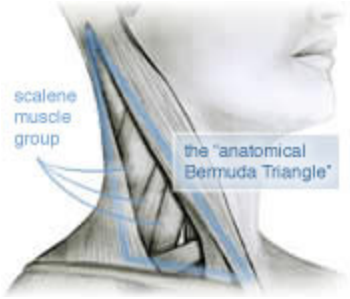
Massage Therapy for Neck Pain, Chest Pain, Arm Pain, and Upper Back Pain



Trigger points in this area cause an astonishing array of problems in the neck, head, chest, back & arms!

Perfect Spot No. 4, an area of common trigger points in the odd scalene muscle group in the neck

Paul Ingraham • Jun 13, 2018 • 15m read

Trigger points (TrPs), or muscle "knots," are a common cause of stubborn & strange aches & pains, and yet they are under-diagnosed. The 14 Perfect Spots (jump to list below) are trigger points that are common & yet fairly easy to self-treat with massage — the most satisfying & useful places to apply pressure to muscle. For tough cases, see the advanced trigger point therapy guide.

Pain Location	Problems	Related Muscles
in the upper back (especially inner edge of the shoulder blade), neck, side of the face, upper chest, shoulder, arm, hand	thoracic outlet syndrome, throat pain and tightness, chest pain	scalenes (anterior, middle, posterior)

"Big Red Books" Reference: Volume 1, Chapter 20 see chart of all spots below

Deep within the Anatomical Bermuda Triangle, a region on the side of the neck, is the cantankerous scalene muscle group. Massage therapists have vanished while working in this mysterious area, never to be seen again. The region and its muscles are complex and peculiar, and many less-trained massage therapists have low confidence working with them. This article explains how the scalene muscles can be involved in several common pain problems in the neck, chest, arm, and upper back, and how to treat pain in these areas by massaging the scalenes. The scalenes are a difficult muscle group to work with, but rewarding!

The scalenes are a strange muscle group

If you have stubborn or severe neck pain, you may prefer to start with my advanced neck pain tutorial.

The scalenes are often involved in common neck pain and headaches, but that's just the tip of the iceberg. Seriously, this is a *weird* area: the scalenes often harbour TrPs with more diverse and peculiar symptoms than any other muscle tissue in the body. The primary mechanism for this strangeness is the phenomenon of "referred pain." Pain in the scalenes is often felt just about anywhere *but* the scalenes themselves. Instead of your scalenes, your arms or chest might hurt. [1]

Referred pain effects are par for the course with all muscle pain or any other internal pain — for instance, heart attacks are felt in the shoulder and arm — but the scalene muscles consistently produce unusually complex, variable, and extensive patterns of referred pain. The results can be a bit bizarre, causing symptoms that most people never guess are coming from the scalenes, even doctors and therapists.

Spreading pain

Just like the pain of a heart attack spreads from the heart into the shoulder & arm, the pain of painful scalene muscles spreads throughout the chest, upper back & chest, the arm & hand & the side of the head. Pain referred to the back may feel like a penetrating pain stabbing through the torso.

And scalene TrPs can *also* have several other "interesting" (in the sense of the Chinese curse [2]) effects: on your voice, on swallowing, on emotions, on sensations that sweep through the entire head, the sinuses, hearing, and teeth. I have found scalene TrPs to be obviously clinically relevant to conditions as seemingly unrelated as:

- a professional singer with a mysterious degradation of quality in his voice (helped by releasing scalene and other throat trigger points)
- at least two patients with severe chronic sinus infections that they'd actually had surgery to try to correct (one of them virtually cured by scalene trigger point release alone, the other significantly helped)
- several people with severe cases of what I call "brick back," where the space between the shoulder blades feels so stiff and stuck that it's like there's a cinder block there instead of bone and muscle
- cutting off blood and nerve supply to the arm, because tight scalenes can impinge the brachial artery and brachial nerve plexus in the neck
- the sensation of a lump in the throat in the absence of an actual mass ("globus sensation") [3]

So scalene trigger points are "drama queens," with symptoms and consequences that seem out of proportion to such small and obscure muscles. They often contribute to anything *else* that goes wrong in the whole region. Like a gang, scalene TrPs can be counted on to mess up the neighbourhood. The anterior scalene in particular is a trouble-maker, causing and complicating many other problems.

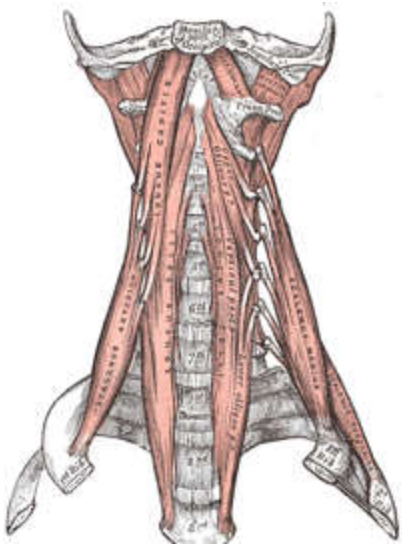
The cult of scalenes

Is the clinical importance of scalenes exaggerated? Some muscles in the human body are put on a weird pedestal by many massage therapists, made into the scapegoat for an unrealistic number of ailments. The canonical example of muscle mystique is the psoas

muscle, a big muscle buried deep in the pelvis and abdomen … but the scalenes are probably the other main example, and they are directly analogous to each other anatomically.

Psoas hype is just silly — there's almost nothing to it, and it's deliberately missing from my "Perfect Spots" series. But the kernel of truth in scalenes hype is more substantive. [4] Yes, the importance of scalenes is exaggerated by many professionals … but there's a little more rational justification for it than there is with psoas.

The scalenes are part of a larger group of deep cervical flexors — all the deep anterior muscles of the cervical spine. It is quite trendy to try to exercise these muscles to treat neck pain. See Deep Cervical Flexor Training for Neck Pain: "Core" strengthening for the neck is even less evidence-based than core-strengthening for back pain.



The scalenes along with several other deep neck flexors.

The anatomy of the Anatomical Bermuda Triangle

The scalenes fan out from the sides of the neck bones to attach to the *ribs*, above the collarbone. [5] The scalene group consists of *three* muscles: the *anterior*, *middle*, and *posterior* scalenes. They generally attach to the sides of the neck vertebrae at the top and to the uppermost ribs at the bottom. So the scalenes are mostly head pullers: they pull the head from side to side. And although they certainly do move the neck, they are also breathing muscles, because of the way they pull up on the ribs.

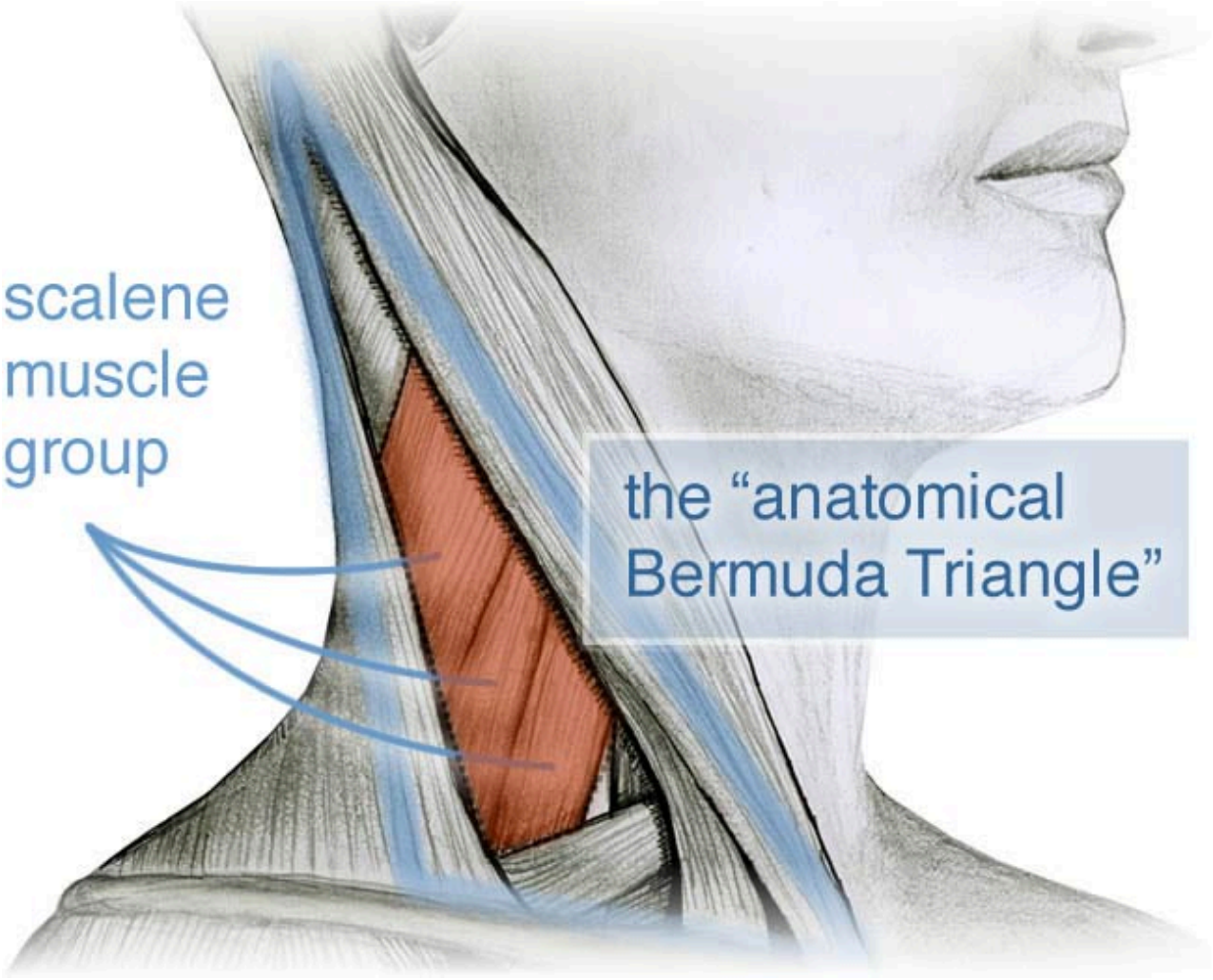
And here's some more weirdness that makes this muscle group quite interesting: in some people the scalene muscles even reach down *between* the ribs and attach *directly to the top of the lungs*, the only muscles that attach directly to the lungs other than the diaphragm. They pull up on the pleura, the membrane that shrink-wraps the lungs. A strange muscle group indeed! Such anatomical variability is actually fairly common throughout our bodies. [6]

In some people the scalene muscles even reach down between the ribs & attach directly to the top of the lungs.

The scalenes as a group are not hard to find, but they are intricate in their details. They fill the space between three obvious structures that form the triangle:

1. the collarbone
2. the trapezius muscle on top of your shoulder

3. the long V-shaped throat muscles (sternocleidomastoid or, if that's too much of a mouthful, just the SCM)



Where is Perfect Spot No. 4 and the scalene muscle group?

Perfect Spot 4 is somewhere in the triangle. There is one particular spot, in the belly of the middle scalene, that I think is the most common clinically significant trigger point — the spot most *likely* to feel important to patients — but I don't want to send you on a wild goose chase trying to locate exactly that spot. Any location within the triangle *could* prove to be important, so you should definitely explore. Things change, too: Perfect Spot 4 might be in one corner of the triangle one day, and in another corner the next. Precise self-treatment isn't necessary — a willingness to gently experiment is.

The best way to approach this area as a helper is from above the head, with the recipient face up. Without a massage table, it works well to place his or her head in the corner of a bed. Hold your fingers flat and place the pads of your fingertips in the hollow of the triangle: above the collarbone, in front of the massive trapezius muscle along the top of

the shoulder, and on the outside of the prominent V-shaped sternocleidomastoid muscles of the throat.

In this position, your hands will be angled inward a bit, and roughly pointing at the sternum. Now press down and perhaps a little inwards with a fairly broad pressure — finger pads, not finger tips — on the ropy muscles that fill the triangle. By using a broad pressure, you can easily stimulate some TrPs and stiff muscle without having to worry about being too accurate.

Explore in the triangle with your fingertips, using small circles to find the ropy bands of muscles, gently strumming across them. The area is a rich minefield of trigger points, any of which might be worthwhile and interesting.

Danger! If you're foolish. This area is a little vulnerable, obviously: there is a possibility of impinging blood vessels or nerves. Do *not* massage this area vigorously, and (for pity's sake) do not use tools here. Duh.

If you do touch the carotid artery or the jugular vein, the pulse is obvious — just back off. It's not an appealing place to rub. You no more want to rub your carotid artery than your eyeball. Smaller vessels are not a concern, and nerves are remarkably robust — they tolerate more pressure than most people realize — but it would still be foolish to take chances in this area.

Anything else? The trachea and voice box are delicate, but also too central to get in the way of scalene massage, and no one would tolerate any careless pressure there.

How should scalene massage feel?

Massage feels better on some muscles than others. [7] The scalenes are not really pleasurable to massage, in general. The throat is a vulnerable body part, so many people feel threatened by pressure here — beware of underestimating it, [8] and all the more so if you aren't confident that massage is safe, or if you don't understand the strange sensations that are so common in this area. That vulnerability seems to translate into sensitivity, so even a gentle approach may feel a bit hot, nasty, and dodgy at first — not really the kind of trigger point you want to mess around with for fun.

Wow, sign me up! Sounds great, doesn't it? But it's not all bad news.

Some people enjoy scalene massage right out of the box, and others can come to appreciate it after a period of "working through" and getting used to the uglier sensations. But the best-case scenario is when you are actually solving a problem: if your scalenes are in distress and causing a chronic pain problem, then it's going to feel more like you're finding the right place to scratch an itch that you couldn't reach before.

Maximize your chances of a positive experience by moving slowly and respectfully, and massaging the scalenes with broader, less "poky" pressure. Such pressure is more likely to produce the best-case scenario: a peculiar deep ache spreading into the head, chest, back, and/or arm. At its best, scalene massage feels challenging but "profound." The spectacular referral patterns make the scalenes feel important, the key to the region. No muscle produces more amazed comments. As an entire limb "lights up" with referred pain from a light pressure in the neck, many people will say something like, "Holy $%!@$#$!, what the hell is that?" This is generally true of all referred pain, and it's equally true of all the Perfect Spots, but "some trigger points are more equal than others." The scalenes may be awkward and uncomfortable to massage at first, but this Perfect Spot can be very impressive in the end.

As an entire limb "lights up" with referred pain from a light pressure in the neck, many people will say something like, "Holy $%!@$#$!, what the hell is that?"

So be prepared for anything, and take it easy.

Although you might have to "work through" a little unpleasant sensation to get to the better sensations, this doesn't mean "no pain, no gain" — do *not* be brutal in this area. Patients need a little time to adjust and "accept" the stimulation here. Persist respectfully, and there is a fair to middling chance that the sensation will change from hot to warm, from sharper to achier. It might make the transition in five minutes, or it might take a few days of sweet-talking the area. But there is a limit to how much you should try. If the effort doesn't start to develop a bright side after a reasonable amount of time, then this Perfect Spot isn't so perfect, and you should let it go.

The respiration connection (theoretical but plausible)

Tennis, meet elbow

Tennis is the traditional way to get a case of tennis elbow, but it's not the only way.

Many common aches and pains, particularly around the head, neck and shoulders, may be caused in part by inefficient breathing. It's just a theory, but the connection between dysfunctional breathing and pain is straightforward in principle: if the diaphragm doesn't do its job well, muscles in the upper chest (pectoralis minor) and throat (sternocleidomastoid and scalenes) try to take over. Unfortunately, these muscles just aren't built for routine respiration, and they can exhaust themselves to the point of irritation and injury. A cascade of consequences may result, from garden variety stiffness to seemingly unlikely and severe consequences such as rotator cuff

injuries, whiplash, and thoracic outlet syndrome — a constellation of painful upper body conditions.

And the strange, cranky scalenes are the most likely muscles to cause symptoms in this scenario. They are "uniquely structured in fiber composition to sustain prolonged contraction." [9]

Anything that makes breathing more difficult could easily provoke over-use of the scalenes. There are many possibilities, but probably the most common and preventable is smoking — which is also a risk-factor for chronic pain independently, [10] so it's a double whammy. This is pure speculation, but smokers could not only have more trigger points in their accessory respiratory muscles, but also nastier ones, more painful and persistent.

For more information, see The Respiration Connection.

A surprising relationship between the scalenes and tennis elbow

This tennis elbow connection is a good example of how odd and clinically relevant the scalenes can be to conditions they don't *seem* to have anything to do with at first.

The scalene muscle group has surprising importance to a condition called "tennis elbow" or lateral epicondylitis, which commonly afflicts typists as well as racquet sports players. It is generally characterized as an inflammatory condition, but it is rarely that simple. [11] It is likely that myofascial TrPs, particularly Perfect Spot No. 5 in the muscles of the forearm, play a significant role in any case of tennis elbow.

And Perfect Spot No. 4 seems, in turn, to significantly affect Perfect Spot No. 5. Travell and Simons write, "Scalene muscle trigger points are frequently the *key* to [treatment of] forearm extensor digitorum trigger points." That is, trigger points on the back of the forearm. [12] So an interesting benefit to treating Perfect Spot No. 4 is that it may be a key to treating Perfect Spot No. 5!

About Paul Ingraham


Headshot of Paul Ingraham

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:

Appendix A: Is trigger point therapy too good to be true?

Trigger point therapy isn't too good to be true: it's just ordinary good. It can probably relieve some pain cheaply and safely in many cases. Good bang for buck, and little risk. In the world of pain treatments, that's a good mix.

But pain is difficult and complex, no treatment is perfect, and there is legitimate controversy about the science of trigger points. Their nature remains somewhat puzzling, and the classic image of a tightly "contracted patch" of muscle tissue may well be wrong. What we do know is that people hurt, and it can often be helped.

The Perfect Spots are based on a decade of my own clinical experience as a massage therapist, and years of extensive science journalism on the topic. Want to know more? This is the tip of the iceberg. I've written a whole book about it …

Appendix B: Quick Reference Guide to the Perfect Spots

This index is also available on its own page.

1 For headache, neck pain

Under the back of the skull must be the single most pleasing and popular target for massage in the human body. No other patch of muscle gets such rave reviews. It has everything: deeply relaxing and satisfying sensations, and a dramatic therapeutic relevance to one of the most common of all human pains, the common tension headache. And no wonder: without these muscles, your head would fall off. They feel just as important as they are. (Click/tap heading to read more.)

for pain: almost anywhere in the head, face and neck, but especially the side of the head, behind the ear, the temples and forehead

muscle(s): suboccipital muscles (recti capitis posteriores major and minor, obliqui inferior and superior)

2 For low back pain

This Perfect Spot lives in the "thoracolumbar corner," a nook between your lowest rib and your spine — right where the stability of the rib cage and thoracic vertebrae gives way to the relative instability of the lumbar spine. It consists of trigger points in the upper-central corner of the quadratus (square) lumborum muscle and in the thick column of muscle that braces the spine, the erector spinae. (Click/tap heading to read more.)

for pain: anywhere in the low back, tailbone, lower buttock, abdomen, groin, side of the hip

muscle(s): quadratus lumborum, erector spinae

3 For shin splints

Perfect Spot No. 3 is in your shins — seemingly an unlikely place for muscle knots! But there is meat there, and if you've ever had shin splints then you know just how vulnerable that meat can be. Even if you've never suffered so painfully, your shins probably still suffer in silence — latent trigger points in the upper third of the shin that don't cause symptoms, but are plenty sensitive if you press on them. (Click/tap heading to read more.)

for pain: in the shin, top of the foot, and the big toe

muscle(s): tibialis anterior

4 For thoracic outlet syndrome, throat pain and tightness, chest pain

Deep within the Anatomical Bermuda Triangle, a triangular region on the side of the neck, is the cantankerous scalene muscle group. Massage therapists have vanished while working in this mysterious area, never to be seen again. The region and its muscles are complex and peculiar, and many lesser-trained massage therapists have low confidence working with them. (Click/tap heading to read more.)

for pain: in the upper back (especially inner edge of the shoulder blade), neck, side of the face, upper chest, shoulder, arm, hand

muscle(s): scalenes (anterior, middle, posterior)

5 For carpal tunnel syndrome, tennis elbow

Just beyond your elbow, all the muscles on the back of your forearm converge into a single thick tendon, the common extensor tendon. At the point where the muscles converge, in the muscles that extend the wrist and fingers, lies one of the more inevitable trigger points in the body: Perfect Spot No. 5. It is constantly provoked both by computer usage today, and more often by the use of a pen in simpler times — and by the occasional tennis match, then and now, or maybe crocheting. (Click/tap heading to read more.)

for pain: in the elbow, arm, wrist, and hand

muscle(s): extensor muscles of the forearm, mobile wad (brachioradialis, extensor carpi radialis longus and brevis), extensor digitorum, extensor carpi ulnaris

6 For gluteal and hip pain, sciatica, bursitis, low back pain

When you have back pain, buttock pain, hip pain, or leg pain, much or even all of your trouble may well be caused by trigger points in the obscure gluteus medius and minimus muscles, a pair of pizza-slice shaped muscles a little forward of your hip pocket. Other muscles in the region are usually involved as well, such as the gluteus maximus, piriformis, and the lumbar paraspinal muscles. However, the gluteus medius and minimus are a bit special: their contribution to pain in this area is particularly significant, and yet people who have buttock and leg pain rarely suspect that much of it is coming from muscle knots so high and far out on the side of the hip. (Click/tap heading to read more.)

for pain: in the low back, hip, buttocks (especially immediately under the buttocks), side of the thigh, hamstrings

muscle(s): gluteus medius and minimus

7 For jaw pain, bruxism, headache

Your masseter muscle is your primary chewing muscle — not the only one, but the main one — and it covers the sides of the jaw just behind the cheeks. It's also the main muscle that clenches your jaw and grinds your teeth, unfortunately, and it's one of the most common locations for trigger points in the human body. It is probably an accomplice in most cases of bruxism (that's Latin for "grinding your teeth") and temporomandibular joint syndrome (jaw joint pain), plus other unexplained painful problems in the area. (Click/tap heading to read more.)

for pain: in the side of the face, jaw, teeth (rarely)

muscle(s): masseter

8 For runner's knee

A lot of quadriceps aching, stiffness and fatigue emanates from an epicentre of "knotted" muscle in the lower third of the thigh, in the *vastus lateralis*, a huge muscle — one of your biggest — that dominates the lateral part of the leg. Stretching it is effectively impossible, but massage is an option: although often shockingly sensitive, Perfect Spot No. 8 can also be quite *satisfying*. It also often complicates or contributes to other problems in the area, especially runner's knee (iliotibial band syndrome). (Click/tap heading to read more.)

for pain: in the lower half of the thigh, knee

muscle(s): quadriceps (vastus lateralis, vastus intermedius, vastus medialis, rectus femoris)

9 For chest pain & tightness

The "pecs" are popular: of 700+ muscles, the *pectoralis major* is one of just a dozen or so that most people can name and point to. It also harbours one of the most commonly-encountered and significant trigger points in the human body, and can produce pain much like a heart attack in both quality and intensity. (Click/tap heading to read more.)

for pain: anywhere in the chest, upper arm

muscle(s): pectoralis major

10 For plantar fasciitis

The tenth of the Perfect Spots is one of the most popular of the lot, and right under your feet — literally. It lies in the center of the arch muscles of the foot. This is one of the Perfect Spots that everyone knows about. No massage is complete without a foot massage! (Click/tap heading to read more.)

for pain: in the bottom of the foot **muscle(s):** arch muscles

11 For upper back pain

This "spot" is too large to really be called a "spot" — it's more of an area. The thick columns of muscle beside the spine are often littered with muscle knots from top to bottom. Nevertheless, there is one section of the group where massage is particularly appreciated: from the thick muscle at the base of the neck, down through the region between the shoulder blades, tapering off around their lower tips. There is no doubt that this part of a back massage feels even better than the rest — even the low back, despite its own quite perfect spots, cannot compete. (Click/tap heading to read more.)

for pain: anywhere in the upper back, mainly between the shoulder blades **muscle(s):** erector spinae muscle group

12 For low back and gluteal pain, sciatica

At the top of the buttocks lies a Perfect Spot for massage: a sneaky but trouble-making brute of a trigger point that commonly forms in the roots of the gluteus maximus muscle. It's *below* the lowest part of the low back, but it often *feels* like low back pain. This is the kind of spot that the Perfect Spots series is all about: not only does it tend to produce a profound, sweet ache when massaged, but the extent of the pain that spreads out around it is almost always a *surprise*. It feels like a key to much more than expected. (Click/tap heading to read more.)

for pain: in the lower back, buttocks, hip, hamstrings **muscle(s):** gluteus maximus

13 For low back pain, sciatica

Some of the Perfect Spots are perfect because they are "surprising" — it's delightful to find a place to massage that feels highly relevant your pain in an unexpected location. Others are perfect because they are *exactly* where you expect them to be — and what a relief it is to be able to treat them. Perfect Spot No. 13 is perhaps the ultimate, the quintessential example of a trigger point that is usually "right where I thought the problem was": in the "pit" of the low back, at the bottom of the thick columns of back muscle beside the spine. (Click/tap heading to read more.)

for pain: in the low back, buttocks, hamstrings **muscle(s):** erector spinae muscle group at L5

14 For shoulder pain

I avoided adding Spot 14 to this series for many years, because it's a bit tricky to find. But precision is not required: although there is one specific spot that's especially good, nearly anywhere under the ridge of bone on the shoulder blade is worthwhile, and often a surprising

key to pain and stiffness everywhere else in the shoulder, *especially* all the way around on the other side, facing forward. (Click/tap heading to read more.)

for pain: any part of the shoulder, and upper arm

muscle(s): infraspinatus, teres minor

What's new in this article?

2018 — New small section, "The cult of scalenes." Is the clinical importance of scalenes exaggerated?

2016 — Edited for clarity.

2015 — Miscellaneous improvements.

2005 — Publication.

Notes

1. This is because our nervous systems generally struggle to isolate where pain is coming from when it's deeper than the skin. A pinprick on the skin we can locate precisely, but the location of muscle pain often feels out of focus — we just don't have the neurological "wiring" to get a clear signal. The net effect is sensory confusion. And the confusion seems to be greater with the scalenes than with other muscles.

2. "*May you live in interesting times*" is one part of a three-part curse that is supposedly "ancient Chinese," but is probably actually English or American in origin. According to Wikipedia, "The Chinese language origin of the phrase, if it exists, has not been found, making its authenticity doubtful." The other two parts of the curse are the less famous "*may you come to the attention of those in authority*" and "*may you find what you are looking for*."

3. *Globus* is the unexplained sensation of a lump in the throat, which is common and often alarming. Although many cases are "all in your head," many cases probably have subtle physical causes, basically anything that irritates the throat (tonsil stones, acid reflux, Eagle syndrome, cysts, etc). For more information, see Stuck in My Throat: A "globus pharyngeus" nightmare, with a side of science.

4. Their involvement in some common pain problems is much more plausible *and* they are much more accessible for (cautious) self-treatment experimentation. In my career as a massage therapist, I routinely judged scalene massage to be worth trying, but almost never psoas work, and many years later (and much more cynical and educated) I still think my reasoning was sound.

5. Yes, you heard me right: ribs! We actually have ribs *above* our collarbones. The rib cage and lungs are quite "tall," and this area is the very top of your rib cage. In rare cases, people even have a small extra rib at the top, one vertebrae higher than normal.

6. Ingraham. You Might Just Be Weird: The clinical significance of normal — and not so normal — anatomical variations. PainScience.com. 4520 words.

7. There's a broad pattern I observed as a Registered Massage Therapist, back in the day: sensitivity to pressure in the *flexor* muscles tends to be sharper and nastier than the *extensor* muscles, where "good pain" is more commonly reported. I have no explanation for this — it's just an interesting correlation I noticed.

8. The fear of throat touch can be severe, even phobic, with or without any obvious cause. But an obvious cause is that some victims of assault are choked, which may make massage in this area completely off-limits. An old friend and massage colleague of mine was extremely uncomfortable with throat massage. Despite making this clear, an instructor in our massage therapy college publicly attempted to "joke" about this during a massage demonstration, and touched my friend's throat. She actually smacked his hands away and yelled at him, which he richly deserved. This was an extreme breach of ethics and professionalism on the part of the instructor, and a sad example of the poor quality of some massage training — we spent far too many hours learning massage therapy from that guy.

9. Machleder HI, Moll F, Verity MA. The anterior scalene muscle in thoracic outlet compression syndrome. Histochemical and morphometric studies. Arch Surg. 1986 Oct;121(10):1141–4. PubMed 3767646 ❐

10. Ingraham. Smoking and Chronic Pain: We often underestimate the power of (tobacco) smoking to make things hurt more and longer. PainScience.com. 1417 words.

11. Boyer MI, Hastings H2. Lateral tennis elbow: "Is there any science out there?". Journal of Shoulder And Elbow Surgery. 1999;8(5):481–491. "The term epicondylitis suggests an inflammatory cause; however, in all but 1 publication examining pathologic specimens of patients operated on for this condition, no evidence of acute or chronic inflammation is found." This surprising lack of inflammation is actually typical of supposedly inflamed tendinitises. For much more information about that, see Guide to Repetitive Strain Injuries: Five surprising and important ideas about repetitive strain injuries for patients and professionals.

12. Travell J, Simons D, Simons L. Myofascial Pain and Dysfunction: The Trigger Point Manual. 2nd ed. Lippincott, Williams & Wilkins; 1999. Volume 1, p513.

Permalinks

https://www.painscience.com/articles/spot-04-scalenes.php

PainScience.com/spot4
PainScience.com/scalenes_massage

linking guide

3,750 words