

**The Law of Tissue Tolerance;  
The key to staying uninjured  
By Dr. Tim Maggs**

We runners are a peculiar sort. Highly irrational much of the time. We tend to always want it our way, despite the lunacy in our thinking.

*“Doc, I can’t believe my hamstring is injured”.*

*“Well, you are running 90 miles a week, and in racing flats”.*

*“But, I’ve never had this before”.*

*“Well, you do now”.*

*“And I have a huge race in 3 weeks that I’ve been training hard for.”*

*“Mother Nature could care less about your race schedule”.*

*“Doc, you need to get me better”.*

***“Ahhhhhhhh. Please Lord, give me just one rational patient.”***

Regardless of what we want, the laws of physiology and stress will always dictate our outcomes. Many patients think I made the rules for healing. Not so. I only spread the news and help patients implement the necessary steps in getting and staying better. Dr. Jeff Spencer, Lance Armstrong’s chiropractor, once stated, *“The body doesn’t care what you think, it only cares what you do.”*

**The Law of Tissue Tolerance**

Every tissue in the body has a tolerance level. That tissue can be muscle, tendon, ligament, cartilage or bone. The goal in life is to increase all tissue tolerance as much as possible so when the varying stresses of life hit, from training to cutting down trees to slipping on banana peels to aging, we’re ready for them.

When a stress is greater than the tolerance of the tissue it’s affecting, there will be a defensive response by that tissue. If it’s muscle, there will be a tear in fibers or a reactive (defensive) constriction. This is the person whose low back *“goes out”*, and they’re bent to one side. Then there are stress fractures in bone when the stress gets too great. There are tears in cartilage (meniscus), and there are bulgings and herniations (bulges that have popped) in discs. Ligaments stretch and tear, and tendons rupture. But, all in all, it’s the same thing, more stress than that particular tissue can handle at that particular time.

Unfortunately, not enough Drs. out there are familiar with biomechanics and the biomechanical imbalances that are the pre-cursors to these stresses. I always chuckle when a patient tells me they might have caught a cold in their back.

So, with this law of tissue tolerance so clearly involved in all of our lives, what can we do to improve it?

### **Increasing Tissue Tolerance**

There are many ways to increase tissue tolerance. The most obvious is to balance and mobilize our structures. On exams, I test for “*imbalances*”, with digital foot scans, center of gravity scans, range of motion tests and biomechanical x-rays. Imbalances increase the demand on one or more tissue groups in the body. Identifying these imbalances is always step number 1 in helping people become less vulnerable.

Below are a list of ways you can increase tissue tolerance at home in the absence of a detailed biomechanical exam;

- 1) **Custom Orthotics**—and I prefer the flexible type that don’t restrict foot motion during the walking or running. These will balance the foundation of the body, giving any athlete an advantage. You can also get them off the shelf in running stores or department stores, but, obviously, custom are preferred.
- 2) **The Stick**—this will improve both flexibility as well as recovery of the muscles. The Stick improves toxin elimination as well as improved circulation (food and oxygen to the muscles) and should be used every day, and ideally, prior to and immediately after working out.
- 3) **Massage**—there is nothing better for the muscles than to have someone periodically work out the toxins and constrictions, as these will continue to produce a reduced tissue tolerance.
- 4) **Nutrition**—both diet and supplementation will have a huge effect on tissue tolerance, from joints (glucosamine) to muscle (proteolytic enzymes) to ligaments (minerals). Any good sports nutritionist will be able to guide you in making better decisions.
- 5) **Yoga**—mobility and flexibility are the key to keeping tissue tolerances high. Restrictions and loss of flexibility are the breeding ground for injuries and degeneration.
- 6) **Chiropractic Adjustments**—chiropractors “mobilize joints”, and a mobile joint will tolerate a significantly larger amount of stress without a negative response than a fixated joint. Only a chiropractor can evaluate you biomechanically while using adjustments to mobilize joints, and once the imbalances and fixations are determined, lay out a corrective plan for improvement.

- 7) **Water**—we all drink acid water. We were all born with an internal alkaline environment, yet the modernization of our society has converted all of our internal environments to acid. Mother's milk is alkaline, and since 70% of our bodies are made up of water, the entire environment of our body is severely affected by the water we drink. I've recently purchased an alkaline water system and would recommend you do as well, since all of our health, especially the aging of all cells, is directly influenced by the pH environment in our bodies. [www.Lifeionizers.com](http://www.Lifeionizers.com). This will also make you start looking at the pH of the foods you eat, which is only a good thing.

Best of luck, and at least you'll now know why you're injured, and ways you can help yourself get better.