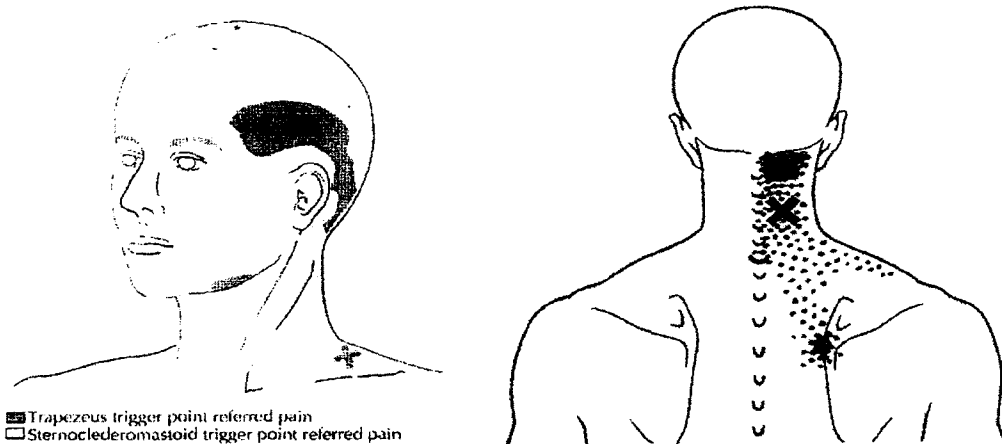


Intramuscular Stimulation: Dry Needling

Intramuscular Stimulation (IMS) is a treatment for muscular tightness and spasm which commonly follows injuries and often accompanies the degenerative processes. This muscular tightness and spasm will cause compression and irritation of the nerves exiting the spine. When the nerves are irritated, they cause a protective spasm of all the muscles to which they are connected. This may cause peripheral diagnoses, such as carpal tunnel, tendonitis, osteoarthritis, decreased mobility and chronic pain. IMS needles are inserted in the muscles at the trigger points causing the pain referral. The muscles would then contract and release, improving flexibility of the muscle and decreasing symptoms.



The pictures above represent an example of "knotting" or trigger points in the muscle. The X's show the origin of the possible referral region likely associated with headache pain.

What is Intramuscular Stimulation (IMS)?

Intramuscular stimulation (IMS) is an effective treatment for chronic pain of neuropathic origin (see below). IMS was developed by Dr. Chan Gunn while he was a clinic physician at the Workers' Compensation Board of British Columbia. Dr. Gunn is currently a clinical professor and teaches IMS at the University of Washington's Multidisciplinary Pain Centre in Seattle and the University of British Colum-

bia's Medical School. IMS is also taught and utilized at many centers around the world.

IMS is effective and has few side-effects; the technique is also unequalled for finding and diagnosing muscle shortening in deep muscles.

Although IMS uses implements adapted from traditional acupuncture, it is based on scien-

tific, neurophysiological principles. The acupuncture needle used is very thin (much thinner than the hollow needle used to inject medicine or take blood samples). You may not even feel it penetrating the skin, and if your muscle is normal, the needle is painless.

However if your muscles are supersensitive and shortened, you'll feel a peculiar sensation—like a muscle cramp. This is a distinctive type of discomfort caused by the muscle grasping the needle. Patients soon learn to recognize and welcome this sensation. They call it a "good" or positive pain because it soon disappears and is followed by a wonderful feeling of relief and relaxation. The needle may still be in you, but because the muscle is no longer tight, you no longer feel it. What has happened is that the needling has caused your abnormal muscle shortening to intensify and then release. It is important that you experience this sensation in order to gain lasting relief.

Doctors usually have no difficulty in treating pain caused by injury (a fracture, for example) or inflammation (such as rheumatoid arthritis). They are perplexed however by pain that shows no sign of tissue damage or inflammation.

This type of pain, known as neuropathic pain, typically occurs when nerves malfunction following minor irri-

"Neuropathy"- or—what happens when nerves start to go wrong...

tation. Nerves and nerve endings become extremely sensitive and cause innocent, harmless signals to be exaggerated and misinterpreted as painful ones (this characteristic is

known medically as supersensitivity). The result is pain, even when extensive

"The effects of IMS are cumulative- needling stimulates a certain amount of healing, until eventually, the condition is healed and the

The Effects of IMS

The effects of IMS are cumulative—needling stimulates a certain amount of healing,

until eventually, the condition is healed and the pain disappears. Some patients treated with IMS have remained pain-free for over 20 years.

Frequency of Treatments

Treatments are usually once a week (but can be spread out to two weeks) to allow time between treatments for the body to heal itself. The number of treatments you require will depend on several different factors such as the duration and extent of your condition, how much scar tissue there

is present (this usually increases after surgery) and how quickly your body can heal. The rate of healing depends on the condition of your nerves (young people usually heal more quickly although this is not always the case). If the pain is of recent origin, one treatment may be all that is necessary. In published studies of patients with

Treating Neuropathic Pain

Supersensitivity and muscle shortening cannot be operated on and "cut away". "Pain killers" and other analgesic pills only mask the pain. The goal of treatment is to release muscle shortening which presses on and irritates the nerve. Supersensitive areas can be desensitized and the persistent pull of shortened muscles released.

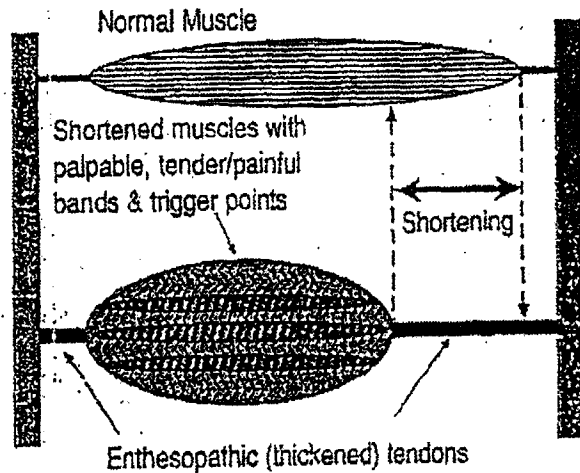
"Supersensitive areas can be desensitized and the persistent pull of shortened muscles released."

"The Shortened Muscle Syndrome"

An Important factor in neuropathic pain is muscle shortening, caused by muscle spasm and contractor. Muscle shortening produces pain by pulling on tendons, straining them as well as distressing the joints they move. Muscle

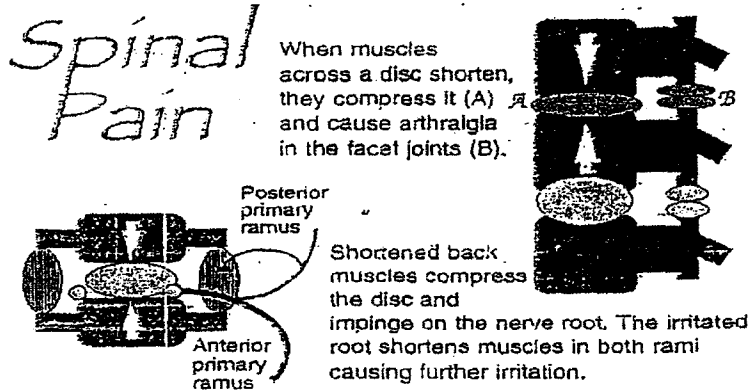
shortening also increases wear and tear and contributes to degenerative changes such as tendonitis and osteoarthritis. These conditions are customarily regarded as "local" conditions and may not receive the

the Shortened Muscle



Involvement of the Spine

The most common cause of nerve irritation and neuropathic pain is "spondylosis", degeneration in the spine, which can be the result of normal wear and tear. Spondylosis irritates the nerve root and leads to neuropathy and muscle shortening.



How IMS Compares to Acupuncture

Acupuncture	IMS
Medical examination not applicable	Medical examination is imperative
Medical diagnosis not relevant	Medical diagnosis is necessary
Needle insertions according to Chinese philosophy into non-specific meridians	Needle insertions indicated by physical signs
Knowledge of anatomy not applicable	Knowledge of anatomy is essential
No immediate objective changes anticipated	Prompt subjective and objective effects are usually experienced

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For more information on IMS or Trigger point dry needling, contact Jeff Deets, PT at either facility listed above.

The OrthoSport approach focuses on individualized treatment with the highest level of care available. We do that by creating a positive, caring environment, where Physical Therapists motivate, encourage and respect every patient.

Whether your goal is to get back in your game, or to simply get back to your daily routine, the professionals at Orthosport Physical Therapy and Sports Performance will get you there.