

With left leg as control, ten standardbred horses showed substantial increase in HA concentration in right leg treated with Infratonic therapy.

Inflammation and Hyaluronic Acid an Antagonistic Relationship

Over the past few years, hyaluronic acid (HA) has become a buzzword synonymous with youth, beauty, pain relief, and accelerated healing. Found highly concentrated in our skin, corneas, cartilage, and synovial fluids, our body naturally produces this viscous oil to lubricate our joints, hold the structure of our cellular matrix, and heal wounds. In addition, it binds up to 1,000 times its weight in water, keeping our skin soft, smooth, and supple.

Amazingly, this valuable oil deteriorates soon after it is produced; **in our skin, where about half of our body's HA resides, HA has a half-life of only about one day!** As children, we have lots of HA, attributing to the flexibility, resilience, and rapid healing of children, but as we age, our bodies produce less and less of this valuable oil. This, combined with the short half-life, means we are left with the consequences of aging: inflammation in joints, harder and drier cartilage, and hardened, wrinkled skin.

Our bodies are factories for HA, producing about 5,000 mg. of HA per day, and containing a total of about 15,000 mg. of HA. The cost of high quality HA is about \$500 per 1,000 mg. in injectable form (used in face lifts and joint therapy), and \$120 per 1,000 mg. in pill form. Your body produces thousands of dollars worth of hyaluronic acid every day.

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However, our cells don't always produce HA efficiently. When HA production dwindles, we often suffer from joint pain, myofascial rigidity, skin aging, dryness, and wrinkles. In addition, we experience slow healing of wounds, muscles, tendons, etc. As the following controlled research shows, stress and inflammation cause reduced HA production while Infratonic therapy restores HA production.

Controlled research conducted by Dr. Ronald J. Reigel using the inflamed hocks of 10 standard

thoroughbred horses, concluded that exposure to Infratonic therapy increases hyaluronic acid production in as little as one week, with profound increases after only one month of use! The increase in the treated hocks of the horses after one month of daily treatments averaged at 15%, while the untreated hock saw a decrease of 18%! In addition, synovial fluid (composed largely of hyaluronic acid) drawn from both hocks of the horses after 6 weeks proved to be clear or pale yellow in appearance in all horses, the normal appearance suggestive of proper cellular waste disposal and circulation. From this, we can conclude that Infratonic therapy not only offers spot treatments; it works with our cells to promote total body healing and vitality.

Many products containing HA on the market offer anti-aging in a bottle. These come in many different forms such as pills, liquids, gels, and creams. Pricy and only temporary solutions, these products provide a drop in the bucket compared to the body's production of HA and thus cannot

match Infratonic therapy in results. Infratonic therapy actually increases HA production of the cells within our bodies by reducing inflammation and cellular trauma. This HA can then fluidly move throughout the extracellular matrix and synovial fluids, providing the entire body with this youth promoting substance. Infratonic therapy is not a supplement; Infratonic therapy works with our cells to enhance our own source of HA.

How do I know if I have benefited from an increase in hyaluronic acid?

Do you find yourself facing an ugly scar each morning as you dress and wish it away? How many people do you know who are affected by osteoarthritis?

Did you yourself once suffer a broken bone and are still able to feel residual pain when the weather changes?

Many of us find ourselves trapped into an old injury or feel weighted by the tell-tale signs of old age. However, we don't need to remain tied to these; within each of us is the key to anti-aging and rejuvenation. Our bodies, as biomechanical machines, can produce more hyaluronic acid. The following testimonials have been provided as examples of how you might know if hyaluronic acid is working for you.

"I personally made extraordinary progress with old adhesions. Twenty five years ago, I had surgery twice and was in the hospital three and a half months, during which lots of adhesions formed. About twelve years ago, I was doing deep breathing exercises and popped one. It felt like a heart attack. Since childhood, I have had

difficulty breathing deeply. But a few weeks ago, while using the Infratonic, I was feeling very relaxed and found I could breathe deeply. I breathed very deeply and felt an adhesion pull in my abdomen. The Infratonic released the discomfort.

Hyaluronic acid then softened the scar tissue of his adhesions and allowed his cells to return to their proper structure and function.

A few hours later, I found I could breathe even more deeply than before, but then felt another adhesion pop near my shoulder. Over the next few days, I continued my deep breathing but took it easy. I felt like an accordion, breathing deeper and deeper as adhesion after adhesion gently released. It was like the Infratonic was dissolving the adhesions so I could break free of old emotional restrictions.

tissues. Jeff's old adhesions, internal scars formed after surgery many years ago, prohibited mobility and circulation within his abdomen. With Infratonic therapy, it appears that cells were finally able to get out of protection mode and increase production of hyaluronic acid. Hyaluronic acid then softened the scar tissue of his adhesions and allowed his cells to return to their proper structure and function. Jeff was actually able to feel this process in motion. This morphing effect of mobilizing scar tissue internally and externally has been reported by many users, and may relate to hyaluronic acid's reported role during the proliferation, morphogenesis, and differentiation of cells.¹

Leaky Gut Syndrome... the Result of Lowered HA Levels?

If you have any case studies related to leaky gut syndrome, please submit them. It appears that inflammation in the intestinal wall can accelerate the breakdown of hyaluronic acid that would normally sustain the intracellular boundary, leaving gaps in the cell membrane. Undigested or partially digested materials can then pass through these gaps despite their inability to be metabolized by our cells. In turn, the cells recognize this matter as foreign and attack, leading to abdominal pain and a variety of conditions, such as fungus infections, sudden severe allergies, chronic fatigue, memory loss, mineral deficiencies, and an overall weakening of the immune system.⁵ As this causes a chronic inflammation that can spread throughout the body, it has been linked to lupus, rheumatoid arthritis, and fibromyalgia.⁶ Slight changes in hyaluronic acid production can easily make the difference between normal digestive processes and digestive materials leaking into the abdominal cavity. User reports on how to use the Infratonic with leaky gut syndrome, and what results to expect, would be most valuable.

Now I can breathe much more deeply and powerfully."

Jeff Long, Laguna Hills, CA

At first glance, it may be difficult to understand how Jeff's experience can relate to hyaluronic acid. In areas of trauma, cells revert to protection mode, become inflamed, and reduce the production of hyaluronic acid. As a result, scar tissue forms to protect surrounding

"While catching for one of the pitchers on my son's baseball team, I got hit in my shin with the baseball. I had a bruise, which became a hard, visible lump on my shin and was very sore to the touch for weeks. The injury was not getting better. The lump was hard and sore. I placed the transducer directly on the lump and bruise for ten minutes on Mind. After one treatment, it was 80% better in reducing lumps and soreness. After two treatments, the injury was 100% better. The visible hard lump on my shin disappeared after two treatments."

WD, Langhorne, PA

"I had a very poorly healed bikini hysterectomy scar, discolored and poorly filled in. It always bothered me that the scar was so poorly healed. When I was hot and sweaty and tired from physical work, it would sometimes ache and bother me. No more. In 2000, after 12 years post-op, I decided to try using my QGM on it for short periods. I treated it for 10-20 minutes at a time on

Mind for a period of a few weeks (not even daily) directly on the scar tissue. The color of the scar is now normal skin color, rather than reddish, and the scar tissue has filled in and smoothed out so that it is hardly noticeable. My chiro/acupuncturist agrees that this is a very well-healed incision.”

KD, St. Paul, MN

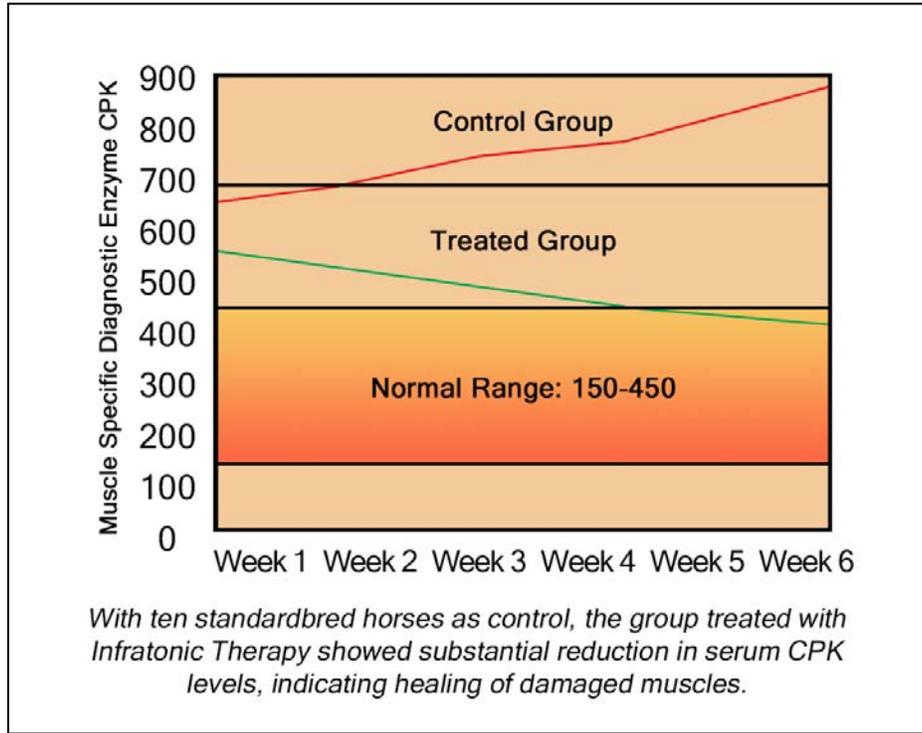
“Scar tissue in urethra causing reduced urine flow and consequently infection and many other symptoms. Resting on perineum and side of pubic bone (Mind) 7-45 minutes as needed up to four times per day. Regained control or reduction of urine flow, which was previously out of patient’s control, and as a result, great reduction of urinary tract infections. Sleeping, eating, weight gain, and many other forms of well-being as a result of reduction of urinary tract infections.”

DV, Tucson, AZ

Pain greatly reduced with meds. Knee pain, fatigue, and edema. Treated one hour per day for two weeks. Edema notably reduced and eliminated. Much greater energy, pain gone, edema eliminated.”

MQ, Rockville, MD

In addition to maintaining cellular structure and function, hyaluronic acid provides our bodies with a natural lubricant. As we age, our bodies naturally begin to show wear and tear, arthritis being a perfect example.



Our cartilage becomes drier and more brittle, leaving our joints grating upon themselves, due largely in part to a decrease in production of hyaluronic acid. Once the area has become worn, we are then left with inflammation, further destroying hyaluronic acid that cells do produce. When exposed to Infratonic therapy, inflammation in our cells is reduced and they can begin to increase significantly the production of

The fluidity of hyaluronic acid allows it to move throughout the body, moving necessary nutrients to and removing waste particles from cells lacking a direct blood supply. This is evident as hyaluronic acid levels can be detected in the blood, where it comes from the lymphatic system of the peripheral tissues,² urine, and synovial fluid. When hyaluronic acid levels are normal, healing can progress smoothly. Reduction in scar tissue is one way to quantify that Infratonic therapy is increasing hyaluronic acid production. Another way is through the reduction of edema. When hyaluronic acid is lacking in the intercellular matrix, cell membranes weaken considerably, spilling fluid into the matrix, resulting in edema.

“Edema following abdominal surgery. Patient treated at home every two hours. Treated over abdomen and thymus. No painkillers were used, scarring was minimized, and edema eliminated. The plastic surgeon was amazed.

The effectiveness of Infratonic therapy in increasing hyaluronic acid production, which then strengthens the cellular wall, reducing inflammation, has been observed in horses and applies to humans as well. hyaluronic acid levels (accelerated, normal, and declining) are currently used as markers for the diagnosis, progression, or stasis of diseases such as osteoarthritis³, suggesting that normalized hyaluronic acid levels can lessen or in some cases prevent symptoms of such diseases. Here’s an example provided by Margaret from Huntington Beach, CA, of hyaluronic acid at work, effectively reducing the inflammation present in those afflicted with arthritis:

“I awoke one morning with arthritis so bad I could barely walk. I use the Infratonic all night every night (Mind). I sleep with the machine every night. My shoulder and neck were especially bad. I would sleep with it on my shoulder. Complete recovery. I now even run 5 times a week. I am 67 years old and lead an active life style including my own business. Also a caregiver for my husband.”

hyaluronic acid in the areas lacking. The results: we can move more fluently, are out of pain, and can return to (or begin) what we enjoy most in life!

The relationship between HA and connective tissue has been the focus of much research within the past few years. Connective tissues play an integral role in our ability to heal quickly, move fluently, and support our overall system. Healthy connective tissue is dependent on the extracellular matrix, largely composed of hyaluronic acid, which once again allows cells to maintain proper structure and maintain hydration. Deep within our tendons, this is specifically important as they need to remain soft and supple to stretch and contract as we move. As the Infratonic can penetrate into these areas, hyaluronic acid levels can normalize and heal traumatized tendons and even ligaments from the inside out.⁴

"I must say, your Infratonic product is very wonderful and has been a godsend for me. My Infratonic 8 has been invaluable in helping me control my tendonitis and other various muscle/ligament injuries and problems. If it wasn't for this device, I would not be able to live such a productive, active, and pain free life."

ES Downingtown, PA

"A three year study on geriatrics and hip fractures. Some patients on actual site about 1 inch away and others 2 to 3 inches away, directed at site of surgery. 10-20 minutes once a day for 1-2 weeks. Setting on High. Doctors were amazed after X-rays taken, healed so much faster than usual; could bear weight sooner and pain decreased, which in some cases took no pain meds."

"I play competitive racquetball. Each time after I play, I get a sore, tender elbow that is very painful. I place the transducer directly on the four areas of my elbow for five or ten minutes on each spot. I used Mind and the tenderness and soreness to the muscle, tendons, and ligaments vastly improved."

WDF Lanhorne, PA

Many of us have experience with broken bones and the consequences of retarded healing. Infratonic therapy increases the production of hyaluronic acid present around those traumas to ease and hasten complete recovery, despite any time lapsing between the initial injury and Infratonic therapy treatments. It also keeps swelling and inflammation at a minimum, allowing cells to continually produce hyaluronic acid, thereby increasing mobility and strength. HA also enables healing to occur much more rapidly, as seen in the following testimonial:

"Multiple fractures of wrist. Pins inserted; quite painful. 20 minute treatments daily for one week, then three times a week for two more weeks. Three weeks after the fractures occurred, orthopedic surgeon couldn't believe how much the bones had healed. Quite significant pain reduction during healing."

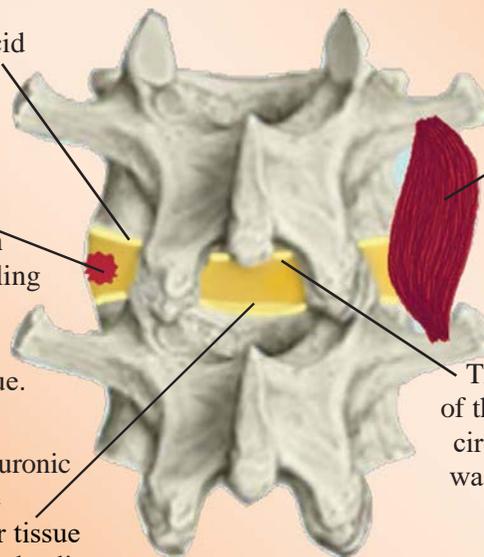
MB, Brookings, OR

Treat Inflammation & Scar Tissue at the Heart of the Joint Injury with Infratonic Therapy

Healthy synovial tissue increases hyaluronic acid production for improved lubrication.

Decreased inflammation reduces swelling and pain and normalizes synovial tissue.

Increased hyaluronic acid assists the melting of scar tissue and accelerates healing.



Relaxes muscle spasms to reduce pressure on the vertebrae and facilitate adjustment.

The rippling motion of the signal improves circulation to remove waste byproducts and improve nutrition.

Decreased limping, sleeping all night and less pain. Quick recovery surprised doctor. Good attitudes."

JO, Fallbrook, CA

Whether treating an old injury, chronic condition, or acute trauma, the increase in cellular production of hyaluronic acid through Infratonic therapy can greatly ease and accelerate the recovery process. If you believe you have seen improvements in your condition that can be attributed to hyaluronic acid, please share your story with us. The more concise and informative your testimonial is in regards to trauma incurred, treatment information, and time oriented results, the more beneficial it will be to others.

Footnotes:

¹ Lammi, Mikko, Editor,

Function of Hyaluronan Proteoglycan Web book, University of Kuopio, Sept 2002.

http://www.uku.fi/laitokset/anat/PG/ha_funct.htm

² Lammi, Mikko, Editor,

Hyaluronan Metabolism Proteoglycan Web book, University of Kuopio, Sept 2002.

http://www.uku.fi/laitokset/anat/PG/ha_metab.htm

³ Manicourt, Daniel.

Connective Tissue

and Arthritis

Christian de Duve

Institute of Cellular Pathology, 2002. www.icp.ucl.ac.be/ICP_chapters_2002/manicourt.pdf

⁴ Culav, Elizabeth M et al, Connective Tissues: Matrix Composition and It's Relevance to Physical Therapy. Physical Therapy Vol. 79 Number 3, March, 1999, 308-319.

⁵ American Institute on Autism, What is Leaky Gut Syndrome? AIA Newsletter #18, Summer 1997 osiris.sunderland.ac.uk/autism/gut.htm

⁶ Rona, Zoltan P. Altered Immunity and Leaky Gut Syndrome www.afpafitness.com/articles/LEAKGUT4.htm

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