

Trigger Point Therapy
A Guide for Pain Relief
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Myofascial pain is characterized by tight knots known as trigger points. Trigger points can result in either local or referred pain. Many pain clinics have found that trigger points are a primary cause of pain over 90 percent of the time and the sole cause of such pain as much as 85 percent of the time.

Latent (“silent”) trigger points tend to accumulate over a lifetime and appear to be the main cause of stiff joints and restricted range of motion of old age. These latent trigger points can also overstress muscles, causing shortening, which affects attachments and causes irreversible joint damage.

Trigger points can cause: headaches, neck and jaw pain, low back pain, symptoms of carpal tunnel syndrome, and many kinds of joint pain mistakenly ascribed to arthritis, tendonitis, bursitis or ligament injury. Trigger points can cause problems as diverse as: earaches, dizziness, nausea, heartburn, chest pain, heart palpitations, tennis elbow, tinnitus and genital pain. Trigger points can also cause: colic, bed-wetting and may be a contributing cause of scoliosis. They are a cause of sinus pain and congestion. They may play a part in chronic fatigue, fibromyalgia, and lowered resistance to infection. Because trigger points can be responsible for chronic pain and disability, they can also cause depression and anxiety.

Causes of myofascial pain syndromes include macro trauma, such as a strain/sprain injury or car accident. They can also include repetitive micro traumas, such as those caused by typing or other repetitive fine motor movements.

There are numerous perpetuating factors that also play a role in the development or maintenance of trigger points. These include:

1. Mechanical factors
2. Nutritional inadequacies
3. Dietary factors
4. Metabolic and endocrine imbalance
5. Psychological factors
6. Other factors

Mechanical factors:

Congenital irregularities in bone structure, postural stress, poor work habits, repetitive strain, trauma and poor conditioning can all contribute to abnormal muscle stresses and consequently the formation of trigger points.

Nutritional deficiencies:

Some experts have found that nearly half the people seen with trigger points are lacking in certain vitamins or minerals that are necessary for pain relief. These nutrients can include: B vitamins 1, 6, and 12, vitamin C, and folic acid. The minerals calcium, iron, magnesium and potassium are also important. The problem may be inadequate ingestion or substances that cause elimination e.g. smoking, caffeine, alcohol, drug/nutrient interactions, and tea. In many cases, a good multi vitamin can meet ones needs.

Dietary factors:

Diets high in alcohol, caffeine, sugar and processed foods cause irregularity in one's metabolism, making it difficult to keep trigger points deactivated. Food allergies can increase the vulnerability of muscles to stress.

Metabolic and Endocrine imbalances:

Chemical or glandular imbalance can interfere with metabolism in muscles thereby affecting trigger points e.g. Thyroid inadequacy, hypoglycemia, anemia, estrogen/progesterone imbalances and high levels of uric acid.

Psychological factors:

Anxiety, depression and daily nervousness can cause constant muscles tension, thereby perpetuating trigger points. People who are anxious often have shallow breathing, which causes some of the neck muscles to tighten and become plagued with trigger points.

Other factors:

Sedentary lifestyle, lack of exercise, poor sleep habits and chronic diseases can all affect muscles, by causing stiffness and weakness.

Therapeutic Methods:

Physical interventions are the most effective ways to deal with trigger points. Other therapeutic methods such as: heat, cold, electric stimulation or ultrasound can give temporary relief, but will be disappointing in the long term. In addition, conventional stretching exercises, when overdone, can actually worsen trigger points. For dependable results, therapy needs to be applied directly to the trigger point as well as to all the related areas. The goal of therapy should be twofold:

1. Lengthen
2. Strengthen

Lengthen

Trigger points can be lengthened through several means:

1. Muscle release therapy (MRT)
2. Spray and stretch
3. Intramuscular stimulation (IMS or "Dry needling")
4. Injections

Muscle release therapy (MRT):

MRT is a simple and effective therapy yielding long-term results in a short period of time. It is a procedural guide for the examination and treatment of the most common and clinically significant muscles that cause pain and dysfunction.

In MRT, local adhesions around myofascial structures are located and then removed, thereby restoring structure and function and eliminating pain.

MRT uses muscle testing and palpation to diagnose myofascial dysfunction. Once adhesions are located, they are reduced as follows:

1. A specific contact is made on the muscle
2. Traction is applied to the tissue to trap the lesion
3. The muscle is moved actively, passively and sometimes weight bearing
4. The practitioner either holds the tissue or applies deep muscle manipulation

As adhesions are broken up, local nerve supply, circulation and lymphatic flow are enhanced effecting range of motion and strength and restoring normal function.

Spray and stretch

Spray and stretch involves releasing a trigger point by spraying the skin with a refrigerant, then stretching the affected muscle. By cooling the skin, the nervous system is distracted thereby allowing a passive stretch to occur without defensive tightening. The procedure of Spray and stretch involves:

1. Identifying the involved muscle
2. Chilling the skin over the trigger point area
3. Warming the skin after the muscle is stretched
4. Gently movement several times to encourage complete range of motion

Intramuscular stimulation (IMS or “Dry needling”)

IMS involves **dry needling** of affected areas of the body without injecting any drugs. The needle sites can be at the epicenter of taut, tender muscle bands, or they can be near the spine where the nerve root may have become irritated and supersensitive. IMS should be followed by stretching and heat. Post needling soreness can be alleviated by ice. When competently performed, IMS has a remarkable success rate, as proven by the amelioration of symptoms and signs. The needles used for “dry needling” are the same as those used in Acupuncture.

Injections

A small needle is inserted into the trigger point and a local anesthetic (e.g., lidocaine, procaine), sterile saline or a vitamin is injected. Injection mechanically inactivates the trigger point thereby alleviating pain. Sustained relief usually is achieved with a brief course of treatment. The injection may cause a twitch or pain that lasts a few seconds to a few minutes. As with IMS, post treatment should include heat, stretching and ice.

The above therapies often yield favorable results that are long lasting. In general, most conditions respond to 4-10 treatments over a period of 2-6 weeks. Results can be influenced by:

1. Perpetuating factors
2. Age of person
3. Acute versus chronic condition
4. Compliance with home exercise program (e.g. stretching and strengthening exercises)
5. preventative measures

Strengthen

Rehabilitation should occur in phases:

1. Stretching and range of motion exercises with self-imposed resistance
2. isometric strengthening exercises
3. Isokinetic/isotonic strengthening exercises e.g. free weights, cables

Conclusion:

Pain is among the top reasons that patients visit their physician. Treatment often consists of medications such as Non Steroidal Anti Inflammatory Drugs (NSAIDs), COX 2 inhibitors, analgesics, narcotics, antidepressants and anticonvulsants. These drugs have numerous side effects, some of which over time are irreversible. In addition, these drugs can inhibit cartilage formation and accelerate cartilage destruction, resulting in osteoarthritis and chronic pain.

The medical profession is fully aware of the deficiencies of these current methods of treating pain, but unfortunately is unaware that there are better solutions. Trigger point therapy is one of the most effective treatments known for a wide variety of pain problems. Billions of dollars and unnecessary suffering could be saved if medications that cover up myofascial problems were replaced by this approach.

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