Get Healthy, Stay Healthy with Kinetic Health

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Icing Great for Pain - But it Stops The Healing

By: Dr. Brian Abelson DC.

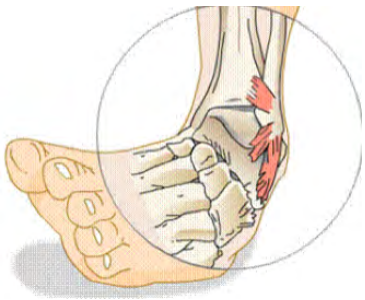
I find **Icing** and **Cold Therapy** to be a very interesting topic, full of a variety of contradictory opinions, and fortunately, a lot of new and comprehensive research. As this new research has come forward, it has caused me to change my opinion and perspectives on this subject. With new information, and my questions and doubts answered, I have come to the conclusion that you should only ice an injury for one purpose - **to reduce pain**. And even this, only when absolutely necessary.
The first thing we must establish is that *inflammation is an essential component of the healing process*.

Understanding the Inflammatory Process
Research has shown that when muscle fibers are damaged (as in an acute strain/sprain injury), inflammatory cells (*macrophages*) stream into the injured area to remove damaged tissue and to stimulate the muscle fibers to regenerate. These *macrophages* are present in your blood stream at all times. When you injure your body, your body releases histamines that act to increase blood flow into the injured area, this increased blood flow releases additional macrophages into the damaged area to digest the damaged tissue (a process known as *phagocytosis*).... *Article continued on page - 2*

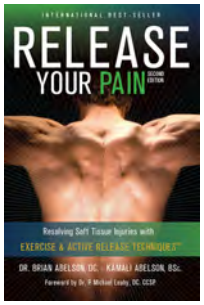
The Most Common Dance Injury: The Lateral Ankle Sprain

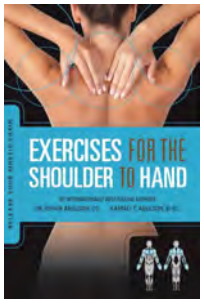
By: Dr. Evangelos Mylonas DC.

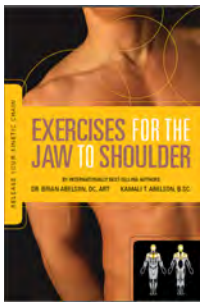
A few weeks ago I had the privilege of attending the Calgary International Salsa Congress. It was a spectacular show featuring some of world's best salsa performers and instructors, local professionals, and dance troupes from all over North America. I was amazed at the level of competition and impressed by the quality of the production, the dancers skills, and the organization of the Salsa Congress itself. It was truly a world class salsa event. As I observed the dancers on stage, I couldn't help but admire them for their passion and dedication to their art. Dancers pursue excellence and invest years of practice in honing their skills. In essence, they are both artists and athletes, pushing their bodies to the limit as they bridge artistic expression with athletic performance.



Not surprisingly, dancers suffer from a variety of injuries that mostly involve their hips, knees, ankles, and feet. The most common injury affecting dancers, and most athletes for that matter, is a *lateral ankle sprain* (also known as an inversion sprain). Ankle sprains in general, account for 40% of all athletic injuries, and of these, 85% are diagnosed as *inversion sprains*.... *Article continued on page - 3*







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Icing… Great for Pain, But it Stops the Healing (continued)

Fluid then rushes into the area from which the damaged tissue was removed (this is the swelling that occurs in the inflammatory process). Then about 24 hours later, *non-phagocytosing macrophages* come in and fill the area with *Insulin Like Growth Factor (IGF-1).* The IGF-1 spurs the damaged area to begin the formation of new tissue (precursor cells). These precursor cells then join together to form the new tissue, replacing the old damaged tissue.

Without this important inflammatory process, healing and regeneration of the injured area does not occur. As you can see, this process requires the body to be able to move fluids in and out of the injured or damaged tissue. Anything that blocks this movement can reduce the rate of healing.

D**ifferentiating Between Acute and Chronic Inflammation**
It is important to differentiate between normal (Acute Inflammation) and run-away or abnormal inflammation (Chronic Inflammation).

Acute Inflammation refers to the type of inflammation that happens immediately after you injure yourself. It could be caused by trauma, strain, sprain, infection, or even by hard physical exercise. This type of inflammation is usually short in duration, and acts to speed up the healing process. Inflammation immediately after an injury is a GOOD thing; it is an indication that your body has moved into an accelerated healing mode.

In comparison, **Chronic Inflammation** is an over-reaction, it is the body attacking its *own tissues*. This includes a number of autoimmune conditions such as rheumatoid arthritis, hay fever, asthma, celiac disease, and many others. The problem is that Chronic Inflammation is an out-of-control process. Unlike **Acute Inflammation** (which is short in duration), **Chronic Inflammation** just keeps going on and on. Even heart disease has been linked to chronic inflammation. The chronic inflammatory process increases the production and availability of a substance called *myostatin* which *hinders* the regeneration of new tissue.

The, Not So Good, Standard Advice
The standard advice given after an acute injury is to both ice and start taking anti-inflammatory medications. I certainly gave my patients this same advice for years, based on my prior medical training and all the educational material available at that time. After all, swelling causes pain (nociceptive pain) by increasing the pressure on nerve endings, and as a practitioner you want to do your best to get your patients out of pain as soon as possible. So the patient ices and the pain is diminished, this is a good thing right? Well yes and no. YES it's good because we have a reduction in pain and the patient can function, but NO because the healing process has now stopped.

H. Lu, D. Huang, N. Saederup, I. F. Charo, R. M. Ransohoff, L. Zhou. Macrophages recruited via CCR2 produce insulin-like growth factor-1 to repair acute skeletal muscle injury. The FASEB Journal, 2010; DOI: 10.1096/fj.10-171579

Using Ice Massage
Ice massage can be more effective than regular icing.

- Fill small paper cups with water and keep them in your freezer till frozen.
- Peel the top of the cup back to expose the ice. Use the bottom of the cup, the paper covered part, as a handle.
- Massage the ice over the injured area in small circular motions, allowing the ice to melt away.
- Use a towel to catch the melting water.
- To prevent tissue damage, only perform ice massage for a maximum of 7 to 9 minutes at a time.

When Should I Use Ice and Pain Medication
If we are talking about the normal soreness that results from working out, I would *avoid ice and cold therapy altogether*. In fact, for the majority of time, it is simply not necessary. As I mentioned earlier, this also includes avoiding all NSAIDS, since most of these medications sabotage tissue regeneration. Whether we are talking about tissue repair due to injury or trying to develop new muscle after exercise, both ice and anti-inflammatory medications can be counter-productive to injury recovery.

On the other hand, if you are dealing with an extremely acute and painful situation, then ice is a great way to reduce that pain. Yes, you *will be inhibiting the healing process*, but only for a short period of time. If you need to take medication because of the pain, try acetaminophen (Tylenol), it will reduce pain but will not reduce the inflammation.

Icing For Pain Relief!
If you are in *severe pain*, icing is a great way to reduce that pain after an acute injury. I would recommend icing for no longer than the first 24 to 72 hours after the injury. If you feel that you don't need the ice, then don't use it. This does not mean we are recommending that you heat the injured area right after an injury. Heat therapy does increase blood flow to an area, but this heat can cause an increase in inflammation, which in turn will cause an increase in pain. We need a certain amount of inflammation to heal, but too much inflammation will definitely be counter-productive.

Back Pain During Pregnancy *(Continued)*

What is a Lateral Ankle Sprain

A lateral ankle sprain refers to an overstretching and/or tearing of the ligaments on the outside of the ankle. This usually occurs when a dancer jumps and lands improperly rolling the ankle to the outside. This causes the ligaments to stretch beyond their normal ranges resulting in a sprain (also common with runners).

Ligaments are tough, fibrous bands that attach bones to other bones. Their primary function is to stabilize the junction between two or more bones, commonly referred to as a joint. The lateral ankle is stabilized by three ligaments. These are:

- Anterior Talofibular Ligament (ATFL)
- Calcaneofibular Ligament (CFL)
- Posterior Talofibular Ligament (PTFL)

Of these three ligaments, the most commonly injured during an inversion sprain is the *Anterior Talofibular ligament (ATFL)*. The function of the ATFL is to prevent the *talus* bone of the ankle from moving forward in relation to the *fibula* bone of the ankle. For example, when a ballet dancer repetitively rises up on the toes to perform *relevé* (a heel raise) this places a considerable amount of mechanical stress on the ATFL as it resists the forward movement of the *talus* bone. If the dancer's ankle starts to invert (roll outward) due to fatigue or a slight loss of balance while performing this movement, this predisposes the ligament to injury. Once the forces applied to the ATFL exceeds its structural limits the ligament tears resulting in a sprain.

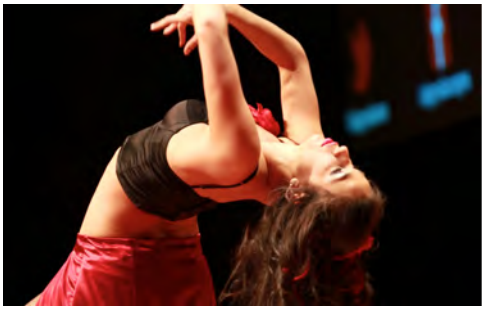
Fascia and the Ankle's Kinetic Chain

All the structures of the ankle's kinetic chain are bound together and interconnected by the *fascia*. More importantly though, we need to recognize that the fascia is much more than simple connective tissue. Fascia is embedded with neurological receptors that help coordinate muscle movement and relay important information regarding mechanical stress and joint position to the brain. Fascia is an integral part of our body's anatomy and it is plays an essential role in all human movement. Therefore, when treating an inversion sprain we need to focus on more than just the damaged ankle ligaments. Superficially, acute lateral ankle sprains tend to heal with time, however if you want to see a full resolution and properly rehabilitate the injured ankle, you have to address the ankle's kinetic chain and its fascial interconnections.

Our Perspective in Treating Inversion Sprains

When we evaluate an inversion sprain (at Kinetic Health) we assess the degree of injury to the ligaments **and** to all the related soft-tissue (muscles, tendons, ligaments, fascia and nerves) and bony structures (ankle, knee, hip, pelvis and spine) that are involved in performing, coordinating, and stabilizing ankle motion.

As we've mentioned before in previous articles, we always look at the "big picture" not just the site of injury. This is especially true when looking at lateral ankle sprains. In most patients, we find that soft-tissue restrictions and muscle imbalances along the ankle's kinetic chain often accompany the damage to the ankle ligaments.



2014 Calgary International Salsa Congress

Amazing Dancers from all over the world. Check out some of the photo's we took at this years Salsa Congress.

https://www.flickr.com/photos/kinetichealth/sets/72157643219579315/

2014 Calgary Comic Expo

This years Comic & Entertainment Expo was a real blast. Check out the photos we took at this years event.

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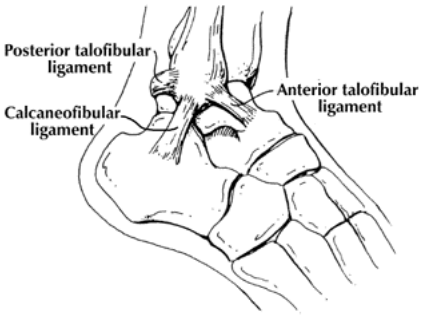


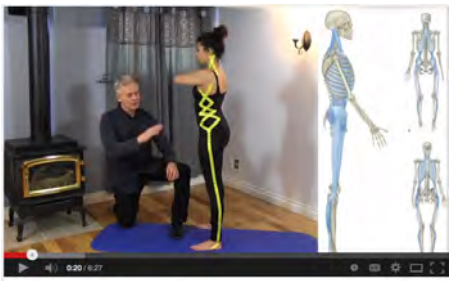
Grading an Inversion Ankle Sprain

Inversion sprains are graded based on how many ligament fibres have been torn and to what degree ankle joint stability has been affected.

Grade I Sprain: A few ligament fibres are stretched and torn, but joint stability is not affected. There may be mild tenderness and swelling.

Grade II Sprain: A moderate number of ligament fibres are torn (partial tear of the ligament) and there is usually moderate tenderness, bruising and swelling around the ankle. There is some joint instability upon physical examination.

Grade III Sprain: There is a complete tear of the ligament accompanied by significant tenderness, bruising and swelling. The ankle joint is unstable.



Lateral Line - Fascial Planes

The Lateral Line

Check out our video on the Lateral Fascial Plane*. Once you have reviewed this video, you will clearly see the importance of fascial connections and how they are directly related to the treatment of inversion sprains.*

http://www.youtube.com/watch?v=nuxTfQ15qOc

Check out our informative websites, blogs, and YouTube channel...

www.kinetichealth.ca

Welcome to our **Kinetic Health Clinic** website. Kinetic Health is located in northwest Calgary, in the community of Edgemont. Our information-rich site provides you with extensive healthcare information about the conditions we treat, our treatment methodologies, conditions we can help resolve, contact information, and information about our staff. You can also download **Admittance Forms** for Dr. Abelson, Dr. Mylonas, and our Registered Massage Therapists.

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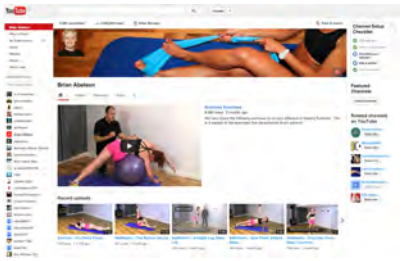
www.activerelease.ca

This popular site is dedicated to providing you with information about one of the most effective and popular treatment methods we use in our clinical practice - **Active Release Techniques (ART)**. We bring extensive expertise in ART. Dr. Abelson was an instructor in ART for over 10 years, has co-authored the international best-seller about ART, "**Release Your Pain**", and contributed to the **ART Biomechanics Manual** that is currently used to instruct ART practitioners. Both Dr. Abelson and Dr. Mylonas are fully certified in all ART techniques.



www.youtube.com/kinetichealthonline

This is the link to our **YouTube** channel. We are constantly updating our channel with videos about new exercises, conditions, biomechanical analysis, local races (marathons, triathlon's), and even cultural events and travel. Please check us out, and feel free to *share* our videos with anyone that you think could use this information.

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www.releaseyourbody.com is where you can find and purchase all our latest publications. Our best selling books can be purchased in both **hard-copy** and **eBook** formats from this site. Get your copy of:

- Release Your Pain: 2nd Edition
- Exercises for the Shoulder to Hand: Release Your Kinetic Chain
- Exercises for the Jaw to Shoulder: Release Your Kinetic Chain
- A Quest for Healing - A Story of Love

Local services, resources, and events we highly recommend.

We have three excellent Registered Massage Therapists (RMT's) at Kinetic Health.

Massage appointments are available Monday thru Saturday. Call 403-241-3772 to book your massage.

Kinetic Health Supports Plan Canada

Plan Canada's goal is to provide children and their families with the essentials of life needed to be successful in their communities. *http://plancanada.ca*

Janelle Morrison - Triathlete

We are proud to be one of Janelle Morrison's sponsors. Besides being an incredible athlete, she really is an amazing person. Check out Janelle's story.

http://www.janellemorrison.com