Volume 1, Issue 10

Ergonomics



Hi, I'm Dr. Kukurin and you are receiving this newsletter as a free gift from me. We spend a lot of time working on this publication. It's the same information patients pay for in my office So I'm sure you will find it valuable and I hope you enjoy it. If you have a topic you'd like to suggest for future newsletters just give me a call. $\sim Dr. K$

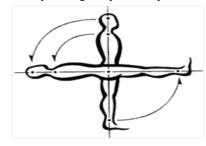
> Journal of Rapid Pain Relief

Effective Home Remedies that Doctors Give Their Patients

Improper body mechanics or ergonomics is the number one reason people end up needing chiropractic care. So if you want to visit our office less, you need to pay attention to ergonomics.

Ergonomics is a funny word that means how man or humans relate to their work environment. I like to expand the definition to include not only how humans relate to their work environment, but also how they relate to their recreational environment and even how they relate to their sleeping environment.

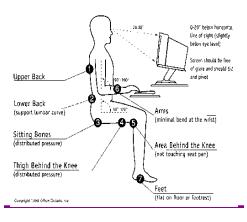
You can take this one step further and even consider the internal ergonomics of the spine itself. Are there any curves, twists or other misalignments, that cause the muscle to compensate? In this newsletter however, we will limit our discussion to work, recreation and sleep ergonomics. In it's simplest terms, ergonomics means how the body and the spine react with postures and positions you assume while at work, play or sleep. When you assume certain postures, the muscles and ligaments of your body must compensate to hold you up against gravity. The better your ergonomics the less work your muscles must do to hold you up. Poor ergonomics leads to inefficient muscle work and higher stress and strain in your soft tissues. Over time, your body might even remodel itself to compensate for poor ergonomics. All this causes stress strain and eventually damage to your body.



You need proper ergonomics standing lying down and everywhere in between. (above)

This issue: *Alternative Medicine Info to* prevent neck and back pain

By far the most important ergonomics are work ergonomics. We stay in the same anatomical position day after day and year after year. This causes gradual remodeling of the spine and soft tissues. Poor work ergonomics is associated with neck pain, headaches, carpal tunnel syndrome, back pain and sciatica (see below). Postural decay occurs in response to poor work ergonomics.





The worst possible sleep ergonomics (**above**). Note how the head is cocked to breath, straining the neck and shoulders, and note how the lower back is kinked. Best possible sleep ergonomics (**below**). Head, neck and spine are in a neutral position. Consider an ergonomically correct pillow to support your neck while sleeping.



Internal Body Ergonomics: Things inside your body that cause compensations

Ergonomics classically considers how the body reacts and adapts to the environment. But you can take this one step further and consider the internal environment of the body. For example, most people will have one leg shorter than the other. This can be a true short leg from birth or from having sustained a broken long bone in the lower extremity. Often broken bones shorten as they heal, creating a leg length discrepancy between the broken and healthy legs. But most people have what we call an apparent short leg. One caused by distortion and misalignment in the pelvis and/or lower back. It really doesn't matter what causes the short leg. A leg length discrepancy places stress and strain on the body. Muscles need to contract to adapt to and compensate for this stress and stain. Chronically contracted muscles produce pain and tightness. So it is important to check the internal ergonomics of your body. Sitting standing and sleeping correctly will help, but if the internal environment of the spine and pelvis is abnormal, most likely headaches, neck and back pain will result. It is a relatively simple procedure to check for a short leg. If you look closely at the picture below you will notice that the patient's right leg is about a half of an inch longer than her left leg. This places strain on the entire spine.

Dr. Kukurin (**right**) checks for leg length discrepancy in a patient. Chiropractic adjustments can reduce most leg length discrepancies.

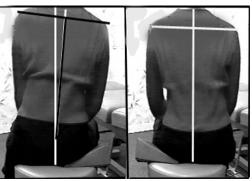


Make sure you are checked frequently.

Home remedies for improving ergonomics



Proper ergonomics when standing are demonstrated in the picture to the left. *Always try to keep one foot up when standing*. This shifts the muscle effort from the spine to the legs and prevents back pain. When one leg gets fatigued, switch legs. Another trick to improve sitting ergonomics is to sit on a book. Note the picture at the right. Placing a lift under one side of the pelvis when sitting aligns the spine. Moving the book to the wrong (opposite side) increases the stress and strain on the body. Ask me to check you during the next visit to our office. ~ Dr. Kukurin



Proper lift placement (right) poor lift placement (left). Schedule a visit so we can determine the appropriate side for you to place a lift.

"Optimize body ergonomics before poor ergonomics cause permanent damage in your body"

1. .Musculoskeletal, visual and psychosocial stress in VDU operators before and after multidisciplinary ergonomic interventions. Appl Ergon. 1998 Oct;29(5):335-54. 2.

2. Ergonomic office design and aging: a quasi-experimental field study of employee reactions to an ergonomics intervention program. J Occup Health Psychol. 2004 Apr:9(2):123-35.

3. The influence of individual low back health status on workplace trunk kinematics and risk of low back disorder. **Ergonomics. 2004** Sep 15;47(11):1226-37.

4. Shape and thickness of cushion in a standing aid to support a forward bending posture: effects on posture, muscle activities and subjective discomfort. **Ind Health. 2004 Jan;42(1):15-23**.





George W. Kukurin DC DACAN



Jason S. Franchi DC