Dr Graeme
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Serious Massagers for Professional Results

Trigger point treatment: deactivation or elimination

The problem

Why does pain from trigger points keep coming back? It's simple. "Evidence based" treatments are based upon clinical trials that measure their success by whether they "de-activate" trigger points. De-activate merely means revert them back to a state where they do not spontaneously cause pain. Of course they are still there. They will still shoot pain if pressed upon, then re-activate becoming painful when aggravated again. This is analagous to resetting a circuit breaker and leaving the fault.

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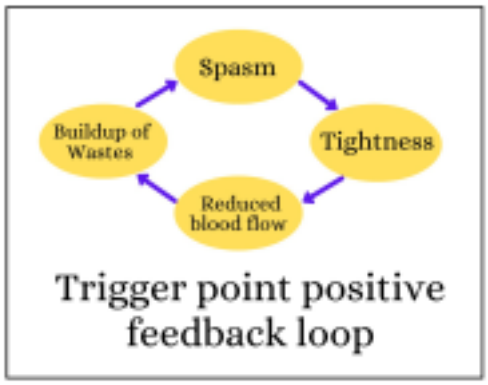
De-activating trigger points is like re-setting a circuit breaker and leaving the fault

Trigger point basics

What is a trigger point

Trigger points are described as being palpable lumps within taut bands of muscle that have characteristic pain referral patterns. They are a key issue in most muscloskeletal pain syndromes (1–4). They are thought to start from microscopic damage to muscles caused by injury or overuse, especially if blood flow is reduced due to chronic tightness. The science behind them can get quite involved, but in summary:

- part of the muscle goes into spasm forming a palpable lump.
- The spasm is locked on by a positive neurological feedback loop.
- Because the spasmed part of the muscle is shortened the remainder of the muscle becomes tight.
- With tightness restricting blood flow and the continued contraction of the spasmed section of muscle there is a build up of neurotransmitters and metabolic wastes, and a depletion of oxygen and nutrients.



Trigger point positive feedback loop

Active vs Latent (non-active)

Trigger points are describes as being active or latent (non-active). This is arguably misleading because as discussed in our section on latent trigger points, although not spontaneously painful latent trigger points actively cause a host of other problems. When a latent trigger point starts shooting pain in addition it is then called "active".

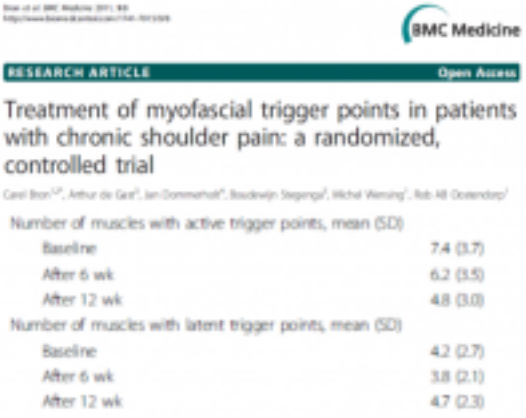
How common are "non-active" trigger points

Overuse and chronic tightness of muscles are a major cause of trigger points, and they can exist in their latent state not noticed. Because of this trigger points are highly prevalent in asymptomatic people (5).

Clinical trials of trigger point therapy

There have been huge numbers of trials into the efficacy of trigger point treatments. What they typically do is identify the trigger points then apply a course of treatments. As confirmed in the quote below, they measure "success" by whether they de-activate the trigger points. By definition, a trigger point is "active" when it spontaneously produces pain, so the goal is to reduce pain. The researchers do things like use various questionnaires relating to pain and disability. They very conveniently neglect to check or note whether the trigger points were still present. If pain is reduced the trial is published as a success, regardless of whether the offending trigger points are still there.

Data from a trial of 12 weekly 45 minute sessions of trigger point therapy


BMC Medicine

RESEARCH ARTICLE Open Access

Treatment of myofascial trigger points in patients with chronic shoulder pain: a randomized, controlled trial

Number of muscles with active trigger points, mean (SD)	
Baseline	7.4 (3.7)
After 6 wk	6.2 (3.5)
After 12 wk	4.8 (3.0)
Number of muscles with latent trigger points, mean (SD)	
Baseline	4.2 (2.7)
After 6 wk	3.8 (2.1)
After 12 wk	4.7 (2.3)

Researchers would surely find this during their literature search: but leave it out.

The three trials we found that did check for trigger points clearly show that most trigger points remain, and of course as discussed in the section on latent trigger points they will continue to cause issues then eventually re-aggravate and become painful again.

To quote a review of trigger point therapies: (7)

> *"Most physical therapy treatments of MPS (myofascial pain syndromes) are targeted at deactivation of MtrPs (myofascial trigger points)."*

Poor and misleading treatment plans

We would strongly argue that following these protocols is not only poor practice, it is highly misleading. To illustrate this we will show two different ways the facts from facts from trial (8) could be presented to a patient. Which is the most honest?

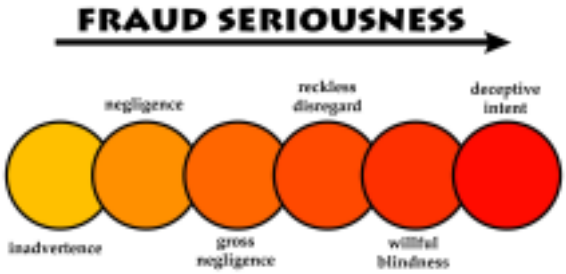
These are the facts. A course of three weekly applications of dry needling gave symptomatic relief. Checking post trial found that 71% of the original trigger points were still present.

Version one

Make three weekly appointments for dry needling. It is a clinically proven treatment so you should feel a lot better.

Version two

I'll give you three sessions of dry needling. You'll feel better, but 71% of your problems will still be there. They'll still be causing you some issues but you won't feel them, then probably the next time you do something they will start hurting again so you can make an appointment for three more sessions of dry needling



Where does omitting that trigger points remain fit in?

The three exceptions

We were able to find three trials that investigated the presence of trigger points after therapy. Note that all found that the majority of trigger points were still there after a course of treatments.

Trial one (8)

52 active trigger points were treated with three weekly applications of dry needling. Symptoms were of course reduced. However, after treatment 11 were still active, 26 had deactivated, and only 15 (29%) were eliminated.

Trial two: (9).

Patients received 12 weekly therapy sessions, with each using multiple trigger point therapies. This is way in excess of what happens in most clinical practices, both in the number of sessions and what was done at each session. Patients did report symptomatic relief, but upon examination approximately 2/3 of the trigger points remained.

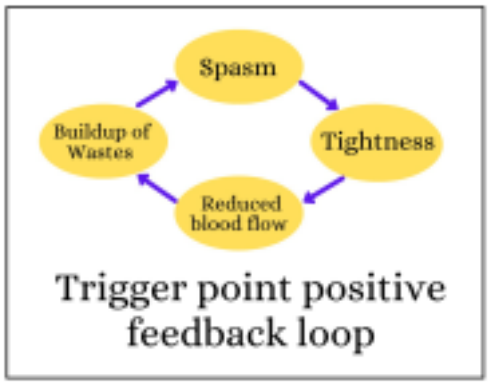
Trial three (10)
Patients were given three sessions of manual therapy plus a home exercise program. After treatment 32% of trigger points were eliminated

The solution

Unfortunately the scientific community has wasted a huge amount of funding and resources only to provide evidence that a course of treatments can (temporarily) deactivate trigger points. Therefore most "evidence based" trigger point therapy is not supported by any evidence that the treatment can eliminate the problem. So, lets look at what we actually do know.

The facts we do know

Treatment results
The three trials that investigated the presence of trigger points post treatment all found that some of the trigger points were eliminated. The most significant trial found that 12 weekly treatment sessions eliminated approximately 1/3 of the trigger points.



The aetiology and physiology of trigger points
Scientists studying trigger points have identified many causes, plus now understand that simply speaking a trigger point comprise the following factors in a positive feedback loop.

- a "spasm" caused by a positive neurological feedback loop
- hypertonicity of the muscle
- a buildup of neurotransmitters and waste products compounded by a reduction in blood flow

The key
The key to successfully eliminating trigger points is to be able to:

- identify and manage causative and aggravating factors
- have an effective therapy that can be applied a large number of times

Which therapy

Cannot rely on professionally administered therapies

Given that 12 weekly 45 minute trigger point therapy sessions (9) eliminated only 1/3 of the trigger points it is reasonable to presume that elimination would require a much larger number repeated over time. Having these administered by a professional would be prohibitively time consuming and expensive.

The best self applied alternative

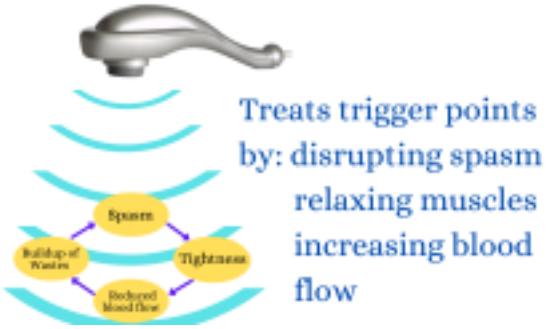
We recommend that the use of vibration massage would be the only practical effective alternative.

Easy to self apply

When given basic instructions, and advised where, when and how often vibration massage is easy to self apply. Please see our instruction page for details.

Addresses all the key elements of a trigger point

Vibration penetrate well and are shown to address all the key elements of a trigger point. For more information please see our article on the scientifically proven effects of vibrations massage.



Vibration addresses all the key elements of a trigger point

Latent trigger points are still a problem

Apart from being just one step from becoming symptomatic, having part in continuous spasm with reduce blood will of course be detrimental for the muscles, and the hypertonicity and reduced functionality will adversely effect posture and biomechanics. Even without referring pain, the consequences of latent trigger points have been summed up as follows. (5)

- restrict ranges of motion
- cause muscle weakness
- cause muscle fatigue
- alter muscle activations
- induce muscle cramps, and
- affect posture and joint function, creating further issues.

On top of that, scientists are now finding that latent trigger points still produce sub-threshold levels of pain that over time sensitises the nervous system. This is a major cause of issues such as fibromyalgia and migraines (6).

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