

# Pelvic Organization and Psoas Function as Influenced by Inflammation and Pregnancy

By Dorit Schatz, Certified Advanced Rolfer™, Rolf Movement® Practitioner

In this article I want to facilitate an enhanced awareness of major physiological conditions the body goes through that highly influence the internal and external organisation of pelvic structure and psoas function. Some of the bony and functional dysfunctions are protective patterns associated with organs ranging from kidneys to the ovaries and the prostate. These patterns allow for better organ function. If eliminated without first helping the inner tissues, this will cause an inflammatory episode of a chronic inflammation or malfunction of the organ. If treated with respect and care for all tissues, we can help the body to come to a higher level of reorganisation and recuperation of its own healing properties.

## The Case of Inflammation

Inflammation can be caused by microbes (such as bacteria, virus, fungus, etc), physical trauma, and overuse of tissue. All of us have undergone intestinal inflammations; many of us have had infections of the bladder, kidney, ovary, spermatic duct, prostate, and others that directly influence the organization of the pelvic ligaments and musculature crossing the pelvis and thus the spatial arrangement of the pelvic bones. Many of us have gone through inflammatory processes caused by physical trauma of various origins.

All of these inflammations have typical stages with typical physical reactions to them:

- Acute exudation phase: increased circulation in the area of microcirculation, change of the permeability of the blood vessels, leakage of the exudate, emigration and transmigration of inflammation cells to the area of lesion,

all of them leading to swelling, redness and heat.

- Pain coming from inflamed nerve endings.
- *Functio laesa*, meaning inhibited function of the organ / muscle / tissue to ensure the healing process.
- Accumulation of inflammation cells.
- Activation and genesis of richly capillarized reparative tissues.
- Proliferation of fibroblasts leading to scar tissue.
- Sometimes necrosis, if all reparative skills of the body fail.

There are different courses an inflammation can take:

**Acute:** the inflammation goes through all typical stages and heals mostly completely (*restitutio ad integrum*).

**Subacute:** the presence of an inflammation does not become as clear, the bodily responses are often not strong enough to completely heal, persistent defects occur.

**Chronic:** not completely healing, reoccurring episodes, persistent defects may get stronger with each episode.

**Subsequent:** other tissues get overused by trying to bridge joints that are lacking normal motion and function of tissues in a *functio laesa*-state or after necrosis.

Typical persistent defects are, among others: ongoing chronic inflammations, with swelling, heat, pain; and adhesions in the surrounding tissues, which cause irritation and pain. These irritations trigger uncoordinated muscular activity, fascial strain patterns, and exaggerated muscular

responses, or there can also be a remaining protective pattern of avoiding any tonus of the surrounding musculature and fascia in order to inhibit further responses of the organs, muscles, and tissue and in residual scars.

It seems to me that many imbalances in the body are caused by remaining patterns of *functio laesa*, where body and often psyche are stuck in the stage of an inflammation or trauma reaction and have somehow not come to the full end of the healing cycle. Thus body and soul have not come to the realization of the fact that it is over.

If we have a look at the effects on the surrounding tissues, we find that inflammations have a tendency to travel along certain routes. Different bodies seem to have different preferences. For some it will mostly be the lymphatic travel-paths, including interstitial liquids; for some, the nerves or blood vessels; for some, the ligaments, and for others the muscular fascia.

Glands normally will have a lymphatic activation, but the prostate, for example, often causes direct co-inflammations of the ligaments from sacrum to prostate/urethra (the male equivalent to the sacrouterine ligaments). Inflammations of the intestines or tubes / ovaries, spermatic ducts / prostate, and even bladder have a tendency to be stronger on one side of the body than the other. The inflammation will first cause an activation and shortening of the ligament. Thus a co-inflammation of these ligaments will cause an inner pull on the sacroiliac joint that leads to a block of movement there. The sacrum will deviate from its normal position, and all muscles of the area will have to form stabilization chains to counterbalance. Due to the inner swelling of the tissue in the whole area and the increased circulation, there will be a dull pain in the lower back. Figure 1 shows the uterine ligaments.

With a chronic inflammation the body can come to the other extreme of reaction: repressing all nerve information coming from an area and deactivating the local ligaments and structures to stop the constant alarm. A reactivation through Rolfing® Structural Integration and Rolf Movement® work thus might reawaken an old pain or cause an episode of a chronic infection. Both have to be seen as opportunities for healing. In case of the chronic infection, the body might finally

have the power to heal, or the person can see a health practitioner who treats the disease. Reorganizing the area through fourth-, fifth-, and sixth-session work from the Roling Ten Series might help bring the organ to a spatially more healthy position, where the body's own properties of healing can work better.

With kidney infections, or trauma in the back at the level of the kidneys, we often have an influence on the psoas (see

Figure 2). It can either be stuck in hyper- or hypotonus. It can also be completely deactivated, generally on one side more than the other. Delicately applied psoas work can considerably help a kidney that is in trouble. As we all know, when a psoas is not active, the iliacus will try to help the situation; thus, depending on which portion of the iliacus is more active, the ilium might get pulled into anterior tilt or the hip joint might get fixated. This will influence the position of the sacrum and influence all

other ligamentous and muscular balances of the pelvis.

## The Influence of Pregnancy

Another example I want to roughly sketch out is changes due to pregnancy. Ligamentous stretch through the influence of the hormones starts right at the beginning of the pregnancy. Muscular stabilization has to take over. Some women create stabilization in upright position more through muscular action, while others lean into their ligaments a lot. For the latter, already in early pregnancy, this represents a big shift in the method used to stabilize the body. They have to relearn stabilization, and will have a tendency to sacroiliac joint problems early in pregnancy, when the increasing weight cannot yet play a sufficiently explicative role. The pubic symphysis can increase its physiological deviation from a few millimeters to a whole inch (2-3 cm.) and in some cases up to 2 inches. This of course influences all surrounding tissues and is a major task for stabilization in motion.

*In utero*, most babies have a preferred position. If the baby's back is on mother's left side, the mother's psoas on that side will have to react, because the head of the baby is being pushed towards the ilium more often and more strongly than on the other side. At first that muscle might react with contraction, but over the course of time it will become more deactivated. According to gynaecological literature, 60% of babies prefer their back to be on mother's left side.<sup>1</sup> The push of the baby's head will often cause the ilium to come into anterior tilt: the ligaments of the sacrum, and the organization around the sacrum (including the piriformis), will try to counterbalance. Many times these patterns will persist after delivery. Roling work can help a lot to support the client coming back into balance.

## Conclusion

Knowing our clients' histories will help us to make an informed assessment of where to work and what to expect as probable reactions to our work. It will also help us prepare our client's awareness for physiological healing reactions.

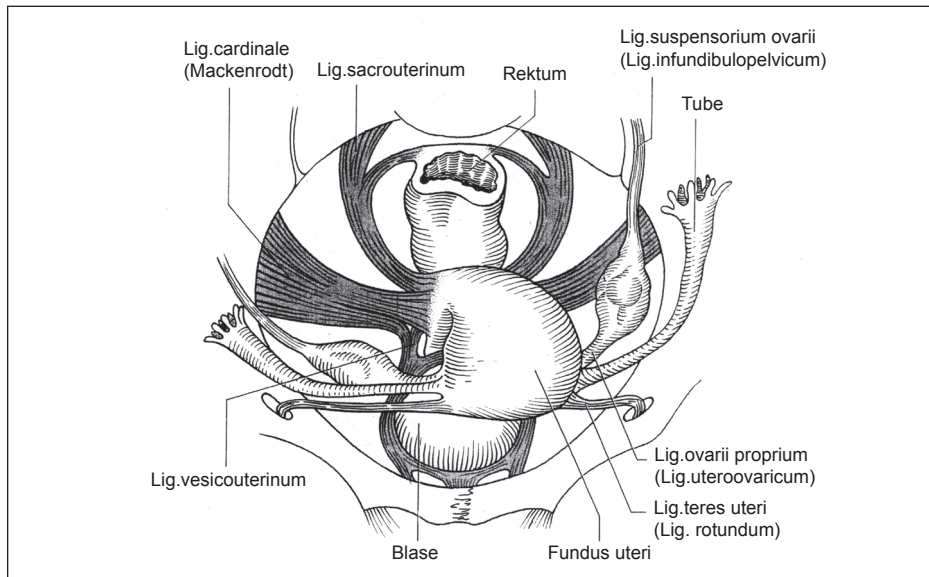


Figure 1: Uterine ligaments (from Martius Hebammenlehrbuch, Thieme-Verlag, 1984).

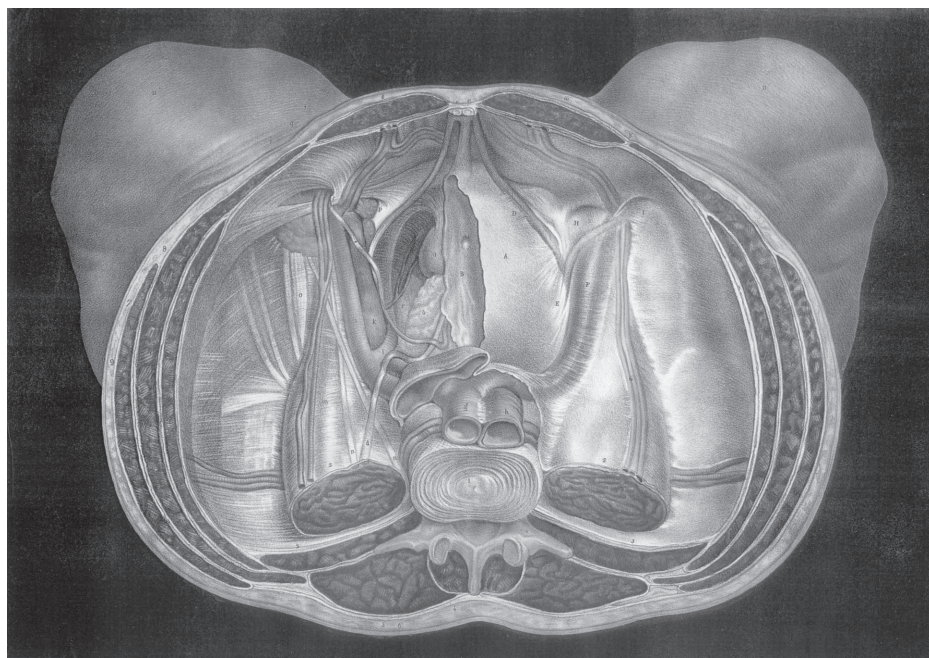


Figure 2: Inside the pelvis (from *Iconografia d'Anatomia Chirurgica e di Medicina Operatoria*, by Dr. J. M. Bourgery, Serantoni Editors, Florence 1856, courtesy of Pierpaola Volpones).

**Endnotes**

1. Pschyrembel and Dudenhausen, *Praktische Geburtshilfe*. Berlin, New York: de Gruyter, 1986.

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# Assessment and Thoracic Viscera in Structural Integration

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Connective tissue in the human body is a single three-dimensional web comprising approximately 20% of the weight of the body. Dr. Rolf taught that, collectively, this web is the organ of support, defining and maintaining spatial relationships among the other 80% of our body's constituents. In her work, Rolf worked with much less than this essential 20% of the body. This article humorously explores more of this splendid connective tissue.

Rolf's doctorate was in biological chemistry and most of her published scientific work is on transformations of the lecithin molecule. During her biochemical studies she gained no more than a passing acquaintance with human anatomy, nor is she known to have taken any coursework in anatomy. Her human anatomy, learned largely or entirely after she received her doctorate, was self-taught, and her knowledge of anatomy remained limited.<sup>1</sup>

When Rolf began working with human structure, she first worked as an artist with a visual perspective. She maintained throughout her Rolfining® Structural Integration (SI) career that it was possible to know everything one needed to know to structurally integrate a person from visual inspection of contour alone. In her work she demonstrated the truth of this statement; however, Rolf was working with myofascia, superficial fascia and investing fascia, a fraction of the body's connective-tissue matrix. In recent years, Rolfers have begun to work with additional portions of the connective-tissue web – meninges, bone, joint capsules, organ support membranes, nerves, and blood vessels. When these other, and often deeper, portions of the connective-tissue matrix are included, visual inspection of contour remains an essential feature of SI assessment, but is no longer sufficient.

Sufficient in what sense? Rolf also taught that we should continuously ask the

question, "Where can I work on this person that will make the greatest positive change for the whole system?"<sup>2</sup> This article will illustrate how additional assessment methods become necessary to answer this question of where to work most fruitfully, when additional portions of the connective-tissue matrix are to be addressed. Aspects of organ support membranes, vasculature, and dura in the thorax will be reviewed as a platform for illustrating this viewpoint on assessment.

## Thoracic Organs: Pleura and Walls of the Mediastinum

The thoracic contents include the lungs, heart, and thoracic duct as well as portions of the aorta, esophagus, vagus nerves, and phrenic nerves. A partial description of these and some of their support membranes will be given.

On the inner surface of the chest wall lies the endothoracic fascia, which is well-adhered to the periosteum of the ribs and the myofascia of the intercostal muscles. It also continues above the first rib as part of the pleural cupola. Just deep to this lies the parietal pleura. The parietal pleura is adhered to the endothoracic fascia; however, in dissection it is substantially easier to separate the parietal pleura from the endothoracic fascia than it is to separate the endothoracic fascia from the ribs and intercostals.

To trace the principal membranes supporting the thoracic organs, imagine a small creature, which will crawl along the membranous surfaces. This creature, Geekus Anatomicus Rolfinensus, somewhat resembles a centipede but has interesting behavior – it has great curiosity, but is also monomaniacal; it likes to walk, but only knows how to walk in a cardinal plane, and will always keep its feet on the same surface, never picking up all of its feet to

**Errata**

"Becoming a Rolfer: An Instructor's Overview, a Student's Project, and Mentoring"

In the December 2010 issue of *Structural Integration: The Journal of the Rolf Institute®*, an error appeared on page 8 in Table 2 in the article "Becoming a Rolfer: An Instructor's Overview, a Student's Project, and Mentoring." The second column of data should have had the heading "% of Activated Students Experiencing Sign." We regret any confusion this may have caused.