the chiropractic group, improvement at 6 weeks was 10.57% and all 11 test scores improved. At 12 weeks it was up to 16.7% improved.
2. Watson<sup>2</sup> followed 52 high level soccer/rugby players to assess relationship between injuries and body mechanics. He used photos with prints on a metric grid to detect asymmetry of shoulder, back, trunk and lower limbs. The incidence of injury was linked to body mechanics defects at the site of injury. Most commonly found was swayback, reversed spinal curve, shoulder asymmetry, scoliosis, rib hump, foot and knee problems. This suggests that, as mentioned, asymmetry and body imbalance leads to greater incidence of injury.
3. Nansel<sup>3</sup> found that neck adjustment improved symmetry and range of motion in asymptomatic subjects with reduced neck lateral flexion.
4. Seaman<sup>4</sup> found that after chiropractic adjustment the load distribution between both feet was more equal. After 12 weeks of care, the mean difference of weight measured by scales under each foot went from 12.84lbs to 3.67lbs.
5. Herzog<sup>5</sup> reported that the biomechanics of walking was improved after chiropractic adjustment. Symmetry and load distribution were improved significantly.

### **A few Famous sports stars who use chiropractic care**

Arnold Schwarzenegger  
Dennis Lillee  
Martina Navratilova  
Nick Faldo (golfer)  
Jeff Lawson (cricketer)  
Guy Andrews (iron man)  
Lleyton Hewitt  
The late, great, Possum Bourne (Rally Driver)  
The late, great, Peter Brock

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#### References:

- <sup>1</sup> Lauro. J Chiro Res & Clin Invest 1991;6(4):84-87.
- <sup>2</sup> Watson. J Sports Med & Physical Fitness 1995;35(4):289-294
- <sup>3</sup> Nansel. J Manip Physiol Ther 1989;12(6):419-27.
- <sup>4</sup> Seaman. Chir Res J. 1993;2(3):33-38.
- <sup>5</sup> Herzog. J Manip Physiol Ther 1991;14(2):104-9.