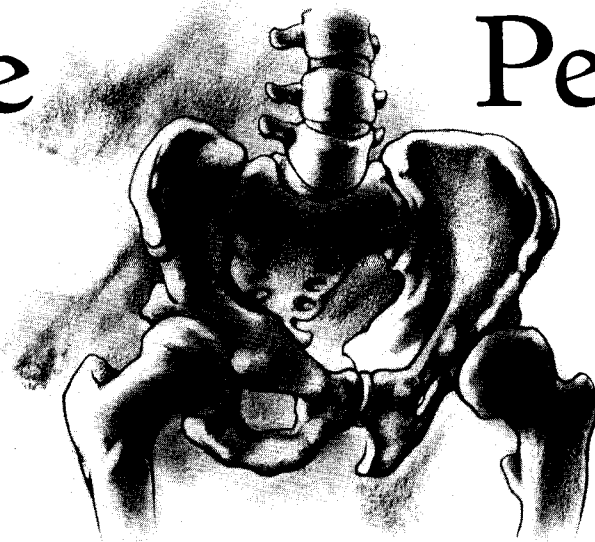


# In and Around the Pelvis



## with Jan Sultan

by Jan Sultan

Illustration: Shane Fox

The isolation of the pelvis as a segment, separate from the whole, is an artificial and arbitrary division, necessary for the discussion of structure, technique and methodology. In fact, the pelvis is a very busy "crossroads" of function and structure; where viscera-autonomic, musculo-skeletal-myofascial, and body-image-psychological components all interface to make up this component of the whole busy indeed.

Your intent as a therapist may be directed toward one aspect of this area more than another depending on the system you are working with and on the present needs and state of your client.

Whatever the intention, there are some basic concepts and observations about the pelvis that are constants you will be dealing with.

I should say that my premises about interaction between client and therapist hold that it is intention and focus of attention, as much as technique, that will determine the result of the interaction. That in touching the body, what you *think* you are doing influences what happens. You may touch the low back with an attitude of inquiry to determine the state of the underlying musculo-fascial and osseous tissues and not evoke any particular reaction from the client. On the same person, same place and same depth of touch, but with the intention to access emotional material, you may indeed evoke a release of feeling. This may take a variety of forms ranging from a sigh to active sobbing.

In the light of this, my intention here is to talk mainly about structure and interrelationships in this region, rather than technique and intention which, again, will be determined by your "school" of approach and by the specific needs of the client.

The understanding of this region is greatly enhanced by the recognition of fascial continuity. The connective tissues, collectively, are the medium of transmission of kinetic energy across segments; they are a system unto themselves that also have the roles of maintaining position and structural relationships and

that the visceral organs, contractile elements of the locomotor system, bones and neural tissues are all packed in, and invested by, various kinds of connective tissues. Taken as a whole system, the connective tissues resemble nothing so much as a 3-D body stocking or union suit with a "place" for everything in it.

The fascial continuity implies that there are no truly local effects or events in the system. When this idea of continuity is coupled with a working knowledge of musculo-fascial anatomy, it gives the practitioner an eye for the interrelatedness of the elements in the system.

In this view then, the only level where there is a distinct pelvic "segment" is skeletal. Even here the two ilia must "share" the sacrum with the spine, and while it completes the shape of the pelvis and is often considered to be part of it, the genesis of the sacrum is a fusion of vertebral elements knit between the posterior aspects of the ilia by strong ligaments and interfaced with them by a synovial joint, the sacro-iliac.

So, with these observations as context, let us go on a guided tour of key areas around the pelvis with an eye to the interrelationships distal to those areas and the various depths involved.

Your client is prone (face down) on the table. You are standing beside the table facing headward. Place your hands over the iliac crest area, thumbs pointing headward. This is a key area as many structures find their attachments along the bony edge of the iliac crest.

The first structural layer, deep to the skin, is the lumbar fascia. This is actually a broad "aponeurosis," anchoring the latissimus dorsi to the spinous processes of the lumbar and lower thoracic vertebrae, and to the medial third of the iliac crest. It also covers the dorsal surface of the sacrum.

If you work with your thumbs along the superior edge of the medial third of the crest (fig. 1), you will come to the interface between the attachments of the lumbar fascia and the perios-

teum of the ilium. In many people, you will find undifferentiated loose connective tissue and fat deposits here. The lumbar fascia is deep to these tissues. Do not try to break-up these masses, but work through them until you "sound" the bony edge. As you make contact at this depth, the whole latissimus will begin to release and a spreading effect can radiate along the fibers of the latissimus to the posterior border of the axilla where the latissimus has its superior insertion on the humerus.



Fig. 1. Work with your thumbs along the superior edge of the iliac crest.

If you move your hands just inferior to the crest so your thumbs are pressing up under the ridge, you are on the gluteal fascia. Medially, the fibers of this fascia are continuous with the lumbar fascia covering the sacrum and thence all along the medial 2/3 of the crest. As you come "around the corner" of the crest anteriorly, you come onto the fascia lata. For practical purposes, this is continuous with the gluteal fascia. Working along the inferior edge of the iliac crest will spread release from the coccyx (which is also wrapped by gluteal fascia) laterally and inferiorly and from the fascia lata, inferiorly, to blend with the fascia lata proper (fig. 2). There is continuity of fibers from the crest to the lateral aspect of the knee. Intervention anywhere along this sheet will have effects all along it.

Coming back to the superior edge of the iliac crest, we now go deeper to find the inferior attachments of the long spinal muscles along the medial third of the crest. Some of the attachments of these structures are into aponeuroses that are part of the lumbar fascia, anchoring to the sacrum and lower lumbar as well as to the bony crest itself.

The layering here is extensive. With your thumbs just lateral to the posterior superior iliac spine and superior to the crest, you can count down through four or five layers (depending on how you count them) between the surface and the vertebrae. While the depth here means it takes a fair amount of pressure to get it, you can expect spreading effects all along these layers headward and down deeply along the spinal column.

Some distinction should be made regarding the "spinal groove" and the mass of the erector spinal group. When you press into the groove, you have direct access to the rotatores, multifidus, and the ligamentous and fascial structures at the level of the vertebrae. When you move laterally onto the mass of the erector bundle, you have several distinct layers of musculo-fascial tissues between your hands and the skeletal layer.

Moving more laterally, you contact the lateral border of the erectors. Here, there are many slips of insertion of erector fibers into the periosteum of the ribs.

It is this lateral border that "becomes" the lateral edge of the

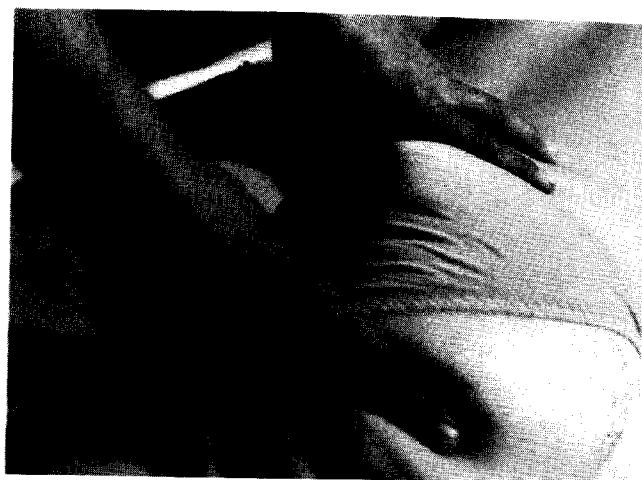


Fig. 2. Work along inferior border of gluteal fascia from coccyx to trochanter.

lumbar fascia which ultimately inserts into the iliac crest, sometimes as far forward as the coronal plane. Here, pressure will spread an effect in several directions (fig. 3): superiorly along the lateral edge of the lumbar fascia and spinal erector mass, deep through the internal obliques (which insert deep to the lumbar fascia along the crest) into the quadratus lumborum and ultimately to the iliopsoas, which lies pre-vertebrally with the iliacus and has attachments all along the inner edge of the iliac crest.

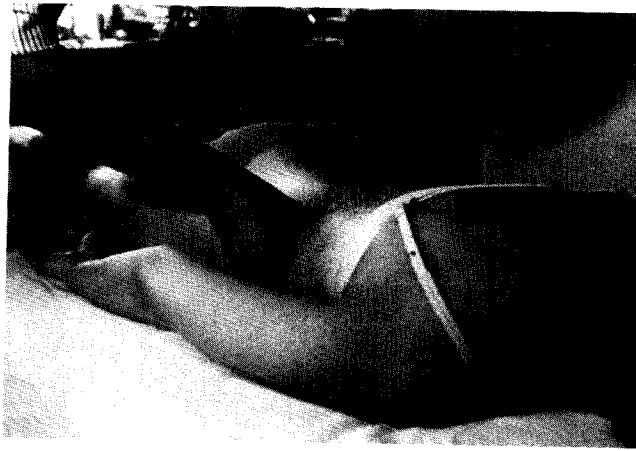


Fig. 3. Work along the lateral border of the lumbar fascia.

In light of these structural observations, it is possible to project a sequence of moves as a way to incorporate this information into a massage session. Assume the work is bilaterally symmetrical, although only one side is described. With the client face down, initially the therapist begins to work from the posterior superior iliac spine (PSIS) laterally, inferior to the crest with successive strokes pressing deeper as the tissue "warms up." Stay close to the bone and work all the way around to the anterior superior iliac spine (ASIS).

Next, come back to the PSIS and this time work diagonally lateral, and inferior, toward the trochanter. This will pick up the inferior margin of the gluteal fascia as it traverses the buttock to blend with the fascia lata on the way to the knee. Now, go ahead and follow that edge all the way down to the knee. Note that fibers of this same continuum cross the lateral aspect of the knee to blend with the fascia over the head of the fibula.

Come back to the PSIS and begin medial to it, working into the space over the sacrum. Then, work superior and lateral along the superior margin of the crest as far as the lateral

border of the lumbar fascia.

From here, work headward along the lateral edge of the lumbar fascia and pick up the lateral edge of the erectors as you cross onto the 11th and 12th rib and above (fig. 4).



Fig. 4. Pick up the lateral edge of the erector spinae.

As you work here, go slowly enough to be aware of small knots and hard places in those attachments on the ribs. Also work along the anterior border of the latissimus, from lumbar fascia to the posterior edge of the axilla (fig. 5).

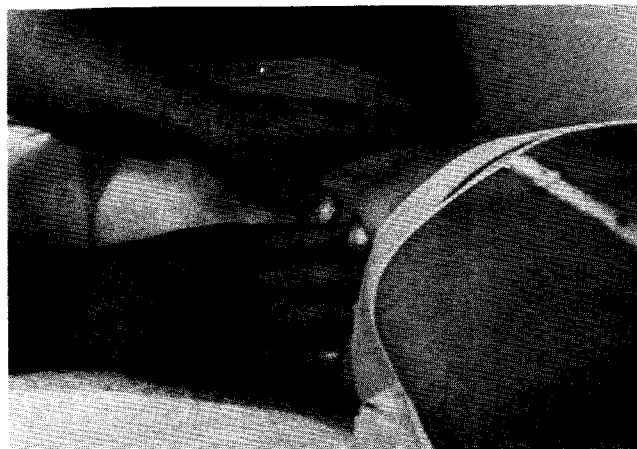


Fig. 5. Work along anterior border of latissimus.

Now, come back to the PSIS and this time, work into the spinal groove starting on the sacrum and systematically going deeper as the tissue responds. Several passes are appropriate and generally the work should go as high as T-8, where the superior medial border of the latissimus and the inferior attachments of the trapezius insert into the dorsum.

Now, let us turn the client over (supine) and look at the ventral aspect of the pelvis with an eye for structural relationships.

The major bone landmarks we will use here are the ASIS, the iliac crest (as in the prone position), the pubic symphysis and the greater trochanter of the femur.

Your client is face up and you stand at the side of the table facing headward. Place your palms over the ASIS, thumbs on the abdomen side and fingers onto the space between the crest and the trochanter.

Under your thumb at the ASIS, the belly wall is three distinct muscular layers thick. These layers are attached along the superior margin of the crest and, if you follow along the crest toward the coronal line, you will come to the place where we left off (with the client prone), the lateral edge of the lumbar

fascia. The layers of the abdominal "tube" go under this lumbar fascia and then "split" to invest the quadratus lumborum and erectors posteriorly, and the psoas and renal structures, anteriorly. It should be noted that the deep muscular layer of the abdominal tube, the transversus abdominis, has attachments that inter-digitate with the costal attachments of the diaphragm on the inside of the rib cage. The pattern of attachment mirrors that of the "sawtooth" interdigitation of the serratus anterior and the external oblique on the lateral ribcage.

By virtue of these anatomical "avenues," work on the belly wall itself, especially along the crest, the lower ribs and costal margins will be carried deep intra-pelvicly, inter-thoracicly, and pre-vertebrally.

Back at the ASIS and moving medially across the abdomen, we come to the lateral border of the rectus abdominis. Here, the fascia of the three layers of the belly wall split to invest the rectus, in much the same way as the posterior investment of the erectors, quadratus and psoas.

Moving from here toward the pubes, we come to the attachments of the rectus on the middle third of the pubic arch, covered by a broad, thick fascia with reinforcing fibers running laterally toward the inguinal ligament and the ASIS. It is interesting to note that the bladder has its suspensory ligaments (the urachus) attached to the inner surface of the peritoneum, on the midline *behind* the attachment of the rectus on the pubes.

Working on the lateral border of the rectus will ease the whole muscle from pubes to rib cage on both the superficial and deep surfaces. This means that you can work on the surface and get deep intra-abdominal effects. Once again, reference the ASIS as a beginning point. Move *just* medial on a line about an inch below the navel. Now, go deep to the belly wall and follow the curve of the ilium in. You're touching the surface of the iliacus here, which lines that inner surface of the ilium (fig. 6).



Fig. 6. You're touching the surface of the iliacus here.

The investing fascia of this layer runs deep into the pelvis and superiorly to the inside of the iliac crest, medially to the psoas and renal structures, and inferiorly to blend with fibers of the levator ani, obturator internus and other structures of the pelvic floor.

If the pressure is carried deep and medial along the concave surface of the iliacus, the psoas can be easily palpated as a bundle of vertically-lying fibers with a range of tonus varying from full and flexible to hard and "stringy," depending on the physical make-up of the individual (fig. 7).

Now, move back to the ASIS and consider some structures that lie outside the abdomen. From the ASIS, move laterally to

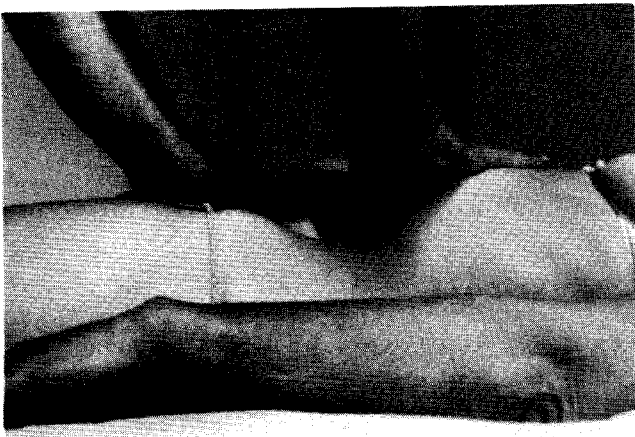


Fig. 7. The psoas can be easily palpated.

find the tensor fascia lata, gluteus minimus, and gluteus medius making up a layered bundle, wrapped in thick fibrous connective tissue. The surface is continuous with the fascia lata all the way to the knee and across to the head of the fibula. The deeper layers of the gluteus minimus and medius span from trochanter to crest and primarily function as abductors and auxiliary flexors of the leg on the pelvis. The overlying fascia is continuous posteriorly with the gluteal fascia.

Come back to the ASIS and move just inferior to it. Here are the attachments of the quadriceps femoris. Medial to this we find the femoral triangle whose medial border is made up of adductor structures and lateral border the aforementioned quadriceps and the sartorius. Deep in this triangle is the posterior pole of attachment (on the lesser trochanter) of the psoas and iliacus by a common tendon.

At this level then, there is continuity of fascia from the deep inner aspect of the leg, across the pubic arch, across the pelvis, lateral to the spine and finally to the posterior fibers of the diaphragm round the 11th and 12th rib and vertebral bodies of upper lumbar.

So, given these anatomical references again, let us see how this information might be incorporated into a massage session. Although one side will be described, it is assumed that the work will be done bilaterally.

Begin with strokes that work the belly wall superficially from ASIS to the costal arch and the crest of ilium to the short ribs. Pay special attention to the lateral edge of the rectus abdominis and work close to the costal margin and the crest as far back as the anterior attachments of the lumbar fascia.

Work from the center of the pubic arch headward along the belly of the rectus abdominis. At the attachment on the pubes, work progressively, deeper and slower, to have the effects go into the pelvic basin.

Now, go inside the ASIS and with slow pressure get onto the iliacus. This can be a very "jumpy" place for many people, so it is important to modulate your speed of entry and quality of touch to allow for this.

If the person will tolerate it, you can work medially until you contact the psoas. Rather than working on it with "strokes" at this depth, it will be enough to press and hold with your thumbs along the fibers. Again, the client will determine how much you work here. Expect the effects to radiate far and wide. Many chronic backaches have involvement with psoas and iliacus hyper- or hypo-tonus.

The lower abdomen and groin are often "loaded" places with a lot of emotional content in the tissue. The same general comments could be made about massage in this area as with the iliacus. Pay attention to the client's response for feedback as

you work.

On the fascia lata area, use steady palm-pressure from crest toward the trochanter and knee in a series of progressively deeper strokes. Gradually cross medially to the area just below the ASIS and the lateral border of the femoral triangle (fig. 8).



Fig. 8. Use palm pressure from crest toward trochanter.

The tissue here and over the tensor fascia lata is very tough and inelastic, but massage here is very good for energetic release even if you do not feel tone changes under your hands.



Fig. 9. If you can, work deeply into the femoral triangle.

Move now, medially, into the femoral triangle and work as close to the inguinal areas as is comfortable for the client. Generally, the strokes should run from groin toward knee. The use of the flat palm and heel of the hand here are less "ticklish" if the client is very sensitive. If you can get deep into the triangle with your thumb or fingers and work inferiorly, the effects can range far and wide as referenced by the anatomy of the region (fig. 9).

In the foregoing material, I have tried to show how there is an order and logic to the anatomy of the body. A working knowledge about structure will enhance your effectiveness and creativity in whatever branch of the manual therapies your interest takes you.

While I find the use of "anatomese" to describe these events a bit cumbersome, it is a universal language. The standardization allows us to communicate across the disciplines and avoid the pitfalls of becoming so insular in our syntax that we can only talk to those in the same school. ■

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*Photos by Ivan Sultan.*