

the painless messenger

The practitioner's resource for chronic pain management.



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Dear Colleague:

I recently came upon an intriguing article published in the prestigious journal *Spine*. The article concluded that resveratrol, a natural compound found in various plants including grapes and red wine might have a miraculous effect on the matrix of the intervertebral disc and slow the progression of the disc degenerative process.

This phytoestrogen seems to have a significant anabolic effect on the molecular enzymatic cascade, potentially affecting age-related degradation of the disc. Intervertebral disc degeneration, also called internal disc disruption, is an extremely common condition and cause of chronic low back pain. The degenerative process occurs naturally in the adult population and appears to be symptomatic in approximately 40 percent of patients with chronic low back pain.

Presently, discography immediately followed by computed tomography (CT) scan is considered the gold standard for diagnosing internal disc disruption. Spontaneous remission of pain from this condition is infrequent, and more often than not, aggressive treatments are required. Newer treatments are evolving and these include intradiscal radiofrequency of the disc, also called biacuplasty. Patients who do not respond to more conservative measures may potentially benefit from surgical procedures such as disc replacement.

In light of this therapeutic conundrum, more preventive therapeutic approaches clearly make sense.

Thank you for your ongoing trust and support,

Julien Vaisman, MD

in this issue:

Acupuncture Shown to be Effective for Chronic Low Back Pain

Controlling Pain Through Diet

An Update on MRI of the Lumbar Spine

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Reference

Li X, Phillips FM, An HS et al. The action of resveratrol, a phytoestrogen found in grapes, on the intervertebral disc. *Spine*. 2008 Nov 15;33(24):2586-95.

Acupuncture Shown to be Effective for Chronic Low Back Pain

Elaine Walsh, MA, MAc, LicAc

Until recently, there were few large cohort studies that examined the long term efficacy of acupuncture compared with conventional medical treatment for chronic low back pain. In the *Archives of Internal Medicine*, Haake et al describe the German Acupuncture Trials, which were conducted on 1162 patients in 340 outpatient clinics. The patients varied in age from 18 to 86 years and had chronic low back pain for a mean duration of eight years.

Treatment was given for 30 minutes twice per week for five weeks for a total of 10 sessions. Traditional Chinese acupuncture was administered to 387 subjects using points on the lower back, ankles, wrists, hands, and feet. Sham acupuncture was given to 387 subjects, and this consisted of shallow needling of "non-acupuncture" points. The third group of 388 subjects received a combination of medication, physical therapy, and exercise.

The primary outcome measure was defined as a 33 percent improvement or greater on pain scores and 12 percent improvement or greater in functional scores at six months after ending treatment. Improvement in the real acupuncture group was 48 percent and improvement in the sham acupuncture group was 44 percent. The improvement was 27 percent in the conventional therapy group. The authors concluded that the effectiveness of acupuncture for chronic low back pain was almost twice that of conventional therapy.

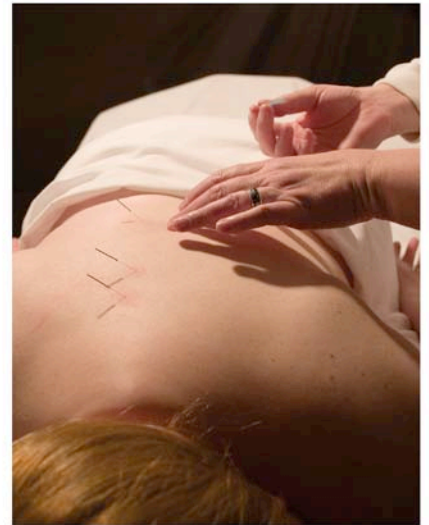
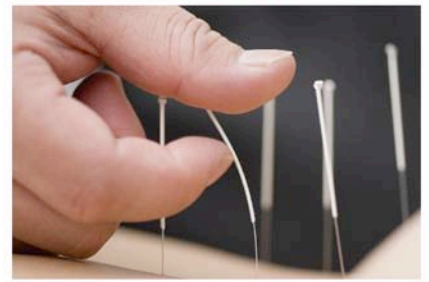
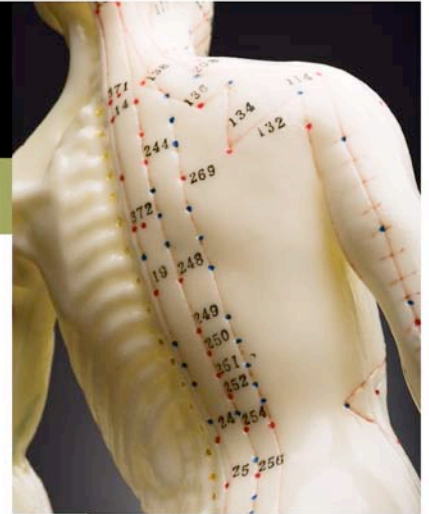
One might argue that the results of true acupuncture after six months appear to be no better than sham and that this is a "placebo effect." However, it is known that shallow needling of "non-acupuncture" points does have an energetic effect. Both shallow needling and non-insertive needle techniques are employed in Japanese-style acupuncture to move energy in the body. New points, which are not on the acupuncture channels, are continually being discovered and have documented actions and effects in the body. In this study, the effects of the sham or control group were not as neutral or inert as a true placebo would be. The sham group actually received a kind of energetic treatment off the traditional acupuncture meridians, and this is probably why the sham group showed 44 percent improvement at six months. It is important to note that the sham results do not imply that random needling is just as effective as needling on the correct acupuncture point. There will be superior results, as this study shows, when the correct acupuncture points are needled by a trained professional.

Reference

Haake M, Müller HH, Schade-Brittinger C, et al. German Acupuncture Trials (GERAC) for chronic low back pain: randomized, multicenter, blinded, parallel-group trial with 3 groups. *Arch Intern Med.* 2007 Sep 24;167(17):1892-8.



Elaine Walsh, MA, MAc, LicAc, has extensive experience as a clinician and researcher in both western and eastern medicine. She practices at Pain and Wellness Center and teaches Laser Acupuncture at the New England School of Acupuncture.





Controlling Pain Through Diet

Mark Friedman, DC, DACNB, FABDA

As an integrative medicine center, Pain and Wellness Center recognizes the benefits of both allopathic approaches and natural ways to help patients control, reduce, or eliminate their pain. Research has shown that certain foods act in a pro-inflammatory way, while others have anti-inflammatory properties.

Pro-Inflammatory Foods

Increased pain can occur because of poor blood glucose control. It is crucial to understand the relationship between food and its effect on blood glucose levels.

Most everyone is aware that eating sweet foods causes a rise in blood glucose. However, many foods not considered sweets are also rapidly converted to sugar in the body such as bananas, potatoes, corn, peas, fruit juices, and processed cereals, to name a few. Large quantities of food can also cause an increase in glucose levels, even if the food is the "good" kind.

When blood glucose is high, inflammation runs rampant throughout the body, resulting in low energy levels, increased susceptibility to infectious diseases and age-related diseases, and an accelerated aging process. To optimize health, pro-inflammatory foods must be avoided.

Anti-Inflammatory Foods

There are also foods that have powerful anti-inflammatory activity. Many of these anti-inflammatory foods provide excellent sources of essential fatty acids. The essential fatty acids designated as omega 3 fatty acids have anti-inflammatory activity. These fats are found in many foods, and salmon is a particularly good source. Many fresh fruits and vegetables also have anti-inflammatory properties, although be aware that some can actually have pro-inflammatory properties.

Green tea contains a type of polyphenol that inhibits the expression of the interleukin-8 gene. Black tea is made from the same leaves as green tea and contains theaflavins, strong phytochemicals that help protect the body. A 2002 article in the *Archives of Internal Medicine* found that men and women who drank tea for over 10 years had higher bone mineral density than nonhabitual tea drinkers. This bone-boosting benefit may be attributed to compounds such as fluoride, phytoestrogens, and flavonoids.

Resveratrol, a phytoestrogen, nonsteroidal compound, is present in the skin of grapes and other foods. Various studies have shown that resveratrol blocks activation of COX-2, an enzyme that promotes inflammation.

Broccoli contains glutathione, a powerful antioxidant and detoxifying agent. Glutathione-rich foods include asparagus, cabbage, cauliflower, potatoes, tomatoes, avocados, grapefruit, oranges, peaches, and watermelon.

An enzyme in pineapple called bromelain helps reduce inflammation. This may benefit those with knee osteoarthritis, rheumatoid arthritis, and carpal tunnel syndrome.

Counseling patients on making some simple changes in their diets can have a significant effect on their pain experience and quality of life.

Reference

Wu CH, Yang YC, Yao WJ, et al. Epidemiological evidence of increased bone mineral density in habitual tea drinkers. *Arch Intern Med.* 2002 May 13;162(9):1001-6.



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An Update on MRI of the Lumbar Spine

Karen Little, NP

At this point, we know that magnetic resonance imaging (MRI) of the lumbar spine is not indicated in most patients with acute and subacute low back pain (LBP). In my experience, however, requests from patients to order this study are common, and a lot of patient education regarding the workup and treatment of LBP is required. Below, is an update for clinicians on lumbar spine MRI for acute and subacute low back pain.

In a pivotal 1994 study published in the *New England Journal of Medicine*, researchers reviewed the lumbar MRI scans of patients without back pain. They found that 52 percent of asymptomatic patients had one or more disc bulges, 27 percent had a disc protrusion, and 1 percent had a disc extrusion. They concluded that disc bulges and protrusions seen on MRI in people with low back pain may be coincidental. I often review this study with patients when discussing the potential causes of their low back pain and explain that I prefer to treat their symptoms rather than their MRI scan.

In the February 7, 2009, edition of *The Lancet*, researchers performed a systemic review and meta-analysis on lumbar imaging for low back pain.

"I prefer to treat a patient's symptoms rather than their MRI scan."

Chou et al reviewed trials that compared immediate lumbar imaging (radiography, MRI, or computed tomography) versus standard treatment without imaging for patients with low back pain who displayed no indication of a serious underlying condition. As expected, the researchers found that immediate imaging did not improve clinical outcomes, and they concluded that "clinicians should refrain

from routine, immediate lumbar imaging in patients with acute or subacute low back pain without features suggesting a serious underlying condition."

References

Chou R, Fu R, Carrino JA, Deyo RA. Imaging strategies for low-back pain: systematic review and meta-analysis. *Lancet*. 2009 Feb 7;373(9662):463-72.

Jensen, et al. Magnetic resonance imaging of the lumbar spine in people without back pain. *N Engl J Med*. 1994 Jul 14;331(2):69-73.



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