**Sacrum Dysfunction** 

# **Structural Yoga Therapy Course**

June 29, 2008 New York

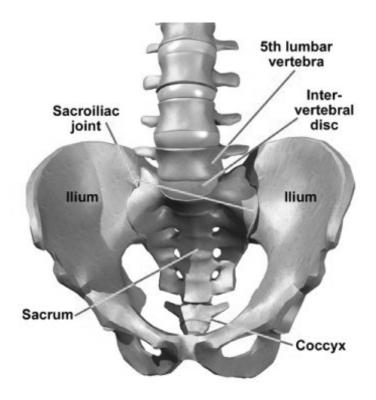
By

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# 1 - Case study

# a – <u>Initial intake</u>

Geraldine is a French woman, 35 years old, who is now living with her husband and 11 months old son in the north east. Her husband is here for a program at MIT and she is currently working part-time at home as a marketing manager. In addition, she also takes part-time courses at an Extension Center and is taking care of her young son. She has a baby sitter during the time she goes for the courses. *"Life currently is really hectic for me*" she said.

Before being a mother, Geraldine used to work out at the gym, participated in biking, Pilates and Ashtanga Yoga. During the time she was in France (5 years ago) she did kick boxing twice a week, running 3 times a week and walking to almost all locations within walking distance. In Finland 3 years ago, she ran during weekends, went to work by bike and joined a fitness club where she took classes almost every day. Classes included: Pilates, cycling, aerobics, stretching, abs, and Ashtanga yoga.

She enjoyed her fitness routine so much until one day she was struck by pain at sacrum area (pain ran from S1-5, right to left side) This pain occurred 3+ years ago (Summer of 2005)

The Doctor in Finland where she first visited assured her that there was no structural problem. He called the condition Lumbago (general kind of pain). He showed her how to do Uttanasana (Forward Bend Stretch), which helped to alleviate the pain. No medical treatment was needed. Not long after that the pain reemerged and "froze" her in pain again. She had to stay in bed in Apanasana pose for 3 days. Since moving to France, a doctor there also found no structural problem and recommended applying hot packs for 3 days, which helped relieve the symptoms. She said static standing like queuing is very tough for her as it caused pain at the sacral areas. However, if she does Uttanasana or is moving around this helps to alleviate it. No major pain happened during the time she was pregnant. However she tends to experience pain whenever she is tired, lacks sleep, or is sitting or standing static for a long time. The condition gets better with rest. It is an intermittent issue.

Geraldine's goal for working with me is to eliminate her Sacrum Pain (short term), build a stronger hip girdle (medium) and obtain better posture and lose down 10 pounds (long term). She has shown commitment to her daily homework with good feedbacks so far. I have also assured her that I was ready to dedicate considerable time and energy to her case.

| Range of Motion Assessments     |         |             |             |             |             |           |           |
|---------------------------------|---------|-------------|-------------|-------------|-------------|-----------|-----------|
| Joint Action                    | ROM     | March<br>25 | March<br>25 | April<br>29 | April<br>29 | June<br>5 | June<br>5 |
|                                 | Norm°   | Left        | Right       | Left        | Right       | Left      | Right     |
| KNEE                            |         |             |             |             |             |           |           |
| Extension                       | 0°/180° | 10          | 10          | 10          | 10          |           |           |
| Flexion (Supine)                | 150°    | 125         | 128         | 136         | 139         | 143       | 145       |
| HIP                             |         |             |             |             |             |           |           |
| Flexion (Bent Knee)             | 135°    | 110         | 105         | 125         | 123         | 136       | 135       |
| Flexion (Straight-Leg<br>Raise) | 90°     | 55          | 53          | 67          | 69          | 86        | 88        |
| Flexors-quad/psoas restriction  | NSS     |             |             |             |             |           |           |
| External Rotation (Supine)      | 45°-60° | 40          | 35          | 45          | 42          | 45        | 45        |
| Abduction (Side Lying)          | 45°     | 30          | 31          | 38          | 40          | 45        | 47        |

# b - Physical assessment and posture body reading

# Muscle Testing Assessments

| Joint Action                 | April<br>02 | April 02  | April 29  | April<br>29 | June<br>5 | June<br>5  |
|------------------------------|-------------|-----------|-----------|-------------|-----------|------------|
|                              | Left,       | Right, 1- |           | Right,      | Left,     | Diabt 1 5  |
| KNEE                         | 1-5         | 5         | Left, 1-5 | 1-5         | 1-5       | Right, 1-5 |
| Futencien                    |             | 2.        | 0.5       | 2.5         | 25        |            |
| Extension                    | 3           | 3+        | 3.5       | 3.5         | 3.5       | 4          |
| Flexion                      | 2.5         | 2.5       | 2.5       | 2.5         | 3         | 3          |
| HIP                          |             |           |           |             |           |            |
| Hip Flexors & Abs (Supine)   | 2.5         |           | 2.5       |             | 3         | 3          |
| Trunk Flexion (Supine)       | 3           |           | 3         |             | 3.5       | 3.5        |
| Hip Flexors - Bent Knee      |             |           |           |             |           |            |
| (Supine)                     | 2           | 2         | 3         | 3           | 4         | 4          |
| Iliopsoas Isolation (Supine) | 2.5         | 2.5       | 3         | 3           | 4         | 4          |
| Sartorius Isolation (Supine) | 3           | 3         | 3         | 3           | 3.5       | 3.5        |
| Abduction (Side Lying)       | 3           | 3         | 3.5       | 3.5         | 4         | 4          |
| Adduction (Side Lying)       | 2           | 2         | 3         | 3           | 4         | 4          |
| Gluteus Maximus Isolation    |             |           |           |             |           |            |
| (Prone)                      | 3           | 3         | 3         | 3           | 3.5       | 3.5        |
| External Rotation (Prone)    | 2.5         | 3         | 3         | 3           | 4         | 4          |
| Internal Rotation (Prone)    | 2           | 2         | 3         | 3           | 3.5       | 3.5        |
| Quadratus Lumborum           |             |           |           |             |           |            |
| (Seated)                     | 2           | 2.5       | 2.5       | 2.5         | 3         | 3.5        |

# c – <u>Summary of findings</u>

| Muscles need to stretch | Muscles need to strengthen           | Muscle to be released     |  |  |
|-------------------------|--------------------------------------|---------------------------|--|--|
|                         | (*) weakest                          |                           |  |  |
| Hips flexors            | Quadriceps, Psoas and Hips flexors * | Hamstrings                |  |  |
| Psoas                   | Sartorius                            | External rotators of hips |  |  |
| Sartorius               | Gastrocnemius and hip extensors      |                           |  |  |
| Hamstrings              | Hip Internal rotators *              |                           |  |  |
| Hip Adductors           | Hip external rotators (left weaker)  |                           |  |  |
|                         | Hip Abductor, Abdominal              |                           |  |  |

# Posture and Body Reading On Geraldine

Geraldine's shoulders and upper back are rounded, her head is forward. She had no pain complaint on her upper back but acknowledges that she experiences stiffness. Her breathing was shallow. I also observed that she had been holding stuck energy at the pelvis area and her chest which may indicate a Vata imbalance. She expressed her wish to reduce/eliminate pain, have better posture and a stronger body.

During standing assessment of SI joint, the left side was moving down ½ inch and the right side move up ½ inch. This indicated that she experienced SI instability which indicates Vata imbalance. I noticed that that she had hyper extended knees. When she sat down in dandasana, her heels were about 3/4 inch off the floor. She tends to put her weight more on her heels and her shoes are worn out at the 1/3 posterior soles. As I noticed further, her pelvis was badly tucked. I could see that her sacrum was being compressed forward against the convex nature. (There was no pain during her pregnancy). My impression is that it contributes to her pain. She has a only slight lumbar curve. Her hips tend to externally rotate. While doing muscle testing I could read the weakness of her hip muscles (tamasic- I could feel the muscles engaged but she could not).

- SI Unstable: moved down ½ inch on left side
- Forward head: indicate tight SCM and weak upper trapezius
- Round Shoulder: Indicate tight pectoralis major and weak middle and lower trapezius
- Flat back: indicate tight mid-trapezius, rectus abdominus and weak lumbar erector, psoas, and hip flexor.
- **Pelvis posterior tuck**: indicate tight hamstrings, weak lower back, and hip flexors. This, in my opinion, contributes a lot to her pain at the sacrum as tucking too much deprives the natural convex curve of the sacrum. This may explain the fact that her pain got better during pregnancy as the lumbar was pulled forward allowing the sacrum to go back to convex curve. She was working full time throughout her pregnancy; however, she was pain free and happy.
- **Hyper extended knees**: indicated tight hamstrings and gastrocnemius, weak lower quadriceps and popliteus.

#### **Special Notes**

- Geraldine is 5.3 feet tall, 142 pounds, slightly plump, tends to go over weight
- Large slow eyes, round face with pink skin tone
- Hair and skin are slightly oily, teeth are well formed
- Slouches when standing or sitting, giving the impression of structural stress at SI joint, hips girdle and shoulder, constricted/collapsed at abdominals and chest
- Irregular and moving pain (vata imbalance) tends to be experienced when standing and holding at static position and alleviates with gentle movement. The pain could freeze her at times (kapha imbalance)
- Overworked, overcommitted, lack of sleep and discernment of body limitations, constant busyness (pitta imbalance)

# D, E – <u>Recommendations and Results</u>

My impression is that Geraldine's pain is greatly contributed by the weakness of the muscles at her pelvis girdle and lower back, compensations of synergist and antagonist muscles as well as the poor level of mind and body awareness. The program developed for her pain starts with freeing her structural and pranic level by bringing her awareness to breathing. Later, strengthening weakness and reconnecting the relationship of body, mind and soul will follow.

# Recommendations March 25 and April 02-Session 1 and 2

I was encouraging her to be more sensitive to her feeling towards her pain, physical and emotional stress (balance Vata/Pitta) and to incorporate yoga into all kinds of daily activities. This helps to unwind her load of the day, and to improve her discernment towards her body, as such, calm Vata and Pitta. I also reassure her that it is fine for her to confide in me and that I hope we will work closely with open hearts (Kapha). I recommended she keep a journal of daily practice and feeling towards her body and mind (Pitta).

She was asking me about her posture in relation to her walking motions. I shared with her my observation of the compression noticed on her sacrum as she stood, and reminded her to be aware of her sloughed posture which may bring her pain. I recommended she spend about 5 minutes each day standing against the wall with an erect, well alignment body and Wave Breath to start the homework. I also emphasized Sutra 46 "Yoga Pose is a steady and comfortable position" and "never stretch at the joint, instead feel the stretch in the muscles" - Mukunda during any given exercises.

• Sacroiliac Stabilization Exercises (SSE): to improve freedom at SI joints, stabilize and strengthen muscles support her SI, 6 times to start and 12 times if she is comfortable. I reminded her to be extra sensitive to her feelings toward this exercise upon her SI joints "*no stretch should be felt at the joints*". I demonstrate SSE before guiding her. She did not have any negative feelings doing the movements and felt very good instead. She did fine without any cushion. Working together to find the right muscles was not easy for her. After closely guiding her, discernment improved. She was so motivated. Her SI was improved one week later. Both joints both moved up evenly.

# • Joint Free Series (JFS) use Wave breathing

-To improve freedom of joints (to balance Vata)

-To bring awareness to breath and body movements (To balance Vata and Pitta-darshan) -To focus on strengthening knee extensors, hip flexors, hips extensors (Balance Kapha) -To build a stronger hip girdle and back (she has little lumbar curve) which will help to release the pressure of body weight on these areas.

It is recommended to repeat the movement 6-12 times each side and at all time stay comfortable with movements and breathe. And I asked her not to hold the breath and explore the movement with the breath by keeping in mind the awareness like "What, where, how do I feel this movement"? I demonstrated the whole series and guided her to bring awareness to targeted areas.

# Results 2 first sessions

Geraldine has shown her commitment to her home work. She has been practicing every day before bed and kept me very well informed. She started with faster speed and her awareness was less. After one week of home work, her SI was moving up on both the left and right sides (kosha1) There is a sense of better posture as she stands. I also noticed that she is more open and uplifted and receptive to having sessions with me. She shared with me she had done it slowly and comfortably with awareness of breathing. She said: "I felt like having a massage doing the JFS 6,7,8" (positive change at Kosha 1, 2,3)

However, when doing the polishing the JFS with me, she finds it hard to inhale than exhale, at times she is still holding her breath. She also found it hard to locate a specific muscle without my supervision. There was no pain felt during the exercise though.

During the 2 sessions, I worked with her on bringing her awareness to the movement and her feelings toward target muscle groups and breathing in every single exercise. She was very comfortable throughout JFS. There are certain moments (JFS 5, 8, 16) where she found it hard to activate and perceive the correct muscles and at times she was holding her breathing. However, she improved really fast with her awareness and finally she felt the targeted muscle group. Her breathing is much deeper with less tension. Prana is improved and she felt grateful (kosha1,2,3,4).

On April 06 (email) she wrote to me showing her appreciation of the JFS I gave her on March 25 saying it did wonders for releasing her pain. She wrote:" Yesterday afternoon and today, my back pain went worse. Merwan (her son) woke up nearly every hour during the night (teething), so I didn't have the rest I would have needed to heal my back. I woke up with still the same pain, but worse. <u>Now, after I did the exercises</u> (JFS), I feel much better. In fact, at the time I'm writing I'm not suffering at all. I hope this will continue like that." (Geraldine)

# Recommendations - April 9 and 16-Session 3 and 4

**April 09**: Her SI was stable so I took the SSE out so we can focus on JFS. I went through JFS with her again and guided her in details regarding awareness of muscles, movements and breathing. I showed her the anatomy chart and explained the target groups. She was really appreciative. I encouraged her to relax the effort of trying. She loved the idea that I was there to undo her. She preferred to exhale through her mouth and I encouraged her to go ahead as I believed it helped to release stuck energy in her body. Shavasana with Yoga Nidra and Wave breathing followed,

# April 16:

I was asking about her diet. She is more comfortable eating veggie based meals, some fish; however she hardly eats meat. She drinks milk or tea for the morning, has no soda at home, and sometimes drinks some juice. Apparently her diet is really healthy. She took my advice to drink additional amount of water. She drank 2 glasses when she was with me.

Her homework was kept the same. I recommended she keep the JFS as her main practice, as she loved it so much; however, focusing more on JFS 4,6,7,8 as she knew they were good for her.

(6-12 repetitions) each and the rest can be reduced to 3 repetitions. Wave breathing is being polished, Yoga Nidra during Shavasana.

- Polish JFS and JFS Variations
- Polish Wave Breathing
- Yoga Nidra- Shavasana

Tadasana: Stand against the wall and bring awareness of breathing and alignment (20 breaths)

**Modified JFS4**: extend leg out with big toes pointing out (45 degrees)-to strengthen psoas and sartorius, hip flexors and lower back muscles. (Inhale to extend leg, exhale to bring heel toward buttock). Maintain natural lumbar curve. At this stage she felt more comfortable without support of arms. (6 repetitions each side)

Sunbird Modifications: By week 3 she had mastered this pose very well. I decided to show her the modifications (Sunbird toe out, Fire Hydrant) to strengthen her Sartorius and Psoas as well as External

rotators of hips. This helps to support her body weight at the hip girdle. 6 repetitions each side (inhale leg out, exhale knee toward chest)

Shavasana with Yoga Nidra: To calm her body, mind; to detach the outer world and connect to the inner self.

**Wave breathing**: Breathe slowly with awareness of inhalation and exhalation. Inhalation starts from the top down (chest to abdomen) and exhalation sending breath out, upward from abdomen. I encourage her to do Wave Breathing after Shavasana (3-5 mins)

# **Results**

On April 09, Geraldine came to see me looking a bit tired. Pain at her right SI visited her again when she had class the day before. "*The chair was not comfortable so I move around a lot*" She said. However it calmed down slowly after her sadhana before bed time. I took sometime talking to her to understand how she felt. The reason for the pain was that she got only 4 hours sleep the night before because she working on her final papers. However, she was grateful to JFS for keeping her going everyday. She proclaimed "*I am looking forward to the session as it will free me and bring me back some energy*". Apparently she was working very hard for a perfect score on her paper. This deprived her of sleep (Vata/Pitta imbalance). I took sometime taking to her about lifestyle issues such as: diet, method of unwinding, and if she prayed. She was not interested in religion; however, she believes "*there is superpower in very thing*". I talked to her about Sutra 2-34 and she seemed to relate very well to daily activities. I also gave her a gentle massage on her head to calm Vata during after Shavasana. She was feeling so restful afterward.

On April 16, she came with a big smile. She looked really healthy, and happy and was enthusiastic. She said: *"I have not been feeling good like this for a long time*". Her breathing seems deeper and she seemed to be aware of her posture. She told me the pain has left her since last week and that she got 9 hours of sleep the day before.

She did practice every day except Friday night (due to a function). Her practice has great impact on her. There was no feeling of soreness or aches throughout the week. Her awareness of muscles and breathing improved. She shared with me that the exercise was much more purposeful with the new awareness she had obtained.

I went through the homework with her to understand her movements. She had improved so much and it showed in her movements and breathing.

<u>Tadasana</u>: Her awareness of better (more comfortable) alignment was appreciated by experiencing sense freedom at her SI joint.series and clarified her questions.

<u>Modified JFS4</u>: At this stage she felt more comfortable without support of arms. However, I saw her lumbar rounded after 4 repetitions so I suggested her to practice with arms back to engage latissimus more.

<u>JFS 5</u>: She did not feel the muscle at the hips but at IT band instead. After guiding her and modified the movements, she finally felt it at the internal and external rotators of the hips.

<u>JFS 6:</u> Her breathing was much more natural during Cat-Cow. Her lower back was more mobile and engaging well, her whole back move with the flow of the breath. She enjoyed this pose so much: "Just like I getting a massage" she said.

<u>Sunbird Leg rotate out</u>: She started it without coordination of the breath. She later felt more comfortable and stop at 4 repetitions before it starts feeling weak.

<u>Sunbird Fire hydrant</u>: Her knees were lower than the lower legs so I reminded her to keep them in line. She could move slowly for 3 repetitions on the right. The left side indicated weakness after 2 reps. She felt the great contraction at the gluteus medius and deep six external rotators of hips. Shavasana with Yoga Nidra: She actually slept well.

Wave breathing: Her inhalation was better. However I found it a bit short and forceful.

I asked her about what she needed most at the moment. She told me that she would love to have more rest. I recommended for her to cut down insignificantly on daily involvement and have a baby sitter come over so she can have more peaceful rest as she has been sleeping so little. She seemed to like the idea. I am happy that she have benefited from the JFS. At this movement, she is pain-free given the stress and short hour sleep

# April 23-29 – Sessions 5 and 6 Reassessments and Recommendations

Her home work was kept at JFS with modifications plus some SYT poses to target the weakest muscles and release the tight muscles. I recommended she keep the JFS as her main practice followed by Yoni Mudra in Shavasana, and Wave breath with a ratio of 4:4, more if comfortable.

- Modified JFS (keep short at 3 repetitions except JFS #4,5,6,7,8)
- Key SYT poses for her condition
- Yoni Mudra in Shavasana
- Wave breathing with Ratio

# Bridge with wave breathing:

She loves it and she can do it any time to recuperate. It strengthens hip extensors, quads, opening her tight chest, which she enjoyed very much. I encouraged her to feel the contraction at the hamstrings and gluteus maximus, Arms rotate out and engage to activate latissimus dorsi, teres major, open chest to encourage deep breathing during inhalation. Inhale to peel the spine starting from tailbone, exhale to lower the body start from upper back, vertebra by vertebra) -6 reps

**Urdva Prasarita Padasana:** Upward leg stretch: to strengthen her quads and hip flexors. I showed her modification to bend knees or lift one leg at a time if she feels uncomfortable for her back. 6 repetitions

**Locust:** Strengthen hips extensors and to correct her flat back. I notice her legs lightly off center to the left as she did full locust. I check her spine again to see if there is any scoliosis. However, there was no sign of it. That was good news. I recommended her to do half Locust first and then move on to full locust with the legs moved slightly to right before lifting legs up (6 repetitions each side).

Apanasana: To release the lower back, and calm Vata, hold for 6-12 breaths. It is her favorite.

**Baddha Kosana:** To open her hips especially the adductors. She felt good keeping her feet further as her adductors were tight. It is to be held for 12 breaths.

Shavasana with Yoni Mudra: To improve Vata and bring Vata home

**Wave Breathing:** I introduced Ujjayi. However, she showed struggle so I took it out. She is quite fine with Wave breathing. Her homework was to spend 3-5 mins for Wave Breathing after Shavasana with Ratio of 4:4 or 6:6 if possible.

#### Reassessment Results (Shown on page 3,4)

On April 22 Geraldine looked tired because of lack of sleep again. However no back pain experienced which is a great thing happened to her (she tends to get back pain when tired or lack of sleep). She guessed it may be because of she has been doing homework every day. She can sit in dandasana comfortably without support, which indicated strength of her hip flexors and back. (She was very proud of her improvement). Through my observation, there was improvement in her breathing and her posture as her back was not rounded like before, and her trunk was straightened up naturally. She told me that she still finds the inhalation to be harder and noticed that is shorter in length. Also her weight reduce 3 pounds *"this is a good start for me"*. She said when she confided that it was very hard for her to lose weight.

<u>JFS</u>: Geraldine has shown a great improvement in her awareness during JFS. However, she still found it challenged to feel the internal and external of hip during JFS 5, adductor and abductors during JFS 8. She really enjoyed doing the JFS.

<u>Bridge</u>: Bridge was very natural for her with Wave breathing. It is one of her favorite poses. Her movement was isolated very well from tailbone to upper back. She wanted to hold longer and I motivated her to start with dynamic then holding a bit longer each time.

<u>Urdva Prasarita Padasana</u>: She found it more comfortable to start with one leg lift. She felt a gentle pain signal at her right psoas and I asked her to stop then try again. The pain disappeared after that. Her quads, engaged well and her hamstrings allowed her to bring the legs nearly vertical, which was a huge improvement compare to her start.

<u>Locust</u>: She found single leg locust was more challenging than full locust. However, she shared that there was a signal of pain at her sacrum when doing full locust with feet together at home. I suggested her to keep the feet apart and no pain was felt at all. She was amazed by what I suggested.

<u>Apanasana</u>: This is a must-do asana for her. She liked it so much with a bit of rocking and deep slow breath.

<u>Baddha Kosana</u>: It was every natural for her to work on her posture in Baddha Kosana. She preferred this pose with her eyes closes. She sat quietly with her shoulder back, down and her chest open for slow Wave breathing.

Shavasana with Yoni Mudra: She found her palms glued to her belly. A great grounding experience! Breathing: Wave breath: 4:4 was a comfortable rate for her.

# May 6 and 13-Sessions 7-8 Recommendations

Geraldine is under final period of her study during May 6 week. She came to me on May 6 looking tired due to lack of sleep and pressure of exams. I decided to give her a massage (I was certified) in order to calm and reenergize her after practicing Bridge with Wave breath. So her homework was cut shorter and focus more Vata and Pitta calming poses: JFS # 6, 8 as she loved them plus some gentle SYT poses. Yoni Mudra in Shavasana with pillow under back to open her chest, improve her respiration, helping her to relax and recuperate. Wave breath ratio of 6:6 more if comfortable. I recommended her to come to go for Swedish relaxation massage if she has time. She felt comfortable with me giving her 2 new SYT poses **(New recommendations are in bold in Bold)** 

- 2 Modified JFS poses (JFS #,6,8)
- SYT poses for releasing stress
- Yoni Mudra in Shavasana
- Wave breathing with Ratio

Half Forward Bend (isolation series): Focus on improve mobility and strength of the lumbar and pelvis area- 6 repetitions to start with. Inhale to extend spine, exhale to round spine up

**Bridge with wave breathing:** As she loves it (given above) Urdva Prasarita Padasana: (described above)

**Abdominal Twist-Jathara Parivatasasana** To Stretch the external rotators of hips, open the anterior body diagonally and chest, helps to improve inhalation. No stretch should be felt at the sacrum but at the deep 6 rotators and gluteus maximus. It was to inhale to untwist and exhale to twist; hold for 6 breaths each side.

Apanasana: It is her favorite.

Baddha Konasana (given above)

Shavasana with Yoni Mudra: To improve Vata and bring Vata home

**Wave Breathing:** I introduced Ujjayi. However, she showed struggle so I took it out. She is quite fine with Wave breathing. Her homework was to spend 3-5 minutes for Wave Breathing after Shavasana with Ratio of 4:4 or 6:6 if comfortable to calm the mind yet improve alertness.

#### **Result Sessions 7-8**

Geraldine looks happy today. She finally got over with her exams. She told me about her plan to go back to France for 2 weeks and that she will spend her time doing yoga and recuperating. She felt so appreciative toward my commitment to her and the positive change she obtained. She is now looking at things with a level of discernment and compassions. She mentioned enjoying the Yoni Mudra that I gave her. She experienced a deep sense of grounding as her palms glue to her belly. Her Wave breathing can go more slowly with good regulation and ratio of 6-6. I decided to read to her Yoga Sutra 2-47 to 50 (master breathing and pranayama)

Half Forward Bend (isolation series): She felt challenged at her lower back as she went to back extension. However I could see her lumbar curve defined and mobile.

Abdominal Twist-Jathara Parivatasasana: She felt the stretch at the outer thigh and the waist line. We played with the locations of the knees and the arms so she could feel the different impact of the pose. She finally felt the stretch and the deep six and the pectoralis. No Pain at the SI joints.

#### May 13 and May 20 - Sessions 9 and 10

These weeks she has more time for herself as study was done. She is now in the stage of Pain-free and stronger body, happier mind. I asked her if she was ready to try something new and she was more than happy to say yes. She will be leaving for France and she would like to spend more time on her sadhana. I could see her ready for Dosha Flow like Sun salutations

**Sun Salutations: (**Modified chaturanga to cat-child-cobra) It is done with dosha flows and synchronizing the flexibility, strengthening and breath to obtain balance and the ultimate benefit of yoga. We did the new recommendations together. I reminded her to be mindful with her lower back and during transitions between poses as well as holding. First is to start the flow in Vata practice, slow and rhythmatic with the ease of mind; then we move to Pitta practice and focused on stretch and discernment. Finally Kapha way is done with more static holding of the poses for building strengthen and stamina. It was suggested 1 round for each dosha practice.

**Warrior 2:** To strengthen hips external rotators, abductor, hip flexors and knee extensors. It stretches her tight adductors. It is done dynamically with 6 breaths for right and 10 for left side (her left side is weaker)

**Triangle:** To strengthen adductors and internal deep external rotators of hips. It also help to bring awareness to body alignment. It is done dynamically for 6 breaths.

**Camel**: with fists on lower back to start with and keep spine elongated all the time. I suggested her to focus more on opening the pelvis due to her habit of over posterior tuck of the sacrum. Strengthen hips extensors, back extensors and stretch quadriceps and hip flexors, open chest for good inhalations. Hold for 3 then 6 deep breaths.

Shavasana with Yoni Mudra

# Results of sessions 9 and 10

Geraldine was back after the holiday. She looked healthy and happy. She came to talk to me her wonderful reunion with her family and what she has been doing with her sadhana. She has been practicing yoga 3-4 times/week for 2 weeks. It was like a yoga retreat for her. She did yoga at the park, at home and that she loves the flow nature of the Sun Salutations. However, she found the dog pose a challenge so she replaced it with cat-cow. I suggested her to get in and out of the pose 3 times and focus only at her lumbar extension and mobility.

In general, Geraldine could feel her body more flexible in all movements and great senses of freedom of her joints. Her body is straighter and she said: *"I feel taller too"*. The holiday helps her to do more of self study and she becomes more discerned toward her feeling and things around her. She mentioned to bring Sura 2-34 into aspects of her life and she seems to find the focus. She plans to take one year off work to take care of herself and her son.

# Recommendations May 27 and June 5 (session 11 and 12)

- Sun Salutations (4 rounds vata-pitta-kapha)
- Warrior Flow (1 round): To strengthen external and internal rotations if hips which helps to stabiles the SI joints. It build strengthen and freedom at the hips girdles, flexors adductors and abductors, which are extremely important in building stronger lower body. Each pose is done dynamically for 3 breaths
- Bridge flow (1 round): Manipulation is similar to bridge but with different positions of hands. To strengthen the hips girdle, abs and back, it focuses on the hamstrings and gluteus maximum which are important to hold the SI in place. Each pose is held for 3 breaths
- **Agnisar Douti:** To build "good fire", balance the digestive fire which purified absorption and elimination organs. IT is done after with knee slightly bend, palms on upper thighs, then exhale completely, chin down to look at belly before pumping the empty belly. Look up and release the belly before inhalation. After 1 round, take 3 deep breaths (it is count as 1 round). 3 rounds.

# Final Reassessment- (shown on Page 3,4)

Geraldine has obtained a great transformation at physical and mental levels. She has been bringing yoga into all aspects of her life: walking, sitting, talking, studying, sleeping, thinking, feelings. She absolutely becomes more aware of her posture and the sensation of her feeling toward her body and mind. Her ROM and strength have been improving so much with less secondary mover involvements. She could be able to sit comfortably in dandasana and JFS 4. Her quads and hip flexors have strengthened tremendously.

There are freedom and strength around her hip and shoulders girdles. She felt overall increase in flexibility and strength. She had been receiving very positive comments from her friends regarding her body toning and posture, which boosts her motivation and confidence. Most of all, she is PAIN FREE and very happy and looking towards her homework every day after her son has fallen asleep.

# 2a. Name and description of the condition

The sacroiliac joint is the joint between the sacrum, at the base of the spine, and the ilium of the pelvis, which are joined by ligaments. It is a strong, weight-bearing synovial joint with irregular elevations and depressions that produce interlocking of the bones.

The pelvis is not only a weight bearing, It is also weight distributing, area of the body. The SI joint plays an extremely important part in stabilizing this whole system. If damage destabilizes one of these joints, weight bearing and therefore the whole postural balance will have to change to compensate for it. Leg muscles will lose their symmetry and it will become difficult to distribute weight equally between the two feet. Once the pelvis goes out of alignment the body will increasingly adapt to the unbalanced situation. However there is a finite limit to the range of adaptation (Howat, 1997). Over anterior tilt and posterior tuck of pelvis is example of compensating which causes stress to the ligaments and supportive structures. The end of adaptive range is signaled by pain: the body's danger signal. Degenerative arthritis (e.g. Osteoarthritis and rheumatoid arthritis) and injury are two common causes of SI joint dysfunction

# b - Gross and subtle body common symptoms

The sacroiliac joint (SI joint) is made up by the connection between iliums (2 pelvis halves) and sacrum. It is secured by front and back ligaments. The joint lies at an oblique angle to the body (30 degree), rather than straight forward and back. The pelvis has three important functions. First, it transmits weight from the axial skeleton to the lower limbs in the standing position to the ischial tuberosities when sitting. Second, it provides attachments for numerous muscles which insert onto and control the lower limbs. Third, it houses the terminal parts of the digestive and urinary tracts and the reproductive systems of males and females.

Subtle body symptoms is an inward reflection of what is happening on the outside just as the gross body is reflecting what is happening on a deeper level. For example, outer sign may be stiffness, lack of mobility could be translated as "feeling stuck in life" or people with trauma to SI joint could become very protective in emotion. Over flexibility may indicate unstable emotion.

Energetically, the first and second chakras reside in the region of the SI joint. The first chakra relates to the earth, groundedness, stability, security and safety. The second chakra relates to the element water, our ability to take in nurturance, sensuality, sexuality, our emotional identity and our ability to create healthy boundaries. SI joint needs to be both stable, to support the body weight, and fluid enough to allow for some movement. Its dysfunction can come from being either too rigid or too loose. This might be an outcome of our personal energetic. Are we rigid on our lives, too structured, or are we over emotional, unable to contain ourselves. According to Richard Rosen, "if the sacrum is properly positioned, the downward and upward forces -which represent the complementary human aspirations of decent into matter and ascent toward spirit- course smoothly through the spine, and we live a fully supported existence. But if the sacrum is misaligned, the spine is cut off from its connection with the ground, the forces in the body stagnate, and we feel "unsupported," physically strained, and emotionally listless."

# c - Related challenges - lifestyle, diet, limitations on activities

"Many physicians find the evaluation of low back pain frustrating because of the perceived difficulty in obtaining a specific diagnosis. Missed diagnoses of treatable conditions can lead to in appropriate surgery,

chronic pain behavior, and narcotic dependence-all of which can have a catastrophic impact on the quality of the patient's life and can produce unnecessary expense for the health care system" www.sidysfunction.com

Often, an exact cause leading to a painful SI joint condition can't be found. The joint simply gets painful, and the patient and provider don't have an answer as to why the joint has become painful.

It is challenging to deal get an accurate diagnosis for SI problem due to the Vata nature of the pain. Usually, doctors tend to group SI joint and lower back pain together (Lumbago). Some challenges related to Sacroiliac dysfunction are the difficulty to get an accurate diagnosis, and dealing with the vata nature of instability and irregularity is not easy. It is important for client to stick to a regular routine of practice, unwind their mind, eating satvic food and leading a healthy life style; however, it is not their nature to do so. As such, the journey to healing is rather tough.

When the sacroiliac joint pain flares up one can suffer limitation of many physical activities. Certain activities like, running, dancing, golf, tennis and vigorous yoga may in particular need to be avoided when pain is present. Sitting on a hard surface for a long period of time may also cause pain. As SI joint is involving in almost all daily activities, awareness of body and movement is very important to reduce the chance of reoccurring.

# 3 – <u>Ayurvedic assessment</u> and Ayurvedic based yoga recommendations

The pelvis is the home of vata and pain is a vata imbalance, thus pain in the sacroiliac joint is first and foremost a sign of vata displacement. However, if stiffness is present, the issue will be Vata and Kapha, if pain goes with inflamation, Vata and Pitta will be worked on to bring body to balance.

It is recommended that the primary goal from an ayurvedic perspective is to bring vata home. In order to bring Vata to Source, regular breathing and meditation practices as well as relaxation should be done. The joint freeing exercises along with wave breath is very easy way to start, and has proven to be very therapeutic for all of these cases. The yoni mudra placed on the pelvic bones and pubic bone helps direct prana, the purified form of vata, into the pelvic region's bones and tissues. If the pain relate to stiffness or inflammation- Kapha or Pitta imbalance, we will also address Kapha and/or Pitta. As vata learns to stay home, pitta and kapha move toward their homes in the abdomen and chest respectively. Vata at home brings a state of calmness, groundedness, serenity, Pitta at home enables us to discern good from not good and move toward a state of clarity. Kapha at home then brings the sweet juices of an open heart. The practice to balance three dosha later will be introduced during maintenance period.

# 4 – Common body reading

Because pelvis girdle is the most dynamic area, there are a large number of muscles, tendons, and ligaments that connect to the pelvic bones and sacrum, there is a wide variety of possible body reading deviations.

The clients I saw showed a forward head, rounded upper back, flat lower back, hyper posterior pelvis tuck, hyper extended knees, foot turned out, slightly flat feet, and uneven weight distribution on the feet. In specific, her pelvis is extremely tucked, which deprives the convex nature of the sacrum. As such, pregnancy had released her pain due to the tendency of the sacrum being tilt forward, which brought it back to natural curve.

So the first step for client is to be aware of aligning the spine and pelvis to natural position to release the compression at the SI joint, to direct the body weight down into the feet and free the two-way flow of the energy. This is integrated at all levels of activities, standing, sitting, doing and resting.

# 5 – <u>Contraindicated yoga practices</u> and general activities to modify or eliminate

It is very important at all time to listen to the body by restraining from activities that cause discomfort, worsen the pain or have tendency to create pain. There are yoga poses that are contraindicated like: seated forward bend, which unlock the sacrum from the ilium may further strain the transverse ligaments. Twisted poses must be done carefully to minimize the movement of the sacrum. Halasana, roll up are not recommended. Trikosana, parsvotanasana, or asymmetric poses are done with great caution as it may cause the SI to be off alignment. Sitting for long period of time may aggravate the problem. There should be no stretch at the joints but at the muscles.

# 6 – General recommendations for the condition

# a – <u>Therapeutic/free of pain</u>

- Ask "what is up?" to understand why pain has visited?
- It is important to check with doctor again to rule out other possibilities of pain.
- During acute stage, rest and refrain from doing activities that aggravate the problem.
- Talk to professional and adjust activities to suit condition.
- **b** <u>Stabilize situation</u> including lifestyle recommendations
  - Set time for regular pain free practice.
  - It is very important to be persistent with the given program as its benefit is accumulated.
  - Continue to work on breathing and keep track of the change in physical and mental, be sensitive with your feelings.
  - Move on to deep relaxation, meditation, mantra and sutra (chapter 2).
- c <u>Maintenance</u> and long term considerations
  - Be present
  - Continue to practice JFS with Wave breath as it works physically and mentally
  - Strengthen weak muscles. After asymmetric strengthening, move to symmetric strengthening
  - Purifying techniques, meditation, dosha practice are great to work on different levels of the 5 Kosha
  - Bring yoga to all aspects of life

# 7 – Questions and Answers from www.yogaforums.com

# Question 1: Instability around SI joint

"I saw you last June in London where you advised me on my unstable disks and highlighted a sacrum dysfunction. I have been following your advice and asana modifications since then and have found I have been able to move and bend with more stability and have less bouts of pain. I have not been attending

classes but have been practising at home but recently I felt confident enough to attend class with a great teacher who helped me in all aspects of my practise - mindful of my needs etc. The practise was much more energetic than I have done for a while but I loved it had no pain and I started to reintroduce asanas in to my daily practise (sun salutations notably) However I now seem to have as much pain as I had before (therefore I have stopped of course) but this time more around the right SI joint. When I go to bend I feel I will just collapse in a heap! If I stand in Tadasana and contract my inner thighs something around the Si joint clicks in or out of place (it feels too deep to identify) and I have some sort of relief. JFS done very mindfully helps somewhat. The Sacrum Stabilizing Exercises has always felt uncomfortable on that side even with props - My left hip is lower than my right and is tighter when opening so I assume that this is the root of the imbalance but I would like to know if there is anything else I can focus on to try and stabilize this area and bring Vata home. I feel angry with myself and depressed and I don't know how to deal with this as well. Perhaps this is the area I really need to focus on before anything but I don't know where to start as when I try to meditate I just sob!"

Answered by Mangala: Sep 2005 "Hi, This is Mangala, one of Mukunda's senior students. It sounds like you really over did it! You are correct to go back to the JFS and SI Stabilizer. I am concerned that you still find this uncomfortable on one side. Can you elevate the hip more during this movement? The SI movements can even be done in a chair.

Do you want to hear my story about the body? Hereris the abbreviated version. I have 2 bulging discs. I had to accept that there are some movements that aggravate this and I very rarely do a class unless it is with Mukunda because I have repercussions. I know my limits and what my body can and can't safely do. It took years to learn this!"

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#### Question 2: 05-11-2002, 02:22 AM

" Dear Mukunda, hope you are well. I am writing with questions about the sacroiliac joint-mine in particular. I have had other joint pain (and saw you in Calgary about that-Vata displaced and now my SI has gotten into the game-slight since Feb and more active in April. My guestions are: 1) what are my best resources to learn about the SI joint? I have Mary Pulig Shatz (which has helped me some) Anatomy of movement (which has kind of helped me understand the movement) and read and reread Judith Lasater's article from Yoga Journal Last year. I have also been lucky to work with Judith 2 weeks ago when she visited Calgary but I still need to know more. My symptoms are pain/ache about the size of a quarter on the right SI joint and recently some low back tightness, almost spasming on the right side. I think (still not sure because it's been hard to get it settled down) it's irritated by hugging knees into the chest and forward bending (hip flexion) which, as I understand moves the SI through it's maximum ROM. I also noticed pain after doing cobra/locust. At your Calgary session in March I irritated it doing Right leg extension and flexion of the knee and you adjusted me to allow more external rotation on the right leg. I still notice any lifting of the right leg while sitting irritates. What I have been doing for 1 week is Shatz's recommended rocking to identify protruded SI. I identify the right side, but it's the sore side, protrusion is difficult to know for sure. I have found some success by pulling in the right knee to chest and levering with the left leg straight and lowering to the ground but MOSTLY with the left leg straight and abducting-that really seems to adjust me and it lengthens my right leg, which is shorter. Also Judith told me over the 2-day workshop that I was left side posterior, then anterior then posterior again. She also left me with some strengtheners. I would like to know as much as possible re: assessing the SI to know what's really up with me or any future students, how does pain on one side reflect that it may represent STUFF on the other side and what to avoid while SI is irritated - If anyone knows for certain, as well as tried and true strengtheners. I recognize each case is individual. Sorry to be so long winded but I am eager to nip this and learn as much as I can. Thank you for allowing this exchange and looking forward to your return to Calgary in JUNE. Smile and breath, M

**Answer:** On an energy level, which I believe is the causation of s/I distress, meditate more often deeper, with intention to restore apana prana to its home in the lower abdomen and pelvic region. Ask yourself what do I need to learn? and see what your inner teacher says. Ask with faith and confidence that the guidance is there and that the Divine is there to protect and guide you in all your affairs. Do this with sincerity and what you need will be provided fully? Then also do the following.- Mukunda

Main reference I would suggest outside of what you have mentioned is to look at my website recommended reading to see you have covered all primary recommendations there first. More advanced reading would be the Low Back Pain Syndrome book of the 7 book Pain Series by Rene Cailliet, MD, published by FA Davis Co....... In addition you can look for Physical Examination of the Spine and Extremities by Stanley Hoppenfeld, MD, Orthopedics published by Appleton-Century-Crofts, NY. The other factors are to strengthen the Gluteus Maximus by doing legs in external hip rotation and extension from a variety of basic poses -- locust, cobra, sunbird, and any other creative motions you can generate. Do them mildly and avoid hip flexion, that is clearly painful to you

**Question 3** posted 04-27-2002: I am suffering from sacroiliac pain in the right side. I visited a chiropractor but it doesn't cure me completely. After some time the pain returns quickly. An x-ray was taken and I suppose that my pelvis is slightly rotated forward on the right side. Please let me know what postures I can use to get rid of this problem permanently?

**Answer**: I love hearing a request for a permanent solution to a repetitive problem. The permanent solution is stop identifying your Self as being a physical body. The short-term solution for the body issue is to mobilize the sacroiliac properly. The following exercise does that and needs to be done regularly until the new pattern is established as a reflex. Sit on the floor with your knees bent and feet to the right side, so that the right foot points back beside the hip and left foot is adjacent to the right knee. If you are stiff and unable to sit comfortably erect, then place sufficient padding under your pelvis to make it comfortable to be erect and move. Avoid leaning so far to one side that your hand needs to support you on the floor. The first movement is to pelvic tilt back and forth from iliac crest (top of pelvis) exhaling as you contract your belly. 12X or until you feel the motion becoming smooth whichever takes longer. Your are looking for a feeling of release (Kriya) in the tissue, energy, or emotion that will react to the motions. The second motion is to take the top of the right thigh (not pelvis) and move it into internal and then external hip rotation. During internal hip rotation your pelvis will lift from the floor, during external rotation your ischial tuberosity (sitz bone) will touch the floor. 12X then reverse legs and repeat. This should be done before any exercises or asanas.- Mukunda

# **Question 4**

Mukunda, thank you for the analysis and means to correct this imbalance, you are on incredibly intuitive and skilled healer. I am having some difficulty knowing how to test and see the imbalance on others as they lift their knees, as you had cautioned. Do you have any helpful pointers on how best to SEE and FEEL this?

#### Answer

Best is to watch from behind with your thumbs coming across the joint so you are feeling both the iliac and the sacrum's motions as the client goes into 3/4 hip flexion. With practice you can learn to feel this on yourself as well. In time I have also gotten skilled at seeing the changes from the front as well. The joint should lift up during hip flexion as a sign of normal stability.

#### **Question 5**

The second concern is the SI joints: Going to the right side in Utthita Trikonasana is great. Going to the left feels like the hip gets jammed and the femur gets stuck with no where to go, then comes the pain that runs down the side and back of left leg. Can this be the SI joint or am I totally missing the signs? I'm stress to the students, keep the pelvic region level will help prevent these problems. Am I on the right track?

#### Answer

This pain sounds more like sciatica can come from S.I or nerve roots at the spinal column, or due to injury of hamstrings. Best is a personal assessment to tell the difference. Keeping the pelvis level is more likely to cause more trouble. One needs to move from the hip sockets while keeping the upper torso neutral. Do not lean with the arms nor will hold pelvis rigidly, both cause trouble.

#### 8 - <u>References</u> – books and websites

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www.yogasite.com/yogatherapyarticles.htm

www.traumahealing.com

# 9 –<u>Appendix</u>

# **Gaenslen's Test**

To assess for hip or sacroiliac joint dysfunction:

- Place the client in a side lying position on the unaffected side.
- Instruct the client to flex the unaffected hip and knee to the chest, holding them there.
- Stand behind the client and stabilize the pelvis with one hand.
- With the other hand, hyperextend the client's affected leg at the hip.

o The test is **positive** for sacroiliac joint or hip dysfunction if the client reports pain in these areas.

A variation:

- Place the client in a supine position, with the affected hip just off the edge of the table.
- Instruct the client to flex the unaffected hip and knee, holding the knee to the chest, while allowing the affected leg to slowly drop into hyperextension.

o Pain reported in the sacroiliac joint is a **positive** sign (Gerard, Kleinfield, 1993)

# Sacroiliac Joint "Squish" or Transverse Posterior Stress Test

A Stress test to assess the posterior ligaments that cross the sacroiliac joints:

- Place the client in a supine position.
- Place one hand on the lateral side of each anterior superior iliac spine and apply pressure from lateral to medial and then posteriorly towards the sacroiliac joints at a 45 degree angle, stressing the posterior ligaments.

o The test is **positive**, indicating a posterior sacroiliac ligament sprain, if the client reports pain local to the sacroiliac joint.(Magee 1992)

A variation:

- Place the client in a side lying position.
- Apply pressure to the upper most iliac crest in a medial direction.

o Pressure or pain reported by the client local to the sacroiliac joint is a **positive** sign for posterior sacroiliac ligament sprain

# Faber Test:

Ask the patient to lie supine on the exam table.

Place the foot of the effected side on the opposite knee.

Pain in the groin area indicates a problem with the hip and not the spine.

Press down gently but firmly on the flexed knee and the opposite anterior superior iliac crest.

Pain in the sacroiliac area indicates a problem with the sacroiliac joints

# Appendix 2: Tantra Lesson- Kosha

We humans are like a lamp that has five lampshades over our light. Each of the lampshades is a different color and density. As the light shines through the lampshades, it is progressively changed in color and nature. It is a bittersweet coloring. On the one hand, the shades provide the individualized beauty of each lamp. Yet, the lampshades also obscure the pure

- 1. Annamayakosha: Physical kosha- "Body sheath made of food which is an illusion"
- 2. Pranamayakosha: Energy kosha- "Body sheath made of Prana, which is an illusion"

- 3. Manamayakosha: Mental kosha- "Body sheath made of thought, which is an illusion"
- 4. Vijnyanamayakosha: Wisdom kosha-"Body sheath made of wisdom, which is an illusion"
- 5. Anandamayakosha: Bliss kosha-"Body sheath made of bliss, which is also an illuion"

"The body is said to be as small as mustard seed, seated in the secret chamber of the interior heart to the right of the physical heart. This body is composed of happiness. It does not need anything to generate its happiness, as that is its natural state."- Mukunda

# 10 – <u>Biography</u>

Fern is a Yoga and Pilates teacher in Singapore who began exploring yoga in 2000 when she was seeking answers to the pain that she suffered since young. Her studies in Yoga forms such as Ashtanga, Vinyasa, Iyengar and Structural Yoga Therapy infuse her approach to using Yoga as both an exercise and a healing form. In addition, Fern incorporates elements of massage and bodywork therapy and aromatherapy as part of an integrated form.