



## Side effects or Adverse Responses

In the business arena it is recognized that there is a certain risk associated with the promise of return on your investment, the degree to which the risk is identified and spelled out can vary. Generally in the pharmaceutical segment of the healthcare arena it is required that the potential risks and adverse effects of a drug are published and available. TV drug advertisements spend more time discussing the side effects and adverse effects than the intended use of the drug.

The non-pharmalogical healthcare interventions the degree to which specific information about the potential adverse effects or side effects of a particular intervention may be less well know and often is not readily provided by the Healthcare practitioner. For example, there are multiple products and services which promise alleviation of repetitive use injury, such as, hot/cold skin patches; prolotherapy; anti-pronation shoes; stretching exercises; Chi Running; ART; and yoga exercise programs and rarely do the advertisements discuss their side effects or adverse effects. When it comes to non pharmaceutical interventions purporting to alleviate repetitive use injury regarding identification of potential risks or adverse effects it is a "buyers beware".

### **Example:**

A developing service based on a growing body of evidence demonstrating that altering the mechanics or the manner in which you run/walk can have a powerful influence on the development and/or alleviation of repetitive use injury. This research has used sophisticated measuring devices which measure the shock into the lower extremities, real time visual feedback of joint movements. Ideally similar positive results can be achieved with less sophisticated feedback such as observing your running form in mirrors when running on a treadmill, or accelerometer imbedded in running shoes (Davis IS 2005).

The promise is that learning to run with ideal form can alleviate shin pain, knee pain, heel pain, back pain. So what are the potential risks or adverse effects? Data and information identifying specific potential adverse effects or side effects of altering gait patterns is relatively sparse.

An investigation of runners who were trained to conform their gait to a theoretical ideal form of running (Pose Technique) was conducted (Dellam GM 2005). The runners decreased stride length, decreased vertical oscillations, both of which are thought to be a more efficient manner of running. The study did not record incidence of injury, but there are anecdotal reports that many of the athletes who learned the Pose Technique develop Achilles and calf injuries. Biomechanical studies have shown decreased stress in the knees, but increased stress in the ankle when running with the Pose technique (Arendse RE 2004).

Another finding of the study identified the subjects who successfully learned the theoretical ideal running technique (Pose Technique) became less efficient (Dillam GM 2005). It is reasonable to expect that the newer running technique would improve efficiency with more practice.

In my experience when working with clients who are striving to modify faulty walking/running form is that they frequently report delayed onset muscle soreness. There is a strong correlation with performing novel activity/exercise particularly involving eccentric muscle contraction and the development of delayed onset muscle soreness. Delayed onset muscle soreness is typically a self limiting short-lived symptom.

Learning to do something new can be psychologically stressful; it takes mental energy. If walking or running is how you “unwind” and “de-stress”, having to concentrate on how you are walking/running can be frustrating. This too should be self limiting and short lived.

The adverse effect or side effects which can occur with pharmacological interventions tend to be more significant and common compared to non-pharmacological interventions. When drugs are prescribed a common practice is to prescribe additional interventions to medicate the side effects. For example, many medications are to be taken after meals, or another stomach medication is prescribed to be taken before the primary medication is taken. Applying this concept to learning to run with a different technique it is wise to decrease the amount of walking or running and slowly build back up. This should minimize the adverse effects of delayed onset muscle soreness, ankle Achilles pain, or psychological stress.

Because the identification of side effects or adverse effects is not required when advertising non-pharmacological interventions it is wise to be an assertive consumer of healthcare. Ask questions.

- What signs or symptoms should I look out for and stop the intervention if they occur?
- What are less serious side effects that I should notify my healthcare professional about?
- What happens if I overdose?
- How long should I expect before the intervention demonstrates an effect?
- Where can I get more information about this intervention?