

Trigger point therapy guide

(Myofascial) trigger points are an important cause of most musculoskeletal pain syndromes, plus have a host of other detrimental effects. If you have had experience with these you will probably understand that after treatment the pain usually eventually comes back again. **This is because most courses of trigger point therapy just (temporarily) stopping them hurting, not eliminate them.** They are still there, so:

- they eventually start hurting again, they eventually start hurting again, they eventually start hurting again, and
- they cause problems even when they are not hurting.

In this article we will discuss a strategy **that should help eliminate your trigger points properly**, including simple home techniques so treatment is convenient and affordable.



This article is a guide to simple effective trigger point therapy

Important background information

In this section we will go over the background information, or if you are just after the treatment **skip ahead to the solution.**

1. **what trigger points are,**
2. **why courses of therapies such as needles, laser and manual therapies only temporarily relieve pain,** and
3. **how we can use our knowledge of trigger points to do better.**

What trigger points are

Lumps in your muscles

Trigger points are those tender lumps in your muscles that massage therapists find that shoot pain when pressed upon. The lump is part of the muscle that has spasmed or cramped, and because the spasm shortens the muscle that part of the muscle becomes tight. As discussed in our article [Your Complete Guide To \(Myofascial\) Trigger Points](#), trigger points are a major part of most musculoskeletal pain syndromes such as back, neck and shoulder pain (1–4), plus also headaches (5–11). Even when not causing pain trigger points cause problems such as muscle tightness, a loss of strength, fatigue, and impaired neurological control.



The growth of trigger points

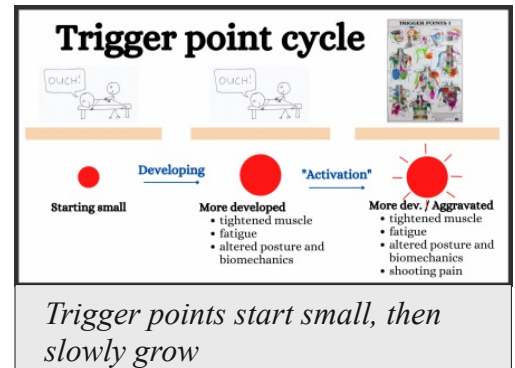
As shown in this diagram trigger points start small and gradually grow over years or decades. At first you will only know they are there if a therapist presses on them. As they grow the muscle will gradually tighten, causing restricted movement and possibly altered posture or fatigue. Eventually something may aggravate the trigger point causing it to spontaneously shoot pain.

Latent vs active trigger points

You will hear of trigger points being referred to as two types:

- “latent trigger points” (not shooting pain), and
- “active trigger points” (shooting pain.)

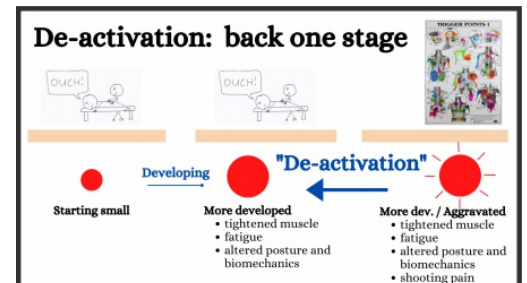
These are exactly the same trigger points. It just depends on whether they are shooting pain or not, which as we will see can easily change.



Why courses of therapies such as needles, laser and manual therapies only temporarily relieve pain

What actually happens

You may feel better after a course of needles, laser or manual trigger point therapies, but what actually happens is as shown by the blue arrow in this diagram. **The trigger point is reverted back to the way it was before it was aggravated.** As you will see the scientists and industry behind providing these treatments use the term “de-activation”, to create the illusion that their treatments do more than just temporarily stop the pain.



“De-activation” the scientific illusion

Every scientist who conducts clinical trials does extensive background research studying what has been done before. Therefore, all those conducting trials of trigger point therapies would have studied the [proof shown here](#), that typical courses of trigger point therapy do not eliminate trigger points. Rather than have this inconvenient fact spoil their results they do do the following when they conduct their trials on therapies such as needles or laser:

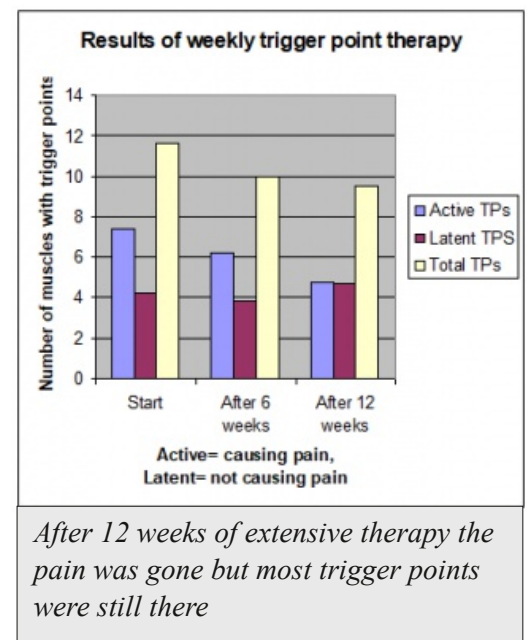
- make the goal of the treatment “de-activation” rather than elimination (12), and
- deliberately choose not to check whether the trigger points are still there afterwards, and instead measure things like pain and other symptoms.

By doing this the scientists are able to write their trials up as a success. For our research we found over 30 such trials ([see summary below](#)). Each claimed that their treatments successfully treated trigger points, where the reality is that all any of them ever proved that was that their expensive courses of therapy give temporary symptom relief. Hoping people do not understand what “de-activation” means these trials are used as follows.

1. Sellers of lasers, needles and so forth market their therapies as “proven” to professionals.
2. Professionals have you believe that their courses of treatment “fix” the problem.

The proof that these courses of therapy do not eliminate the trigger points

We could only find three clinical trials where scientists checked whether the trigger points were gone, and in all of them they were still there (13–15). The most important was a trial conducted by arguably the best trigger point scientists in the world who did 12 weeks of multiple trigger point therapies and as shown in this diagram from the trial report only eliminated about 1/3 (13). The remaining 2/3 were still there. If such a prolonged and extensive course of treatments provided by the best in the world can only eliminate this few a typical course of needles, laser or manual therapies will have little, if any impact on your trigger point population.



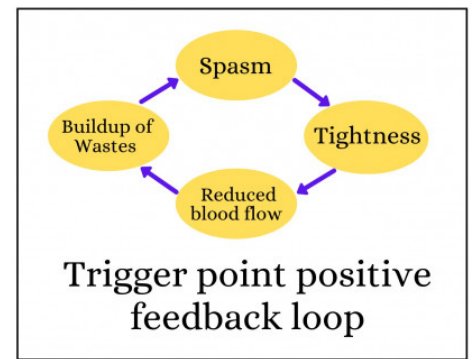
How we can use our knowledge of trigger points to do better

For reasons discussed above most of the clinical trials of trigger point therapy are of little use and arguably deliberately misleading, so to put together the [effective solution below](#) we looked at the following information we do have.

- What trigger points are and how treatments help
- Evidence where trigger points have actually been eliminated
- What causes trigger points.

What trigger points are and how treatments help

As shown in this diagram the reason trigger points gradually grow is because when parts of the muscle spasm or cramp it causes a chain reaction known as a positive feedback loop. As you can see, the spasm causes the muscle tighten, which puts pressure on the blood vessels causing a restriction in blood flow. Because of the restriction in blood flow there is a build up of waste products which becomes toxic, and this in turn causes more spasm (16–19). Knowing this helps us treat this problem.



We need to address parts of the feedback loop

This feedback loop can be slowed or stopped by addressing any part or parts of the loop. Each therapy may affect a different part (16–19). This is why there are so many therapies. For example, massage helps relax the muscle, increase blood flow and squeeze out waste products. In our [solution section](#) we use a treatment that will address every part.

We need to eliminate trigger points properly

We need to eliminate the trigger points properly, because as long as the trigger point is there the positive feedback loop will continue and the lump will continue to grow.

Evidence that trigger points can be eliminated

While the 12 week trial discussed above showed that typical courses of therapy will not eliminate trigger points they did manage to diminish the trigger points and eliminate some. This tells us that treatments will reduce trigger points and eliminate them over time. The main issue is that the therapy must be continued for long after the pain has gone. If using professional services for all this will be totally impractical and not affordable for most. Because of this our [solution section](#) gives therapies you can easily do yourself at home.

The cause of trigger points

If we can reduce or eliminate things that cause trigger points this will help stop them developing or re-forming. In the [solution section](#) we look at things you can do.

The solution

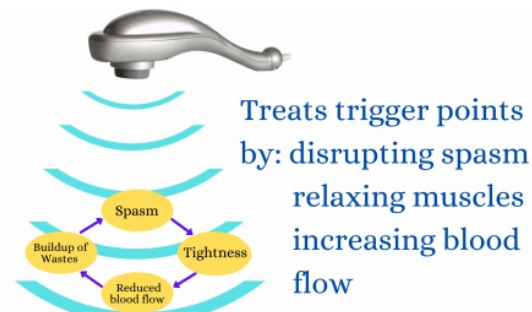
The basis of our solution is very simple

1. We show you an effective therapy that you can easily do at home. That way you can continue to treat the trigger points long after the pain goes, continuing to reduce them and hopefully eliminate them altogether.
2. Show you how to reduce or eliminate the things that cause trigger points to develop.
3. Have you do some regular but less frequent maintenance once health has been restored

The effective therapy you can easily do at home

Vibration massage

By far your best option for home trigger point therapy is using a vibration massager, but you need the proper equipment (**not a massage gun**). It is very safe and very easy to self apply, and as shown in this diagram it is highly effective because the vibrations penetrate and effect and affect every part of the feedback loop. For details on how to use this therapy please see our article [The simple effective way to treat trigger points yourself](#), or check out the video below.



Vibration massage is highly effective because it helps all parts of the trigger point feedback loop

Click image to open



Watch on YouTube - <https://youtu.be/Gww1T24bXpQ>

Other home techniques

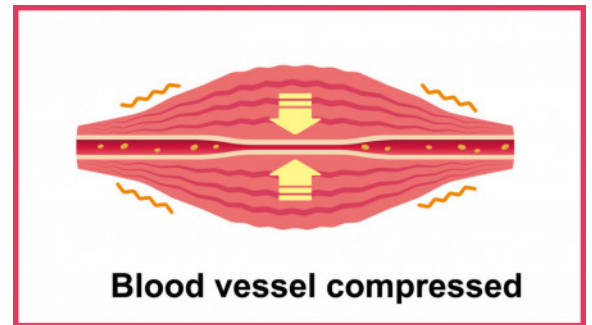
If you do not have the appropriate equipment there are a variety of self massage techniques where you can use either your hand or a simple tool. For details please see [this article](#) or the video above.

How many treatments do you need?

As discussed above 12 weeks of very effective therapy managed to eliminate 1/3 of the trigger points, while reducing the others. To properly eliminate trigger points using your home therapy may require 50-100 treatments, but if you can do them at home and it doesn't cost what does it matter? As long as you are continually improving you can be happy. Simply, what you do is continue the treatments until the pain has gone, then keep going until you can no longer find the trigger points when you examine for them. Once you are trigger point free it is good to keep going with some regular but less frequent maintenance.

How to reduce or eliminate the things that cause trigger points

There are many causes of trigger points including injury, muscle overload and emotional stress. However, the biggest cause is where muscle tightness restricts blood flow creating an environment of accumulated wastes and reduced nutrients in your muscles. This is why trigger points are so common where postural issues (eg. sitting at a computer) or repetitive activities cause muscle tightness. It is also important to note that psychological and emotional issues can cause your muscle to tense, restricting blood flow and causing trigger points to develop. Here are some basic ways you can help stop trigger points from forming.



Blood vessel compressed

The biggest cause of trigger points are postures and activities that tighten your muscles so they press on blood vessels restricting flow

Avoid postures or activities that tighten your muscles

The classic example is sitting at a desk, however, there are many other activities that could cause issues. Our government worksafe has this [excellent practical reference](#) that covers most situations, including how to set up your chair and desk.

Regular breaks

If you are in a situation such as sitting at a desk where your muscles may tighten take regular breaks, doing some light stretches or exercises.

Muscular maintenance

Regular massages or the regular use of any of the techniques we have shown you will help maintain your circulation.

Psychological and emotional stresses

If these issues are causing you to tighten your muscles a lot seek some professional help on how to deal with them.

Do some regular but less frequent maintenance once health has been restored

Once you are free of trigger point congratulations. Now you can do things like get regular exercise, avoid things that can cause trigger points, and have regular “maintenance” or “check up” therapy to keep your muscle healthy.

BONUS: how to do trigger point therapy for various parts of your body

On our website we have a host of guides with specific advice for trigger points in various conditions and various parts of your body. These usually have:

- specific muscles and points, and
- specific techniques for those.

Here are some examples.

[Self massage and trigger point therapy for headaches and migraines](#)

[Massage and trigger point therapy for low back pains with self help options](#)

[Massage and trigger point therapy for calf pain, with self help options](#)

[Massage and trigger point therapy for shoulder pain with self help options](#)

[Self massage and trigger point therapy for tennis elbow](#)

[Does massage help with fibromyalgia, with self help advice](#)

Appendix: What the research says about individual trigger point therapies

Below is a summary of the findings of several scientific reviews of trigger point therapies (12,20–27). As discussed above these trials deemed "success" to be just a temporary reduction in symptoms, and as you can see they can take a lot of sessions to even achieve that.

Laser

Trial results for laser have been marginally better than those for dry needling, but still only temporary relief. Scientists attribute its effect to increasing micro-circulation, improving oxygenation and helping remove waste products. However, this is something that can easily be achieved, if not better, by any competent massage therapist.

The big concern with laser is the sheer number of applications of therapy needed for only temporary benefits. For example one trial (28) used 10 daily applications of laser on patients with upper back and neck pain to get a reduction in pain and tenderness for three weeks. Further, according to one review (29) applications of laser should be given from 2-3 times a week though to 5 times a week, with a total of 30 applications of therapy for long term cases. Keep in mind this is just to achieve deactivation, not to eliminate the problem. Assuming each laser consultation costs \$50 and takes an hour out of your day that's \$1,500 and 30 hours of your life just for some temporary pain relief, leaving you to front up again next time the problem is aggravated.

Dry needling

Most trials show that dry needling provides some short term pain relief and improved function, and where dry needling had been compared with laser the laser has given slightly better results. Again, you are going to need a lot of needles for very little benefits.

Manual therapies

There are various types of manual therapies that involve pressure, massage and stretching of muscles. The trial results for them tend to be similar to those of laser and dry needling. However, according to one review (21) one study did show residual benefit after six months.



Try this therapy with a sample massager (professionals only)

Most of our massager sell through colleagues using our machines and recommending the therapy to patients/clients, so we are very happy to send appropriately qualified professionals a complimentary sample machines to trial. For more info please see our [Professional sample page](#).

Author:

Dr Graeme Blennerhassett B. App. Sci (Chiro)

Contact us:

331 Main Street Bairnsdale (P.O. Box 914)
Bairnsdale Victoria 3875 AUSTRALIA
Website: www.drgraeme.com

Phone: (Australia) (03) 51161298
Phone: (Overseas) +61351161298
Email: graeme@drgraeme.com

References

1. Chiarotto A, Clijsen R, Fernandez-de-las-Penas C, Barbero M. [The prevalence of myofascial trigger points in spinal disorders: a systematic review and meta-analysis](#). *Physiotherapy*. 2015;
2. Celik D, Mutlu EK. [Clinical implication of latent myofascial trigger point topical collection on myofascial pain](#). *Curr Pain Headache Rep*. 2013;17(8).
3. Fuentes-Márquez P, Carmen Valenza M, Cabrera-Martos I, Ríos-Sánchez A, Ocon-Hernández O. [Trigger points, pressure pain hyperalgesia, and mechanosensitivity of neural tissue in women with chronic pelvic pain](#). *Pain Med (United States)*. 2019;20(1):5–13.
4. Castaldo M, Ge HY, Chiarotto A, Villafane JH, Arendt-Nielsen L. [Myofascial trigger points in patients with whiplash-associated disorders and mechanical neck pain](#). *Pain Med (United States)*. 2014;15(5):842–9.
5. Amin A, Maqsood U, Niaz Awan F, Arshad HS, Arshad AH. [Chronic tension-type headache as a risk factor of myofascial trigger points in upper trapezius muscle fibers in neck pain patients](#). *Pakistan J Neurol Sci*. 2017;12(3):21–5.
6. Doraisamy K&, Gnanamuthu. [Chronic Tension Type Headache and the Impact of Myofascial Trigger Point Release in the Short Term Relief of Headache](#). *Glob J Health Sci*. 2010;2(2):238–44.

7. Maistrello LF, Geri T, Gianola S, Zaninetti M, Testa M. [Effectiveness of trigger point manual treatment on the frequency, intensity, and duration of attacks in primary headaches: A systematic review and meta-analysis of randomized controlled trials.](#) Front Neurol. 2018;9(APR).
8. Chatchawan U, Thongbuang S, Yamauchi J. [Characteristics and distributions of myofascial trigger points in individuals with chronic tension-type headaches.](#) 2019;306–9.
9. von Stülpnagel C, Reilich P, Straube A, Schäfer J, Blaschek A, Lee SH, et al. [Myofascial trigger points in children with tension-type headache: A new diagnostic and therapeutic option.](#) J Child Neurol. 2009;24(4):406–9.
10. Wang K, Castaldo M. [Trigger points are associated with widespread pressure pain sensitivity in people with tension-type headache.](#) 2018;38(2):237–45.
11. Florencio LL, Ferracini GN, Chaves TC, Palacios-Ceña M, Ordás-Bandera C, Speciali JG, et al. [Active Trigger Points in the Cervical Musculature Determine the Altered Activation of Superficial Neck and Extensor Muscles in Women with Migraine.](#) Clin J Pain. 2017;33(3):238–45.
12. De Las Peñas CF, Sohrbeck Campo M, Fernández Carnero J, Miangolarra Page JC. [Manual therapies in myofascial trigger point treatment: A systematic review.](#) J Bodyw Mov Ther. 2005;9(1):27–34.
13. Bron C, De Gast A, Dommerholt J, Stegenga B, Wensing M, Oostendorp RAB. [Treatment of myofascial trigger points in patients with chronic shoulder pain: A randomized, controlled trial.](#) BMC Med. 2011;9.
14. Gerber LH, Shah J, Rosenberger W, Armstrong K, Turo D, Otto P, et al. [Dry Needling Alters Trigger Points in the Upper Trapezius Muscle and Reduces Pain in Subjects With Chronic Myofascial Pain.](#) PM&R. 2015;7(7):711–8.
15. Grieve R, Barnett S, Coghill N, Cramp F. [Myofascial trigger point therapy for triceps surae dysfunction: A case series.](#) Man Ther. 2013;18:519–25.
16. Jafri MS. [Mechanisms of Myofascial Pain.](#) Int Sch Res Not. 2014;2014:1–16.
17. Zhuang XQ, Tan SS, Huang QM. [Understanding of myofascial trigger points.](#) Chin Med J (Engl). 2014;127(24):4271–7.
18. Bron C, Dommerholt JD. [Etiology of myofascial trigger points.](#) Curr Pain Headache Rep. 2012;16(5):439–44.
19. Shah J et al. [Myofascial Trigger Points Then and Now: A Historical and Scientific Perspective.](#) HHS Public Access. 2015;7(7):746–61.
20. Boyles R, Fowler R, Ramsey D, Burrows E. [Effectiveness of trigger point dry needling for multiple body regions: A systematic review.](#) J Man Manip Ther. 2015;23(5):276–92.
21. Denny, Diarmuid et al. [Trigger point manual therapy for the treatment of chronic noncancer pain in adults: a systematic review and meta-analysis.](#) Arch Phys Med Rehabil. 2019;100(3):562–77.

22. Tough EA, White AR, Cummings TM, Richards SH, Campbell JL. Acupuncture and dry needling in the management of myofascial trigger point pain: A systematic review and meta-analysis of randomised controlled trials. Eur J Pain. 2009;13(1):3–10.
23. Cagnie B, Castelein B, Pollie F, Steelant L, Verhoeyen H, Cools A. Evidence for the use of ischemic compression and dry needling in the management of trigger points of the upper trapezius in Patients with Neck Pain: A Systematic Review. Am J Phys Med Rehabil. 2015;94(7):573–83.
24. Espejo-Antúnez L, Tejada JFH, Albornoz-Cabello M, Rodríguez-Mansilla J, de la Cruz-Torres B, Ribeiro F, et al. Dry needling in the management of myofascial trigger points: A systematic review of randomized controlled trials. Complement Ther Med. 2017;33(December 2018):46–57.
25. Rickards LD. The effectiveness of non-invasive treatments for active myofascial trigger point pain : A systematic review of the literature. 2006;9:120–36.
26. Pavón, María J. Guzmán et al. Comparative effectiveness of manual therapy interventions on pain and pressure pain threshold in patients with myofascial trigger points- A network meta-analysis. Clin J Pain. 2022;38(12):749–60.
27. Hatem M et. al. HIGH INTENSITY LASER THERAPY EFFECT ON PAIN IN PATIENTS WITH MYOFASCIAL TRIGGER POINTS. Egypt J Phys Ther. 2020;3:1–8.
28. Hakgüder A, Birtane M, Gürcan S, Kokino S, Tura FN. Efficacy of Low Level Laser Therapy in Myofascial Pain Syndrome: An Algometric and Thermographic Evaluation. Lasers Surg Med. 2003;33(5):339–43.
29. Uemoto L, Nascimento De Azevedo R, Almeida Alfaya T, Nunes Jardim Reis R, Depes De Gouvêa CV, Cavalcanti Garcia MA. Myofascial trigger point therapy: Laser therapy and dry needling. Curr Pain Headache Rep. 2013;17(9).