

the **CrossFit** JOURNAL ARTICLES

Trigger Point Massage

Simple Self-Help for Chronic Pain

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What are trigger points?

According to some statistics, skeletal muscle accounts for 40-50 percent of body weight, and about 85 percent of human pain complaints. In athletes, most chronic pain issues are of myofascial (muscle- or sinew-related) origin. This is not surprising, since athletes tend to use their muscles and sinews much harder than the average population.

What is surprising is that when athletes go to the doctor because of some annoying pain that won't go away, hardly ever are their muscles examined and screened for problems. Instead, the doctor usually looks at their tendons and joints, and, in the end, the problem is likely to be blamed on some type of "-itis"—tendinitis, bursitis, arthritis, you name it. In this article, I want to draw your attention to a more likely cause of your pain—one that is directly related to your muscles. I am talking about trigger points.

Trigger points are small, localized muscle cramps with a variety of causes, most notably excessive loads, direct trauma, or repetitive or prolonged muscle contractions. The cramp does not normally affect the whole muscle but is usually confined to one or two small muscle fibers within the main body of the muscle. You can actually feel the cramp as a hard lump or knot in your muscle. Sometimes, especially in small muscles, the whole muscle will feel like a cable made from hard rubber.

Trigger points are not related to acupuncture points, energy points, or other esoteric concepts. Trigger

points can be seen in the microscope. They can be felt as hard knots in your muscles. And oh yes, they hurt when pressed.

Trigger points differ from other causes of pain in that they often produce pain in other sites in the body. This is called referred pain, and it can be a very annoying and perplexing problem. For instance, you may have pain in your elbow that is caused by a trigger point in your shoulder, your forearm muscles, or in the triceps. A trigger point in the peroneus muscle (which is at the outside of the lower leg and makes the foot move down and outward) will cause pain in the ankle, not at the side of the leg where the muscle is. Trigger points in the quads will make your knees hurt. And trigger points in the calves will usually cause pain under your foot. Referred pain is mediated through spinal cord mechanisms.

"Sneaky things, these trigger points," you might say—and you would be right. Most people in the medical profession have been slow to learn about trigger points. Rarely do you find a good physiotherapist who is able to identify and treat the problem. This is why selfhelp is so important for dealing with trigger points.

Trigger points arise at predictable places in the muscle and cause predictable patterns of referred pain. This makes it possible to make up a catalog of trigger points and show for each muscle the trigger points it usually has together with the sites of the referred pain it causes. As a side note, it is good to know that many muscles, especially slender and long ones or those with

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a feathered fiber orientation, may develop multiple trigger points. Typically, a trigger point will develop in the middle of a muscle. But since muscles are made up of many fibers, sometimes with different orientations, trigger points can occur at multiple sites within a single muscle.

To identify trigger points, physiotherapists or physicians compare your complaints to the pain pattern of trigger points they know and to catalogs of common trigger points and then feel around in your muscles for hard knots in the likely places. They will know that they found something when you twitch in agony when the knot is pressed.

What can I do about trigger points?

Trigger points can be treated by several methods: injection, spray and stretch, and massage. In the injection method, a small dose of local anesthetic is injected into the trigger point. In the spray and stretch method, the trigger point is iced with a vapocoolant spray and then stretched. Neither of these methods is suitable for self-help. Massage treatment of trigger points, however, is very effective and you can easily do it yourself.

Here are some guidelines for how to massage a trigger point:

- Massage with short, slow strokes in one direction, applying deep pressure.
- Aim for a pain level of about 7 on a scale of 1 to 10, where 1 is hardly noticeable and 10 is unbearable.
- Massage often but only for a short time (twelve to twenty strokes is usually sufficient per session)
- Don't try to "kill" the trigger point in one session; perform several brief sessions per day.
- Continue massage sessions until pain has subsided to about pain level 3 (this will often take several sessions).

And some tips for easier massage:

- Use a ball to save your fingers (a tennis ball or baseball works well).
- Use a ball between your body and a wall or floor to massage hard-to-reach spots such as neck, shoulders, lower back, arms.
- Try a PVC tube on the floor for legs and feet.

Trigger Point Rules

1. Trigger points are small, localized muscle cramps that feel like hard lumps or knots in your muscles.
2. Trigger points arise at predictable places in the muscle and cause predictable patterns of referred pain.
3. Trigger points hurt like hell when pressed, and referred pain may be felt, according to the characteristic pattern for that trigger point.
4. Trigger points can be treated by massage.
5. Massage with short, slow strokes in one direction, applying deep pressure.
6. When massaging, use your elbow, your knee, your knuckles, or a ball instead of your fingers. Use a ball between your body and a wall or the floor to reach hard spots.

- If the ball always falls down, put it in a sock.
- Use your elbow to massage your upper legs (bending down while sitting).
- Use your knee to massage your lower legs (crossing legs).
- Use your fist or knuckles instead of your fingers where possible.

Common trigger points for athletes

The trigger points that athletes are likely to experience differ according to their sport, since different muscles are involved in the movement patterns and requirements of different activities. However, some pain patterns are relatively common among athletes:

- Elbow pain (tennis elbow and golfer's elbow), referred from a variety of muscles, most notably the triceps, the muscles of the upper forearm, the scalene muscles in the side of the neck, and some shoulder muscles.
- Knee pain, referred from the quadriceps.
- Foot pain, referred from the calves.
- Ankle pain, referred from the peroneus muscles in the outside of the lower leg.

Trigger Point Massage (continued...)

Note that the examples given here are by no means exhaustive. There are many other muscles that contribute to pain in these sites. For more examples of common pain patterns, their associated trigger points, and ways to treat them, see the book and websites listed in “Recommended Resources,” below.

Recommended Resources

Davies, Claire, with Amber Davies. *The Trigger Point Therapy Workbook: Your Self-Treatment Guide for Pain Relief. 2nd Edition.* Oakland, CA: New Harbinger, 2004.

Just get this book. It will save you much pain and possibly a lot of money, too.

The Pain Navigator [web page](#) may help you to pin down the cause of your pain. It details trigger points according to the site of the referred pain.

The Coventry Pain Clinic’s web page contains excellent pictures and detailed, up-to-date information about trigger points. Note the other sections as well (e.g., the section on joints contains articles about tennis elbow and golfer’s elbow).

Of course, all instructions presented here are for informational purposes only. The author is not a medical professional and is not liable for any damage you cause by applying this information to yourself or others.

If you are unsure about any information presented here, please consult your physician.

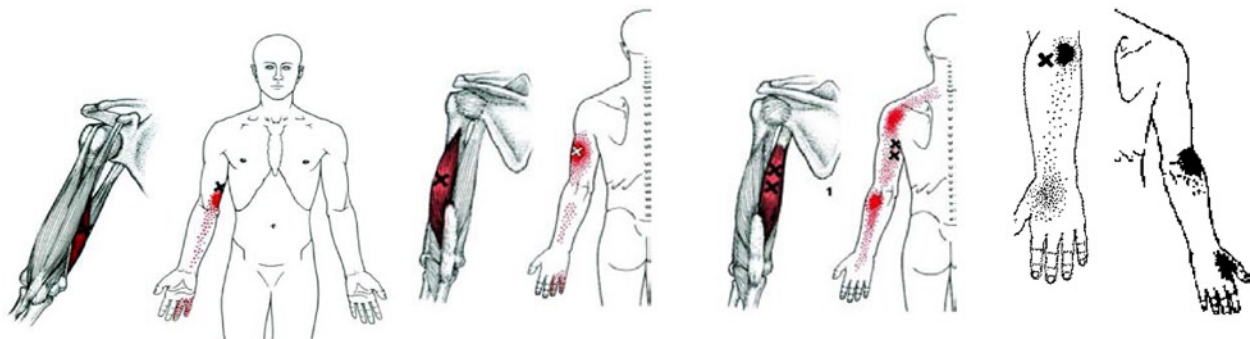


Figure 1. Elbow and arm pain caused by arm muscles (triceps, extensor carpi radialis, and supinator). Massage with the knuckles of the opposite fist.

Trigger Point Massage (continued...)

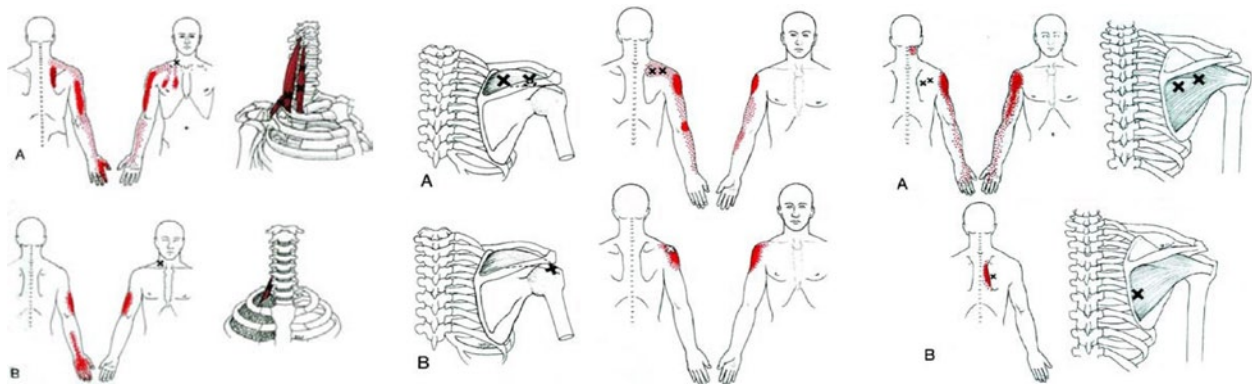


Figure 2. Shoulder and arm pain caused by shoulder and neck muscles (scalenes, supraspinatus, infraspinatus). Massage with a ball against a wall.

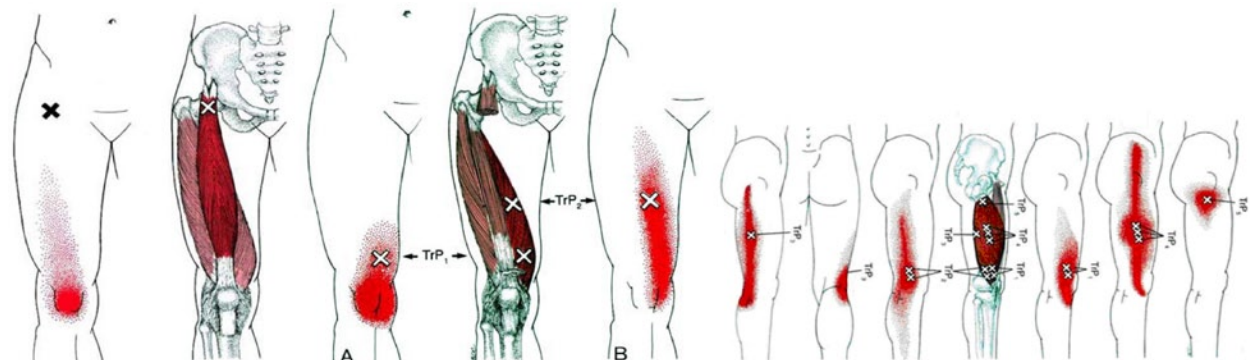


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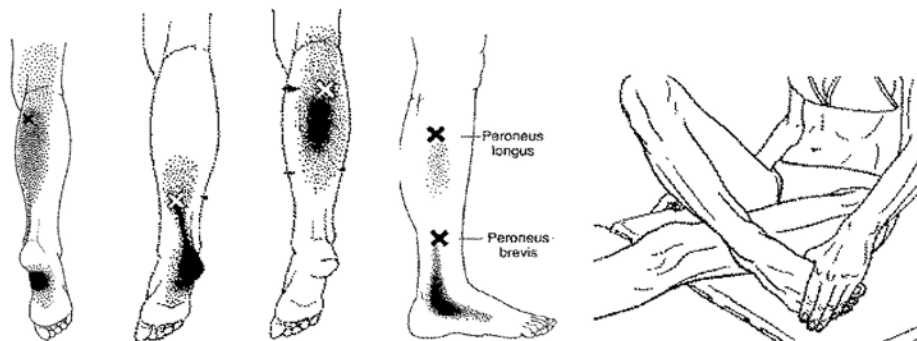


Figure 3. Pain caused by quadriceps. Massage with the elbow of the same side arm or with PVC tube against the floor.

