Improve Your Running with

Active Release Technique

By Dr. Brian Abelson DC.

Running injuries are commonly attributed to faulty biomechanics and errors in training methods. Faulty training techniques such as the rapid build up of mileage, running on worn-out shoes, or ignoring our body's messages and continuing to run through pain. Although these important aspects of a running program should be addressed, runners should also consider the cumulative effects that thousand of repetitive motions have on their bodies. Even with good biomechanics and excellent training, runners are always exposed to a considerable amount of cumulative trauma.

As a marathon runner myself, and as a triathelete for over 20 years, I have felt the effects of cumulative stress injuries caused by running. Like many runners I sometimes push myself over my limits and then pay the price with either an injury or inflammation of soft tissues. These injuries can be debilitating and result in reduced ability to conduct any physical activities. Traditional treatment techniques often require months to fully resolve injuries to soft tissue.

About Soft Tissue Injuries

Injuries to soft tissue (ligaments, muscles, blood vessels, fascia and nerves) result in inflammation and swelling of the tissue. The body responds to this inflammation by laying down scar tissue (cross fibers on the tissue) in an attempt to stabilize the affected area. This scar tissue restricts motion, reduces circulation, inhibits nerve function, and causes ongoing friction and pressure, and usually results in the production of more cross fibers and adhesions.

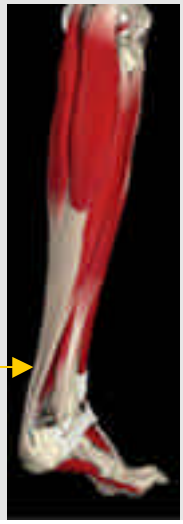
Effective treatment of soft tissue injuries requires an alteration in tissue structure by breaking up cross-fiber adhesions and restoring normal function to the soft tissue. This process substantially decreases healing time, treats the root cause of the injury, and improves running performance.

Achilles Tendonitis

Achilles Tendonitis is an inflammation of the Achilles Tendon. The Achilles Tendon joins the heads of the gastrocnemius and the soleus muscles (calf muscles). Initial symptoms are a dull, aching pain in the tendon after running.

Improper treatment of Achilles Tendonitis can lead to major problems. Cross friction massage often irritates this area, extending the period of recovery rather than reducing. Problems often arise in the treatment of this syndrome when a therapist uses heavy direct pressure and tension over the Achilles Tendon. We have seen numerous case of Achilles Tendonitis that were needlessly prolonged because of ineffective treatments.

When standing, the Achilles tendon is constantly under pressure resulting in limited blood circulation to the tissue. Inflammation of the Achilles Tendon is often caused by the tissue just in front of it. With ART, we often see immediate improvement by releasing restrictions in the fascial tissue. After ART treatments, ice, stretching, strengthening, and balance work continue to be key components in correcting the problem.



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Treating Soft Tissue Injuries

Over time, many methods have been developed to remove these adhesions. As a clinician, I have tested and used many of these techniques. Unfortunately, most of these techniques fail in the critical area of identifying the exact location and direction of these adhesions.

In my practice, working with a broad range of soft tissue injuries, I have discovered that Active Release Technique (ART) to be most effective method for breaking the restrictions formed during running. ART is a patented, state-of-the-art, soft tissue treatment system that is ideal for dealing with problems that occur in muscles, tendons, ligaments, fascia and nerves. ART was developed by Dr. Mike Leahy, a Doctor of Chiropractic in Colorado Springs, and a trained aeronautical engineer.

The effectiveness of ART was seen during the 2001 World Championship Ironman Triathlon in Kona, Hawaii. The ART team at Kona treated more than 1000 athletes prior to the event. ART practitioners worked with a broad range of injuries related to running, swimming and cycling. This Ironman faced some of worst course conditions ever seen at Kona. Cyclists were literally blown off their bikes due to the high winds. Temperatures were high, and the sun hot! Despite brutal conditions, this race had the largest number of *finishing* competitors in the history of Ironman. Ironman race directors attribute this high level of race completion directly to the Active Release Technique treatments received by athletes prior to the event.

How ART Works

During the ART procedure, you are often formulating your diagnosis and performing your treatment at the same time. Practitioners must consider tissue texture, tissue tension, tissue movement, and tissue function. Each of these factors can cause the doctor to greatly alter your treatment.

For example, take the case of a Sciatic nerve that is entrapped between the hamstrings. In such cases, the patient's symptoms are often exacerbated during hip flexion with extension of the knee and dorsiflexion of the ankle. The ART Practitioner can also feel the lack of motion in areas that are entrapped, by the lack of tissue translation.

Once your Doctor has identified the specific entrapment site, and has the lesion (scar tissue/adhesion) under specific contact with his/her hand, the Doctor takes the tissue from a shortened to a fully elongated position, while moving longitudinally along the soft tissue fibers.

During this ART treatment, the hamstring is moved by the Doctor in a proximal (toward center) direction that follows the direction of the tissue fibers. At the same time the patient is asked to execute a movement that causes the Sciatic nerve to move distally (away from centre). When this happens, the practitioner can literally feel the nerve translate in one direction while the muscles move in the

Plantar Fascitis

The plantar fascia is a band of fibers runs from the heel bone to the base of the toes. Plantar Fascitis occurs when these tissues are irritated and inflamed. Bone spurs often form on the heel if this condition is not correctly treated. Biomechanical or training flaws such as over-pronation, flat feet, a tight Achilles tendon, a high-arched foot, or a sudden increase in training mileage often cause plantar Fascitis. Conventional therapy (without surgery) usually requires six weeks to three months.

With ART, we have seen resolution of this problem in 90% of cases with just one to three treatments. Even with chronic cases. ART's effectiveness lays in the way it addresses the underlying structures involved in the injury, rather than just the Plantar Fascia. Under the Plantar Fascia three other structures are commonly involved but rarely treated or addressed:

- Plantar Aponeurosis.
- Flexor Digitorum Brevis muscle.
- Quadratus Plantae muscle.

These structures run very deep within the foot and each must be treated differently to achieve positive results.

Shin splints

Shin splints are commonly caused by muscle imbalances, pronation, insufficient shock absorption (worn out shoes) and toe running.

Anterior shin splints are often caused by a muscle called the Tibialis Anterior. Fibers from the Tibialis Anterior tear away from the periosteal (outer surface of the bone) attachment surface. As these fibers heal, they often become fibrotic, making it difficult for this muscle to lengthen normally. This makes the probability of future shin splints more likely.

The same holds true for posterior shins splints where the tibialis posterior is often involved. With ART treatments adhesions are broken down allowing the muscle to lengthen, thereby reducing the probability of future injuries.

Icing, reducing mileage, avoiding hills, correcting gait imbalances such as pronation, and stretching are all essential components to correcting this problem.

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other as the nerve restriction is freed up. Almost immediately the patient will feel a release.

How to Use ART to Treat Running Injuries

At our clinic we have used ART to effectively treat most common injuries by runners including: Plantar Fascitis, Achilles Tendonitis, Runner's Knee/Iliotibial Band Syndrome, shin splints, and back pain.

With ART, a considerable amount of tension (not compression) is applied to free up the restrictions on these structures. This is especially true if the adhesion has altered blood circulation. Decreased blood flow results in a decreased amount of oxygen getting to the soft tissue, a primary factor in the production of new scar tissue.

Rehabilitation remains an important part of the ART procedure. After the ART procedures, we have the patients ice, stretch, and strengthen the feet to prevent re-occurrences. We also have them test our treatments by returning to their running program. This is what we call *dialing in the body*. We validate the effectiveness of the treatment by checking the ability of the patient to complete the task that caused the injury.

Conclusion

Active Release Technique is the most effective form of therapy I have seen or used for the treatment of soft tissue injuries and for the improvement of running performance.

Its effects are immediate, often dramatic and always reassuring. It lets the runner return to his/her running quickly, minimizes or removes the result of repetitive stress injuries, and results in a freer, more easy run by removing adhesions and cross fibers that restrict normal movement.

ART is a difficult and challenging technique to master. It is important to look for, and work with ART practitioners who are trained, qualified and currently certified in ART Lower Extremity Protocols.

For more information about ART, and to find qualified practitioners in your area check out the following websites:
www.drabelson.com
www.activerelease.com.

Good luck with your running and may it be injury free.

References:
1. Active Release Techniques – Lower extremity Manuals, Dr. Michael Leahy.

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Dr. Abelson treating Runner's Knee at the Kona Ironman 2001 Championship.

Runner's Knee/ Iliotibial Band Syndrome

Runners knee is the term given to diffuse pain around the knee, under the kneecap, often with stiffness under the knee joint. It is often related to too rapid increase of mileage, tight hamstrings, and imbalances between the hamstrings and quadriceps. Other physical structures that are often involved include:

- Knee capsule.
- Meniscus.
- Collateral ligaments.
- Patellar tendon.

Even the posterior knee is often involved especially a muscle called the Popliteus. This muscle is involved in the rotary stability of the knee.

The psoas muscle is also often involved with knee problems. The psoas muscle is the primary hip flexor. When the psoas muscle becomes shortened, fibrotic and weakened the quadriceps (Rectus Femoris) has to exert more force to make the hip flex. This is a major (and often undiagnosed) cause of unresolved knee pain.

In each case ART can be used to effectively locate and free restrictions.

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