

Basic Self-Massage Tips for Myofascial Trigger Points

**Learn how to massage your own trigger points
(muscle knots)**

Paul Ingraham • Jul 3, 2019 • 10m read

Article Summary

Massage therapy isn't cheap, but you can do some of the work for yourself. Self-massage might seem like trying to tickle yourself, but you may be able to relieve a lot of discomfort by treating your own "trigger points": sore spots in muscle tissue that often seem to yield to rubbing. It is a safe, cheap, and reasonable experimental approach to self-help for many common pain problems, even though there are many reasons it might fail. No advanced technique is required: it's mainly just a matter of finding sore spots in troubled areas that feel relevant and briefly applying direct mild to moderate pressure.

tap to collapse



Massaging yourself might seem as useless as trying to tickle yourself. But if there is a good reason for rubbing your own muscles, it's probably muscle "knots" or trigger points: sore spots associated with aching and stiffness, as common as pimples, which may be a cause and / or complication of nearly almost anything else that hurts. They may especially be a major factor in low back pain and neck pain.

Most minor trigger points are probably self-treatable. *You can often get more relief from this kind of discomfort with self-massage than you can get from a massage therapist.* Professional help can be nice — and sometimes essential — but it can also be cost-effective to learn to *save yourself* from trigger points. It is safe, cheap, and reasonable self-help for many common pain problems.

Experimental medicine, but worthwhile

There is a lot of scientific uncertainty about trigger points. It's undeniable that mammals suffer from sensitive spots in our soft tissues, but their *nature* remains unclear, and the popular idea that they are a kind of *micro cramp* could be wrong. ¹ We also don't even know if massaging them actually works. ² All advice about trigger points on PainScience.com is based on clinical experience and scientific plausibility, which is weak sauce. ³

So trigger point massage is an experimental treatment for pain — but one that is well worth trying anyway.

This article just introduces the basic principles of treating trigger points with self-massage. If you'd like to dive deeper into the subject, see my [huge trigger points & myofascial pain tutorial](#). There are several other (experimental) approaches to trigger point therapy, most notably “dry needling” — stabbing trigger points with fine needles, basically — plus stretching and mobilizing, stretch combined with a coolant spray, exercise, oral and injected medications (like Botox), nutritional supplementation, and the treatment of other medical factors (like nutrient deficiencies, sleep disorders, etc). Or maybe you just want to know [if massage guns work](#).

Note that there are several popular self-help books on this topic, most notably the [The Trigger Point Therapy Workbook](#) by Davies, but they all share a frustrating common flaw: they mostly refuse to acknowledge any flaws or controversies.

Why does just a little rubbing seem to help so much?

Just a few *moments* of gentle rubbing can be enough for an easy case. ⁴ Although trigger points can be amazingly nasty, even tougher cases often seem to be surprisingly easy to get rid of with a bit of simple self-massage with your own thumbs or tools you have around the house, like a tennis ball. Why so easy?

Dr. Janet Travell ⁵ wrote that “almost any intervention” can relieve a trigger point, which sounds too good to be true, so we should probably be suspicious of it. How can such a trivial treatment work? The pain may be more of a sensory phantom than something wrong with the tissue. ⁶ Or maybe the rubbing actually helps muscle tissue directly in some way, like taming a cramp with a quick stretch, perhaps *literally* squeezing waste metabolites out of a trigger point. ⁷ Or, if trigger points are caused by slight nerve entrapments — tunnel syndromes, slight snagging / entrapment of nerves inside their tubes ⁸ — then it makes sense that even very gentle, subtle manipulation might free them up and solve the problem, and all the intense sensations are superfluous.

Crash course in finding trigger points

You can't treat it if you can't find it, but finding trigger points is the hardest part, even for experts. It is the exact opposite of an exact science. ⁹ How do you *try* to find trigger points?

First of all, you don't sweat it too much: sure you try, but you also just cast a wide and pleasant net. The first rule of massage for trigger points is that *any* good massage is

probably better than bad trigger point therapy.

But of course you still look for them! And mostly you just grope around stiff, sore muscle tissue with fingers and thumbs and find small, acutely sensitive spots.

You may or may not feel a slight bump or twitch when you hit a trigger point, but those are inconsistent and unreliable signs. *Do not put much stock in them.*

More importantly, the soreness of a trigger point should feel “relevant” — that is, the soreness of the spot should feel like it is related to the discomfort you are trying to treat, rather than some other kind of discomfort that just happens to be in the same area.

It should also feel *good* — a paradoxical combination of soreness and relief we call “good pain.”

You can limit your exploration to a fairly small area of muscle tissue around the “epicentre” of your symptoms, but some trigger points are surprisingly far from the pain they cause, usually closer to the center of the body. For instance, wrist pain may be caused by trigger points in the forearm muscles up near the elbow. (But trying to figure those out is going beyond the basics.)



Who doesn't want an hour of this? But magic massage hands ain't cheap. And you can reach your own legs ...

Basic self-massage instructions for trigger points

It's not rocket science. "Rubbing" is really all there is to it. But rubbing exactly how? There are some specifics to consider...

Rub in what way? For simplicity, either simply press on the trigger point directly and hold for a while (10–100 seconds), or apply small kneading strokes, either circular or back and forth, and don't worry about the direction of the muscle fibres. Really, anything that feels good is fine. But, if you happen to know the direction of the muscle fibres — sometimes it's obvious — then stroke parallel to the fibres as though you are trying to elongate them, because that *might* be more effective.

Rub how hard? Massage is mostly about having a conversation with your nervous system, so you want it to have the right *tone*: friendly and helpful! Not shouty and rude. You're not trying to "kill" it, you're trying to soothe and "scratch" it. The intensity of the treatment should be Goldilocks just-right: strong enough to satisfy, but easy to live with. Too much intensity can backfire, and a just-right intensity may actually be a key to success. So, on a scale of 10 — where 1 is painless and 10 is intolerable — please aim for the 4–7 range, and err on the side of gentle at first. Beginners are often much too aggressive. (And the pros too!)

And rub very gently, too! Regardless of your maximum pressure on any point, always make sure there's *some* light pressure as well. Specifically just gentle tugging of the skin to and fro. It's important to include this because it *might* be more effective, depending on the cause. We cast a wide net with technique as well as locations.

Rub how much, how often? Start small—a single session of about 30 seconds might be enough, give or take depending on how helpful it feels. Five minutes is roughly the maximum that any trigger point will need at one time, but there is not really any limit — if rubbing the trigger point continues to feel good, feel free to keep going. As long as you aren't experiencing any negative reactions, you should massage any trigger point that seems to need it at least twice per day, and as much as a half dozen times per day. More is probably too tedious and involves too great a risk of just pissing it off.

Rub with what? Rub the trigger point with your fingertips, thumbs, fist, elbow ... whatever feels easiest and most comfortable to you. Simple tools are handy for spots that are harder to reach — various balls and other handy objects. Tennis ball massage is surprisingly good stuff! I have a review of several popular tools. (And you can use a foam roller, of course, but the contact area is just too wide for many jobs.)

How do you know it's working? Getting a trigger point to "release"

The goal of self-massage for trigger points is to achieve a "release." What is trigger point "release" and what does it feel like? It mostly refers to an easing of sensitivity of the

trigger point, and/or a softening of the tissue texture.

But release is a painfully vague term with no specific scientific definition. It's a label for the unknown, for *whatever* is going on when the trigger point seems to go away. Maybe it refers to the literal relaxation (or even the violent disruption!) of the tightly clenched muscle fibres. Or maybe it's "just" a sensory adaptation, which might be a kind of healing (it just stops hurting), or trivial and temporary (like scratching a mosquito bite).

A release may not be obvious. In fact, things could even feel worse before they feel better: tissue might remain "polluted" with waste metabolites even after a successful release. Release might even require some *damage* to the tissue of the muscle knots — that is one theory. If so, the area would probably still be quite sensitive *even if you've succeeded*.

In my experience — both treating and being treated — it's a weird mixture of these possibilities: initially there's a satisfying but profound sense of scratching an itch, but the tissue is actually *more* sensitive afterwards, not less.

But don't worry about the details: just stimulate the trigger point, and trust that you *probably* achieved a release, or a partial release, and then wait for the trigger point to calm down. If you were successful, you will notice a reduction in symptoms within several hours, often the next morning.

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Upgrades

Trigger point massage often provides only partial and temporary relief. Here are some of the easiest things you can do to improve your batting average:

- Get some sleep soon after treatment.
- Treat only a few knots at a time. Work only with the worst spots at first.
- Better balls! Almost everyone has a tennis ball, but other sizes and degrees of hardness can be game-changers (e.g. lacrosse ball).
- Beware of excessive pressure—it's by far the worst amateur mistake. Either just be more cautious, or entirely switch to extremely gentle treatment for a few days.
- Stay warm! Chills are *the* top TrP aggravator.
- Lightly exercise treated muscles—just enough to increase circulation.
- Recruit amateur help. Sometimes being able to relax while someone else does the massaging makes all the difference.

What if you can't make progress yourself?

Good professional massage for trigger points is hard to find. The quality of trigger point therapy is all over the map and poor on average. You have to be prepared to *shop around* for someone who seems humble, sensible, and experienced. And please: *never tolerate "brutal" massage therapy.* **10**

When in doubt, it is much better to *just have a great massage* than bad trigger point therapy. There is plenty of overlap between decent trigger point therapy and an ordinary pleasant massage. So mainly just try to find a massage therapist whose style you love. See [How Do You Find Good Quality Massage Therapy?](#) for more detailed tips.

This is the tip of the trigger point iceberg

There are many reasons why basic self-massage might fail. For instance, it could fail for quite "simple" technical reasons — due to the neurological phenomenon of "referred pain," the trigger point may not actually be located in the same place as the pain. This sends people on wild goose chases, rubbing the wrong things, and the only solution is education and experimentation.

There are many other pitfalls like that, especially for tougher cases. Which is why I wrote a whole [self-help book about myofascial pain](#).

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About Paul Ingraham



Headshot
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I am a science writer in Vancouver, Canada. I was a Registered Massage Therapist for a decade and the assistant editor of ScienceBasedMedicine.org for several years. I've had many injuries as a runner and ultimate player, and I've been a [chronic pain patient myself](#) since 2015. [Full bio](#). See you on [Facebook](#) or [Twitter](#), or subscribe:

What's new in this article?

2019 — Minor updates today, but a lot of them. Many good points that have come up over the years in other articles have now been integrated into this one. Many related topics that aren't covered are at least mentioned, with links to more information.

2017 — Summarized all the scientific evidence about whether or not massage is an effective treatment for trigger points.

2016 — Editing for consistency with current science and my own slowly-changing views on this subject. Most of the changes concerned “release” and how trigger point therapy (supposedly) works, but many small changes throughout. Also added a new featured image.

2016 — Upgraded several footnotes.

2016 — Acknowledged scientific controversies about trigger points more thoroughly.


Many unlogged updates.

2008 — Publication.

Related Reading

- **How Do You Find Good Quality Massage Therapy?** — Tips for finding good quality medical massage, and avoiding nonsense and quackery
- **Tennis Ball Massage for Myofascial Trigger Points** — Some creative tips on using a tennis ball (and other tools) to self-massage myofascial trigger points
- **Vibration Therapies, from Massage Guns to Jacuzzis** — What are the medical benefits of vibrating massage and other kinds of tissue jiggling?
- **Vulnerability to Chronic Pain** — Chronic pain often has more to do with general biological vulnerabilities than specific tissue problems
- **Does Massage Therapy Work?** — A review of the science of massage therapy ... such as it is
- **Massage Therapy Kinda, Sorta Works for Back Pain** — It works, but not very well, and “advanced” techniques are no better than relaxation massage

Notes


1. Quintner JL, Bove GM, Cohen ML. A critical evaluation of the trigger point phenomenon. Rheumatology (Oxford). 2015 Mar;54(3):392–9. [PubMed 25477053](#) 

Quintner, Cohen, and Bove think the most popular theory about the nature of trigger points (muscle tissue lesions) is “flawed both in reasoning and in science,” and that treatment based on that idea gets results

“indistinguishable from the placebo effect.” They argue that *all* biological evidence put forward over the years is critically flawed, while other evidence leads elsewhere, and take the position that the debate is over. (They also point out that the theory is treated like an established fact by a great many people, which is definitely problematic.) However, their opinion is extreme, and most experts do not think we should throw out all the science so far (see [Dommerholt et al.](#)).

(See [more detailed commentary on this paper.](#))

If you’d like to learn more about this, I’ve thoroughly covered the controversy: [Trigger Point Doubts: Do muscle knots exist? Exploring controversies about the existence and nature of so-called “trigger points” and myofascial pain syndrome.](#)

2. Trigger point massage has never been subjected to even one sufficiently rigorous clinical trial. There are only about a dozen studies worth knowing about, and *all* have serious flaws and were conducted by researchers with a high risk of bias. *Most* report only minor benefits, and a couple are blatantly negative despite positive-sounding conclusions (if you look at the actual data). Only one ([Aguilera 2009](#)) reports a more robust effect. Three of the less-bad studies are [Hodgson 2006](#), [Gemmell 2008](#), and [Morikawa 2017](#). I’ve reviewed all the evidence thoroughly in my main [trigger points tutorial](#), but the bottom line is clear: the evidence is promising if you’re a trigger point therapist, but damningly faint praise if you’re a skeptic, and just inconclusive if you don’t have a dog in the fight.
3. I do not trust “anecdota,” and I handle it like venomous snakes. I don’t trust any of it, but I don’t ignore it either. I have a lot of clinical experience with trigger point therapy, and deep knowledge of the science of how it supposedly works, and of all the expert opinions. In other words, I am painfully aware that we lack adequate scientific evidence of efficacy, but I tentatively “believe” in trigger point therapy anyway, because it sure seems to work, it is scientifically *plausible* that it works (much more so than, say, homeopathy), and it’s relatively safe and cheap, and it’s not likely to distract anyone from other valuable therapy. That is, it avoids all the [major red flags for quackery](#).
4. True story: One morning an office worker developed increasingly sharp stabbing pains in his lower back. Because the pains were sharp and pinchy, he thought they were kind of scary. He tried to stay calm and got up regularly to wiggle around and stretch, but the pains just kept coming back. He decided to try massage with a tennis ball. Although the pain didn’t seem particularly muscular, pressure on the low back muscles felt terrific — a deep, “sweet” ache. He massaged for just a couple of minutes, and didn’t expect results. And yet, to his amazement, the sharp pains had simply vanished, and they stayed gone: from alarming and rapidly worsening sharp pains to nothing at all in just a couple minutes.
5. Dr. Janet Travell and her research partner [Dr. David Simons](#) devoted their careers to trying to understand the science of muscle knots, and sharing their knowledge with other health care professionals. Her most important publication was the “big red books,” the massive two-volume textbook, [Myofascial Pain and Dysfunction: The Trigger Point Manual](#) (last edition published 1999). Dr. Travell served as President John F. Kennedy’s physician starting in 1961. She was the first female doctor to hold this position. Dr. Travell died in 1997. Although admirable and impressive, of course Dr. Travell probably was not perfect, and she may have become too impressed with her own ideas as her career progressed — an excellent example is described in [Travell, Simons and Cargo Cult Science](#).
6. **Pain is weird**, often disconnected from clear causes, and surprisingly easy to modulate with virtually any reassurance or pleasant stimulus. *If* trigger points are a purely sensory phenomenon without much pathological substance, *if* there is no lesion in the tissue (or only a subtle one), *if* the problem is more about how the nervous system is mis-interpreting sensation in the area... then massage might be able to easily inspire a “reinterpretation.”
7. Shah JP, Danoff JV, Desai MJ, *et al.* [Biochemicals associated with pain and inflammation are elevated in sites near to and remote from active myofascial trigger points.](#) Arch Phys Med Rehabil. 2008;89(1):16–23. [PubMed 18164325](#) 

This significant paper demonstrates that the biochemical milieu of trigger points is acidic and contains many pain-causing metabolites. For much more information about this, see [Toxic Muscle Knots](#).

(See [more detailed commentary on this paper.](#))

The accumulation of metabolic wastes would be much less in a minor trigger point, and probably fairly easy to flush out with a little gentle pressure.

8. Quintner JL, Cohen ML. Referred pain of peripheral nerve origin: an alternative to the "myofascial pain" construct. Clin J Pain. 1994 Sep;10(3):243–51. PubMed 7833584 □ PainSci Bibliography 54775 □

Quintner and Cohen's 1994 paper is a historically significant critique of the "traditional" (Travell & Simons) explanation for the phenomenon of trigger points, known today as the "integrated hypothesis." They propose that *peripheral nerve pain* is a better explanation. More specifically, they proposed that irritated or injured peripheral nerve trunks may be the cause of pain, rather than lesions in muscle tissue. This hypothesis has advantages and problems, just like the idea it is intended to replace. Its main problem is that there's no obvious plausible mechanism for ubiquitous nerve irritation. I review the hypothesis more thoroughly in my book, The Complete Guide to Trigger Points & Myofascial Pain.

An updated version of this paper was published in 2015 in *Rheumatology (Oxford)*.

9. There are many bumps and sore spots in the body that are not trigger points. We all tend to perceive what we expect/want to perceive, rather than what is. Even massage therapists, with lots of experience with feeling anatomy, often mistake miscellaneous lumps for trigger points. The only defence against this murkiness for the amateur is to be humble, cautious, and thorough.
10. Massage therapy is safe, even strong massage, but nothing's perfect. "Deep tissue" massage may aggravate problems, instead of helping. Some chronic pain patients may be disastrously traumatized by it. Occasionally it causes new physical injuries, usually just minor bruises and nerve lesions, but sometimes much worse (strokes and pulmonary emboli). Patients often feel sore and a bit "oogy" after massage, a phenomenon known as post-massage soreness and malaise, which may be caused by a form of injury (rhabdomyolysis), not "detoxification." See Massage Therapy Side Effects: What could possibly go wrong with massage? The risks and side effects of massage therapy are usually mild, but "deep tissue" massage can cause trouble.

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