



The Psoas Muscles, Psoas Stretches, and Abdominal Exercises for Back Pain

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On Topic:

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See [video](#) that shows a complete approach to tight psoas muscle pain.

This article provides information usually missing from discussions about treatment for tight psoas muscles.

Quick Answers to Twelve Basic Questions: [click here.](#)

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So, to get straight to the point, several reasons explain incomplete or temporary success in freeing tight psoas muscles by doing psoas stretches. (1) Stretches don't develop control of tight muscles because they use other muscles to induce the stretch while the psoas muscles remain passive, rather than cultivate direct control of the psoas muscles, which is what adjusts them responsively to movement; (2) Actions done sitting or standing call balance reflexes into play, which use existing patterns of control, which interfere with and override learning new

patterns of control; (3) Movement patterns are *patterns of use*, and stretches are never movements in patterns of use, so no useful learning occurs, and habitual tension patterns return.

Likewise, abdominal exercises.

Abdominal exercises strengthen control of abdominal muscles. If you want to free tight psoas muscles, you have to use the psoas muscles directly and develop your control of them, directly.

[MORE ON STRETCHING IN GENERAL.](#)

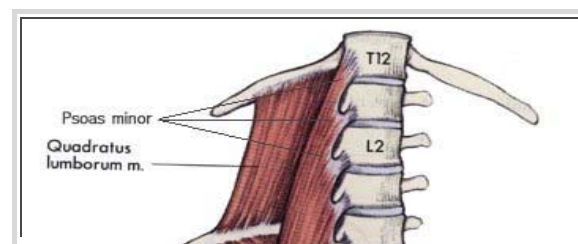


PREVIEW OF INSTRUCTIONAL SELF-HELP LESSON

Varieties of Psoas Muscle Pain

Psoas muscle pain may show up as **groin pain** (psoas tendinitis or psoas bursitis), deep pelvic pain (lumbopelvic pain), pain deep in the belly, or lower back pain. Iliopsoas syndrome is a collection of symptoms, such as those listed above, caused by tight iliopsoas muscles.

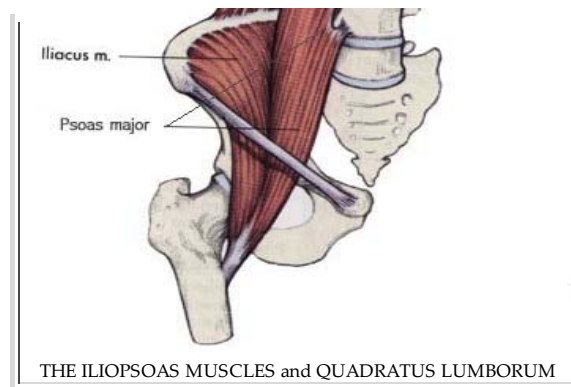
The iliopsoas muscles consist of the iliacus muscles, which span from each groin to the sides of the pelvic cavity; the psoas muscles span from the inner groin to the spine behind the breathing



Direct control develops through a learning process whereby you locate your psoas muscles "by feel", using movements and movement combinations that involve your psoas muscles, and then, with practice, improve your control of those movements and of your psoas muscles. When you have control, you are able both to tighten them and to relax them; that's freedom. Right now, you lack such control and they are "stuck" in contraction, and that's also why you need movement instruction in psoas control.

diaphragm; because they share the same tendon at the groin, they are called, "the iliopsoas muscles".

The iliopsoas muscles are large and long; pain may show up anywhere along their length. See the image, at right.



Because people so commonly treat psoas muscle pain with strengthening, stretching, massage and/or attempts at muscular relaxation -- with little or temporary benefit -- and because I know of a rather better approach than previous methods, I have written this article (1) to get you to understand the psoas muscles better, and (2) to invite and entice you to use that method (clinical somatic education), which is practiced by between one and two hundred specialists around the world. The "doing" by the way, is considerably easier than the "understanding" -- just so you know. Considerably.

Here, I discuss methods of treatment, healthy (and unhealthy) patterns of psoas muscle function, health conditions that often accompany tight psoas muscles, and why somatic education gets better results than strengthening, stretching, relaxation, or any other kind of manipulation treatment.

Abdominal Strengthening Exercises and Psoas Stretches

A protruding belly often accompanies psoas muscle pain. People may think that a protruding belly indicates weak abdominal muscles, and that's understandable, but look deeper.

Psoas muscle pain indicates tight psoas muscles. Tight psoas muscles, which lie behind the abdominal contents, pull the spine forward and push the abdominal contents forward, causing protrusion. A protruding belly may indicate tight psoas muscles, not weak abdominal muscles.

Tight psoas muscles put undue pressure on the bursa at the groin, causing iliopsoas bursitis and iliopsoas tendinitis.

Tight psoas muscles are constantly fatigued and sore, giving rise to pelvic and abdominal pain.

The way people commonly think about these two conditions -- protruding belly and tight psoas muscles -- gives rise to the way people treat psoas muscle pain.

- Protruding belly: abdominal strengthening exercises
- Tight psoas muscles: stretching exercises

Well, you can't correct either condition by strengthening and/or stretching. Here's why: The brain controls the tension level of the psoas muscles as part of its control of posture and movement (postural reflexes). Neither abdominal strengthening nor psoas stretching exercises can change postural reflexes, which control whole-body balance and coordination. You need to take another approach to correct psoas muscle problems: retrain the postural reflexes through movement training.

While retraining postural reflexes involves more than strengthening and/or stretching, it's effective where strengthening and stretching are not. Stretching exercises, such as the one shown above, generally affect the more superficial muscles adjacent to the psoas muscles more than they do the psoas muscles, themselves. Those adjacent muscles (gluteus minimus) are easier to feel and to control than are the deeper psoas muscles, so those are the muscles stretching exercises generally reach, leaving the psoas muscles essentially unaffected. Anyway, control of tension and length in movement is the real issue, not degree of stretch, and if you can't control it, you can't relax it.

Correcting the Protruding Abdomen

When the psoas muscles function properly, they stabilize the lumbar spine, causing a feeling of better support and strength; they allow the spine and abdomen to fall back, giving the appearance of strong abdominal muscles and the feel of a strong (i.e., effortlessly supportive) core. But it's not *strength* that's being felt, but *control and balance*. That different way of thinking is more accurate.

THE REST OF THIS ARTICLE MORE THOROUGHLY DISCUSSES THE RELATION OF THE PSOAS MUSCLES, ABDOMINAL EXERCISES, AND BACK PAIN, SO YOU UNDERSTAND WHAT MUST BE DONE TO CORRECT PSOAS MUSCLE PAIN AND ATTENDENT HEALTH CONDITIONS. IF YOU FIND THIS ARTICLE TO BE TOO MUCH, DON'T DESPAIR, JUST CLICK THE FOLLOWING LINK:



[Tight Psoas Muscles: Twelve Questions and Answers.](#)

-- or just click [here](#) to purchase the self-help instructional program.



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The Relationship of Psoas, Abdominal Muscles and Back Pain

The psoas muscles and the abdominal muscles are opposing pairs (agonist and antagonist) as well as synergists (mutual helpers). Closely coordinated interaction between the two is healthy; poor coordination between the two creates problems.

The psoas muscles lie behind the abdominal contents, from the lumbar spine to the inner thighs near the hip joints (lesser trochanters); the abdominal muscles lie in front of the abdominal contents, from the lower borders of the ribs (with the rectus muscles as high as the nipples) to the pubic bone.

If you want to contemplate how they interact, here are the ways.

AS ANTAGONISTS

(opposition between muscles):

- When standing, contracted **iliopsoas muscles** (whose tendons ride over the pubic crests) push the pubic bone backward; the **abdominal muscles** pull the pubic bone forward.
- The **psoas major** muscles pull the lumbar spine forward; the **abdominal muscles** push the

AS SYNERGISTS

(cooperation among muscles):

- In walking, the **iliopsoas muscles** of one side move the leg forward, and the abdominals bring the same-side hip and pubis forward. (discussed on more detail, below)
- The iliacus muscles, which feed into the quadratus lumborum muscles, which feed into the intercostal (rib) muscles. All these muscles move the trunk in the twisting/untwisting movements of walking.
- The **psoas minor** muscles pull the fronts of attached vertebrae (at the level of the diaphragm), down and back;

lumbar spine back (via pressure on abdominal contents and change of pelvic tilt).

- the abdominals push the same area back.
- One-sided contraction of the psoas muscles twists the torso and causes a sidebend toward the side of contraction (as if ducking to one side and looking over ones raised shoulder) -- it also retracts (pulls in) the leg toward the waist from within; abdominal muscles assist the shortening movement by pulling the hip (iliac crest) into the waist (part of being short-waisted).

Now, if this all sounds complicated, well, it is. What can I say? That's why a somatic educator is needed when someone develops psoas trouble. Fortunately, one doesn't need to keep all this in mind when we have developed good coordination; it just happens, movement feels right, and we feel well put-together.



[Tight Psoas Muscles: Twelve Questions and Answers.](#)

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Words on Abdominal Exercises

Exercises to flatten the belly (e.g., crunches) cause the abdominal muscles to overpower psoas and spinal extensor muscles that are already too tight. Co-contraction results, in which abdominal organs are sandwiched between tight muscles, front and back, which impairs their functioning (e.g., digestive/eliminative problems)

High abdominal muscle tone from abdominal crunches drags the front of the ribs down and causes a head-forward position. Results: (1) impaired breathing, (2) compressed abdominal contents with impaired circulation, (3) sluggish lumbar plexus function (4) chronic constipation (from sluggish lumbar plexus function), (5) poor postural alignment, (6) poor support; gravity then drags posture down, (7) muscular involvement (at the back of the body) to counteract what is, in effect, a movement toward collapse. This muscular effort (a) taxes the body's vital resources, (b) introduces strain in the involved musculature (e.g., the extensors of the back), and (c) sets the stage for back pain and back injury.

It is obvious from the foregoing that "inconvenient" consequences result from the strategy of abdominal exercise. A more fitting approach is to balance the interaction of the psoas and abdominal muscles.

When the psoas and the abdominal muscles counterbalance each other, the psoas muscles contract and relax, shorten and lengthen appropriately in movement. The lumbar curve, rather than increasing, decreases; the back flattens and the abdominal contents move back into the abdominal cavity, where they are supported instead of hanging forward.

The musculature and connective tissue of the legs, which connect the legs with the pelvis and torso, largely determine the pelvic orientation (postural position), and thus the spinal curves. If the feet are not directly beneath the hip joints, but are somewhat behind the hip joints (swayback), or more ahead of them (the stooped posture of "old age"), the strain tilts the pelvis -- and excessive lordosis or kyphosis follows (depending on whether the person has a swayback or a stoop). This postural effect involves the postural reflexes of standing balance, reflexes that involve the abdominal musculature. If the psoas muscles are tighter on one side than the other (pain on one side), abdominal muscles are tighter on one side than the other, and hip height asymmetry results, contributing to the appearance of unequal leg length.

Where movement, abdominal organ function, and freedom from back pain are concerned, proper support from the legs is as important as the free, reciprocal interplay of the psoas and abdominal muscles.



[Tight Psoas Muscles: Twelve Questions and Answers.](#)

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More on the Psoas and Walking

Dr. Ida P. Rolf described the role of the psoas in walking:

Let us be clear about this: *the legs do not originate movement in the walk of a balanced body; the legs support and follow. Movement is initiated in the trunk and transmitted to the legs through the medium of the psoas.*

(Rolf, 1977: Rolwing, the Integration of Human Structures, pg. 118).

(A TECHNICAL DISCUSSION OF BALANCED WALKING)

What this means is that movement forward starts in the trunk (as a slight leaning forward). That slight leaning forward starts as a shifting of weight onto one foot and a subtle lifting of the toes and/or front of that foot, which decreases support, so that you slightly sway forward. When you have swayed far enough forward, you spontaneously bring your other leg forward to catch your forward weight (knee movement forward initiated by the psoas). Your leg comes forward, your foot comes down and supports your weight as it comes forward; then your other leg comes forward. The movement is: foot, trunk, hip, knee, foot, in a cycle.

A casual interpretation of this description might be that the psoas initiates hip flexion by bringing the thigh forward. It's not quite as simple as that.

By its location, the psoas is also a rotator of the thigh. It passes down and forward from the lumbar spine, over the pubic crest, before its tendon passes posteriorly (back) to its insertion at the lesser trochanter of the thigh. Shortening of the psoas pulls upon that tendon, which pulls the medial aspect of the thigh forward, inducing rotation, knee outward.

In healthy functioning, two actions regulate that tendency to knee-outward turning: (1) the same side of the pelvis rotates forward by action involving the iliacus muscle, the internal oblique (which is functionally continuous with the iliacus by its common insertion at the iliac crest) and the external oblique of the other side and (2) the gluteus minimus, which passes backward from below the iliac crest to the greater trochanter, assists the psoas in bringing the thigh forward, while aligning thigh rotation so the leg (optimally) swings directly in the line of travel (not commonly seen, but then idiosyncratic muscular tensions and inefficient movement are more common than well-organized movement -- so common that they are taken as "normal"). The glutei minimi are internal rotators, as well as flexors, of the thigh at the hip joint. They function synergistically with the psoas.

This synergy causes forward movement of the thigh, aided by the forward movement of the same side of the pelvis. The movement functionally originates from the somatic center, through which the psoas

passes on its way to the lumbar spine. Thus, Dr. Rolf's observation of the role of the psoas in initiating walking is explained.

Interestingly, the abdominals aid walking by assisting the pelvic rotational movement described, by means of their attachments along the anterior (front) border of the pelvis. Thus, the interplay of psoas and abdominals is explained.

When the psoas fails to lengthen properly, the same side of the pelvis is restricted in its ability to move backward (and to permit its other side to move forward). Co-contracted glutei minimi frequently accompany the contracted psoas of the same side, as does chronic constipation (for reasons described earlier). The co-contraction drags the front of the pelvis down. The lumbar spine is bent forward, tending toward a forward-bending posture, which the extensors of the lumbar spine counter to keep the person upright; **as the spinal extensors contract, they suffer muscle fatigue and soreness. Thus, the correlation of tight psoas and back pain is explained.**

As explained before, to tighten the abdominal muscles as a solution for this stressful situation is a misguided effort. What's needed is to improve the responsiveness of the psoas and glutei minimi to voluntary control, which means your ability to contract and relax them in movement.

A final interesting note brings the center (psoas) into relation with the periphery (feet). In healthy, well-integrated walking, the feet assist the psoas and glutei minimi in bringing the thigh forward. The phenomenon is known as "spring in the step."

Here's the description: When the thigh is farthest back, in walking, the ankle is most dorsi-flexed. That means that the calf muscles and hip flexors are at their fullest stretch and primed by stretch receptors, in those muscles, to contract. This is what happens in well-integrated walking: assisted by the stretch reflex, the plantar flexors of the feet put spring in the step, which assists the flexors of the hip joints in bringing the thigh forward.

Here's what makes it particularly interesting: when the plantar flexors fail to respond in a lively fashion, ones feet lack spring and the burden of bringing the thigh forward falls heavily upon the psoas and other hip joint flexors, which become conditioned to maintain a heightened state of tension and readiness to contract, and there we are: tight psoas and back pain. Note that ineffective dorsi-flexors of the feet (lifters of the fronts of the feet) lead to tripping over ones feet, when walking; to avoid tripping over ones own feet, the hip flexors must compensate by lifting the knee higher, leading to a similar problem. The answer to this problem, by the way, is not usually to strengthen the muscles of the shin (dorsiflexors), but to free the muscles of the calf, which are usually too tight.

Thus, it appears that the responsibility for problems with the psoas falls (in part, if not largely) upon the feet. No resolution of psoas problems can be expected without proper functioning of the lower legs and feet.

(TECHNICAL DISCUSSION ENDS)

SUMMARY

The psoas, iliacus, abdominals, spinal extensors, hip joint flexors and extensors, and flexors of the ankles/feet all cooperate in walking movements. Poor coordination (generally through over-contraction or non-responsiveness of one or more

- Click for [An Essential Understanding of the Psoas Muscles](#)
- For a **disclosure** of the basic principal and primary technique of clinical somatic education, click

of these "players") leads to dysfunction of the others and often to back pain. To strengthen the abdominal muscles is often misguided effort to correct problems that lie elsewhere - which explains why, even though abdominal strengthening exercises are so popular, back pain is still so common.

Because psoas problems are really movement and control problems (dysfunctions of "muscle memory/movement habit" problems), somatic education provides a better solution for the problem of psoas pain or back pain than abdominal strengthening exercises, which miss the other major players, and than stretching or simple relaxation exercises, which cannot effectively modify movement habits.

[Definitive Pain Relief from Somatic Education.](#)

- For a **preview** of the self-help program, click [Free Your Psoas](#).
- For a **description** of a clinical somatic education session, click [here](#).
- To **see** somatics in action, click [here](#).
(CLICKING THESE LINKS OPENS NEW BROWSER WINDOWS, WHILE THIS ONE STAYS OPEN.)

WHAT TO DO?

This article presents the basis for the self-help program for freeing tight psoas muscles, [Free Your Psoas](#).

Click [Free Your Psoas](#) for a video overview of the self-help program of therapeutic exercises for lumbopelvic and groin pain. An email window will open; send the message and you'll receive preview instructions via return email (to the email address from which you sent the message).

In the near future, I will post a page with video clips of the introductory segments of all of the somatic exercises in that program.

- Self-care [instruction on DVD](#), though not as fast as clinical sessions, is effective.

Remember to bookmark this page for convenient future access.



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