

Muscle fatigue: the cause doctors usually overlook- and what you can do about it

Summary

There are many possible causes of muscle fatigue, but by far the most common and most important is (myofascial) trigger points, those lumps in muscles that therapists find. Scientific studies show:

- trigger points restrict blood flow to muscles (a causes of muscle fatigue)
- trigger points are extremely common
- trigger points are found to cause a reduction in strength, rapid fatigue, and the rapid development of pain
- treating trigger points reduces fatigue and the development of pain



Trigger points are the tender lumps in your muscles therapists find

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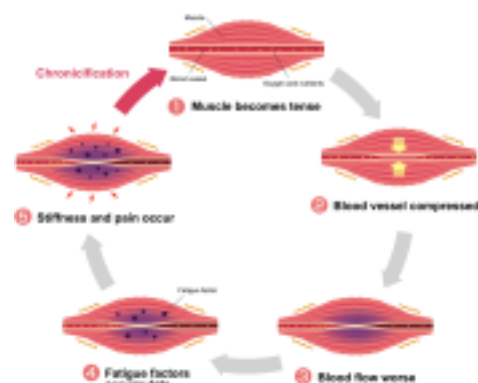
References

How trigger points cause fatigue

Simply speaking, trigger points are parts of a muscle that have gone into spasm and will not let go. Because of this:

- the part of the muscle in spasm is constantly contracting (trying to tighten) so it is already fatigued
- the spasm causes the whole muscle to tighten which restricts blood flow

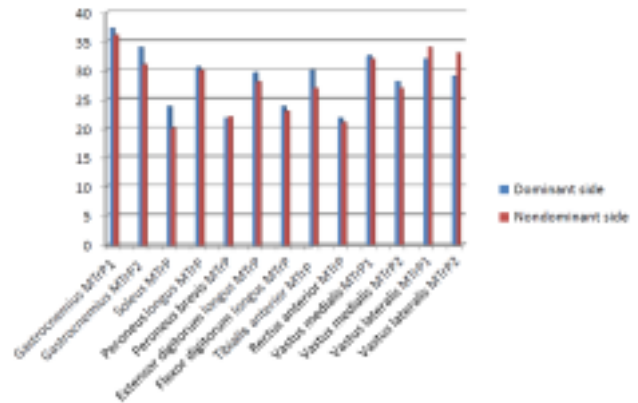
With part of the muscle is already fatigued, and the rest with it's blood supply restricted the muscle is not capable of performing normally. Studies show they will lose strength, quickly fatigue and become painful. It is important to understand that trigger points don't need to be normally painful to do this. For more information please see our article *Trigger point basics*



Pressure on soft walled blood vessels caused by trigger points restricts blood flow to muscles

How common are trigger points

There are many studies that show trigger points are almost universally present when one has some sort of pain syndrome such as back, neck or shoulder pain. However, lets look at how common trigger points are in people who have no pain. This chart shows the findings of a trial that examined 206 pain free adults for trigger points in their leg muscles. The chart shows the percentage of people with trigger points for each individual muscle. Overall 77% of people had at least one. **With trigger points this common and proven to cause fatigue they are certainly responsible for a great amount of fatigue.**



The percentage of people with trigger points in each individual muscle (pain free adults)

Supporting studies

Study one (1) (references below)

This study investigated the rate of fatigue in shoulder muscles of otherwise healthy pain free adults. They found that when trigger points were present the endurance of the muscles was reduced.

Table 3
Results of muscle strength measurement in dominant and non-dominant side

	Group 1	Group 2	p value
Deltoid D	15.13 ± 5.1	18.45 ± 4.4	0.019
Deltoid ND	14.97 ± 4.9	18.11 ± 4.7	0.026
Scaption D	14.75 ± 5.1	17.82 ± 4.9	0.037
Scaption ND	14.35 ± 4.7	17.43 ± 4.4	0.021

D: Dominant, ND: Non dominant.

Table: the effect of trigger points on the strength of various muscles (Group one had the trigger points)

Study two (2)

This study investigated how trigger points in 50 otherwise pain free adults affected the strength of various muscles. As this table shows the strength of those with the trigger points (Group 1) was a lot less.

Study three (3)

This study compared the rate of fatigue and the amount of pain between muscle muscles that contained trigger points, and muscles with no trigger points. As with all the studies mentioned, the people tested were otherwise healthy and pain free. The chart shows that muscles with trigger points became painful upon exertion, and the researchers conclusion shows that trigger points accelerated fatigue.

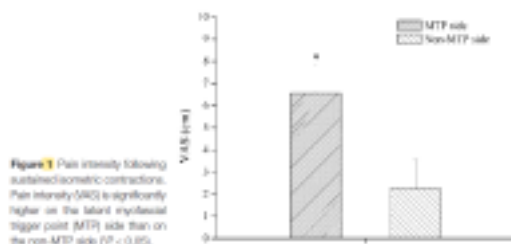


Chart showing the amount of pain upon exertion. The muscles with trigger points (dark bar) suffered much more pain

Conclusions

The current study shows that latent MTPs are associated with accelerated development of muscle fatigue, which may overload active motor units close to an MTP. Elimination of latent MTPs and inactivation of active MTPs may effectively reduce muscle fatigue and prevent overload spreading within a single muscle in musculoskeletal pain conditions.

Conclusion from journal article showing that trigger points accelerated fatigue

Why doctors don't find this

This image is the front page of a typical medical journal article (5). It discusses a host of possible biochemical deficiencies and the drugs or supplements to take. However, it ignores the fundamentals of physics that say that pressure on soft walled blood vessels will cause a deficiency of blood. Drug companies heavily influence practically all the information doctors receive.

Typical medical journal article discussing the causes of fatigue that doctors can prescribe drugs and supplements for 



The treatment of trigger points

We cover how to treat trigger points in our article *Trigger point basics*. However, in summary you need two things.

Professional guidance

Trigger points are often part of more complex musculoskeletal problems. There may be other issues that need to be dealt with. Also, anything that causes or perpetuates the trigger points will need to be identified. Because of this we recommend you seek advice from a professional who deal with these issues.

Therapy

A professional management plan will always include some form of trigger point therapy. We recommend this to be vibration massage for two reasons.

Highly effective

Trigger points are caused by a combination of:

- muscle spasm
- muscle tightness
- a restriction in blood flow, and
- a build up of toxic wastes

Vibration massage is a simple, safe treatment that helps all of these.



Self application

As discussed in our article Trigger point treatment: deactivation or elimination trigger

points need a large number of applications of therapy over a long period of time to eliminate. If relying upon professionally administered therapies this would be prohibitively expensive. With the appropriate advice vibration massage can provide excellent self applied therapy.

Vibration massage works on all the issues

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