

Klippel – Feil Syndrome  
And  
Sprengel Deformity

Structural Yoga Therapy™ Course

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## 1 – Case study Shuddha Jyoti

### a – Initial intake

In January 2006, I had the pleasure of meeting a 26 year old female, whom I will name Shuddha, (the Sanskrit name for pure) Jyoti (Light). Shuddha had never been exposed to yoga but through the persistent urging of her friend came to a therapeutic-restorative yoga class in which I was teaching the Pavanmuktasana (Joint Freeing Series in SYT- p.121). After this class I asked her if she would be interested in becoming a participant in a case study for Structural Yoga Therapy™. She wrote down her diagnoses and said she would come back the next week with a decision. The following week she agreed to work with me.

- First session – January 27, 2006
- 26 year old female
- Physical activities : biking, walking, skiing, snowshoeing, camping
- Administrator of a non-profit agency, supplying food, clothing, financial support and counseling to those in need
- Very spiritual with a peaceful nature
- Diagnosed at birth with Klippel – Feil Syndrome and Sprengel Deformity because the scapula on the right was abnormally high and the neck shorter, x-rays determined the visual and palpable presentations.
- At seventeen she was diagnosed with MRKH (Mayer-Rokitansky- Kuster – Hauser) Syndrome
- It was nine years after the MRKH diagnoses that the skeletal issues from the Klippel – Feil and Sprengel were noted as related symptomologies.
- Shuddha has no fusions in her cervicals nor the omohyoid bone restriction but has limited ROM and balance issues.
- The allopathic community had no recommendations for her symptoms as she presented with no pain only impairment in ROM. She and her family were not interested in surgery to relieve cervical or craniocervical instability and constriction of the spinal cord or to correct scoliosis. Since infancy she has had reoccurring kidney and urethra issues which were detected by a urologist. She had participated in physical therapy but this was not successful in changing the degrees of ROM for the structural abnormalities. Within the alternative health care system her physical anomalies were viewed as an enormous challenge, or with shock and lack of sensitivity with no encouragement or direction towards wholeness. Needing compassion to heal she was guided to a psychotherapist who practiced EMDR and energy work, this three year relationship offered Shuddha a profound opening to release her stored trauma. At the time of this intake she was no longer depressed and had stopped taking antidepressants. During her childhood she had been teased by siblings and students for her lack of ball throwing skills because of the limitation in her right shoulder, still she harbored no resentment. Attending a Catholic

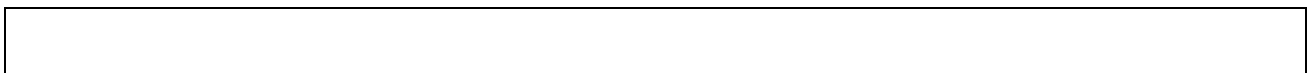
girl's school had strengthened her self confidence and self esteem, which was continually reinforced by loving parents, grandparents and relatives. Her image and felt sense of God is a huge, overstuffed comfortable rocking chair where she is held and soothed. She felt her energy body and subtle body at thirteen during a retreat which included meditation.

- July of 2004, she was hit by a car while riding her bike, she was wearing a helmet and conscious of the need to protect her delicate neck and upper body, she attempted to relax, roll and break no bones. This accident left her with a problematic right hip, and threw her mind into a pattern of despair and lack of confidence when her balance on a bike was shaken,
- Shuddha committed to investing her time, mind, body and spirit into the study and practice of yoga.

#### b - Physical assessment

Visual assessment – body reading presented an elevated right shoulder with internal rotation, head slightly forward of sagittal line, mild curvature of the thoracic spine to the right, both hips drawing toward center, holding with tension, she held her posture with firm strength, I could sense her sensitivity and composure. Her fear was not high as she was comfortable with me observing her. Her legs were stronger than her arms but her arms were not underdeveloped. Shuddha was secure in her body and mind. Her breath was steady, eyes focused on feeling her internal structure, her feet were firmly planted. She was in Tadasana without knowing what the word implied. Her aura was bright and strong, implying her atma bala (soul strength), her karmic patterns were not deeply rooted within the chakras, showing her constitution to be in line with her commitment to study and practice.

- Scoliosis reading based on scoliometer
- 4° @ T-1
- 7° @ T-5
- 2° @ T-11
- Thoracolumbar curve
  
- Pelvic Height    L. 7"                    R. 7¼"
- SI Joint Exam    L. stuck                    R. moves up
- Psoas Isolation    L. strong                    R. weak, engaging the Rectus Femoris



Range of Motion Assessments							
Joint Action	ROM	1st Date		2nd Date		3rd Date	
		Left	Right	Left	Right	Left	Right
<b>ANKLE</b>	Norm°						
Dorsiflexion	20°	18°	26°	18°	26°		
Plantarflexion	50°	79°	79°	79°	79°		
Eversion	20°	15°	26°	15°	26°		
Inversion	45°	43°	55°	43°	55°		
<b>KNEE</b>							
Extension	0°/180°						
Flexion (Supine)	150°	142°	142°	142°	142°		
<b>HIP</b>							
Flexion (Bent Knee)	135°	135°	135°	135°	135°		
Flexion (Straight-Leg Raise)	90°	75°	85°	80°	85°		
Flexors-quad/psoas restriction	NSS						
External Rotation (Supine)	45°-60°	30°	45°	40°	47°		
Internal Rotation (Supine)	35°	30°	45°	40°	45°		
External Rotation (Prone)	45°-60°	54°	42°	50°	47°		
Internal Rotation (Prone)	35°	39°	55°	42°	50°		
Adduction (Side Lying)	30°-40°	32°	30°	32°	34°		
Abduction (Side Lying)	45°	54°	42°	52°	45°		
<b>NECK</b>							
Extension	55°	30°		42°			
Flexion	45°	23°		20°			
Lateral Flexion	45°	14°	27°	19°	27°		
Rotation	70°	39°	49°	38°	52°		
<b>SHOULDER</b>							
Abduction	40°	69°	82°	80°	80°		
Adduction	130°	131°	116°	130°	132°		
External Rotation	90°	90°	62°	83°	65°		
Internal Rotation	80°	80°	80°	85°	87°		
Flexion	180°	170°	164°	174°	145°		
Extension	50°	62°	62°	62°	68°		
<b>ELBOW</b>							
Extension	0°						
Flexion	145°	135°	127°	137°	130°		
<b>WRIST</b>							
Flexion	90°	85°	95°	85°	94°		
Extension	80°	85°	80°	85°	80°		
Radial Deviation	20°	34°	42°	34°	40°		
Ulnar Deviation	30°	40°	45°	40°	44°		

### Muscle Testing Assessments

Joint Action	1st Date	1st Date	2nd Date	2nd Date	3rd Date	3rd Date
	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5
<b>ANKLE</b>						
Dorsiflexion	5	5	5	5		
Plantarflexion	5	5	5	5		
Eversion	5	5	5	5		
Inversion	5	5	5	5		
<b>KNEE</b>						
Extension						
Flexion	4	4	4	4		
<b>HIP</b>						
Hip Flexors & Abs (Supine)	4.5	4.5	5	5		
Trunk Flexion (Supine)	3.5		4			
Hip Flexors - Bent Knee (Supine)	5	5	5	5		
Iliopsoas Isolation (Supine)	3	4	4	4		
Sartorius Isolation (Supine)	4	4	4.5	4.5		
Abduction (Side Lying)	5	5	5	5		
Adduction (Side Lying)	4	4	4.5	4.5		
Gluteus Maximus Isolation (Prone)	4	2	4	3		
External Rotation (Prone)	4	2	4	3		
Internal Rotation (Prone)	2	4	3	4		
Quadratus Lumborum (Seated)	2	2	3	3		
<b>NECK</b>						
Extension	1		1.5			
Flexion	1		1.5			
Lateral Flexion	1	1	1.5	1.5		
Rotation	1	1	1.5	1.5		
<b>SHOULDER</b>						
Abduction	3	3	3.5	3.5		
Adduction	4	2	4	2.5		
External Rotation	5	1	4.5	1.5		
Internal Rotation	4.5	4	4.5	4		
Flexion	3	1	3	1.5		
Extension	4	4	4	4		
<b>ELBOW</b>						
Extension	0	0				
Flexion	2.5	2	2.5	2.5		
<b>WRIST</b>						
Flexion	4	4	4	4		
Extension	5	5	5	5		

Radial Deviation	5	5	5	5		
Ulnar Deviation	5	5	5	5		

### C - Summary of findings

What is tight?	What is weak?	What muscles need release
SCM – R.	SCM – R	Lattisimus Dorsi
SCM – L	SCM – L	Illiopsoas – L
Upper Trapezius	Upper Trapezius	Quadratus Lumborum
	Anterior Deltoid - R	Upper Trapezius
	Middle Deltoid - R	
	Biceps Brachii - R	
	Pectoralis Major – R	
Posterior Deltoid – R	Posterior Deltoid – R	
Infraspinatus – R	Infraspinatus – R	
Teres Minor – R	Teres Minor – R	
Iliopsoas – L	Iliopsoas – R	
QL - L	Gluteus Maximus - R	
QL - R	Gluteus Medius - R	
	Gluteus Minimus - R	
	Tensor Fascia Lata - R	

### D - Recommendations

- Strengthening the tight and weak Trapezius and beginning to release the Lattisimus which was overcompensating for the weaker muscles in the upper body
- SI Stabilizer (SYT Manual) to balance the SI Joint.
- Virabhadrasana 1 (SYT - p.198) with arms at a 90° angle, slowly executed with breath to overcome any fear, floating forward to balance the hip sockets. This was strengthening without any stress on the displaced right scapula.
- Salabhasana (SYT - p.232) to strengthen the Erector Spinae with concentration on hip, spine and knee extension. Widening the legs, feet to the outside edge of the mat to support the lumbar spine without stressing the shoulder girdle. Focus on mid- thoracic with the cue to bring the back of the heart toward the sternum, allowing prana to gently move through the vertebrae. The breath of awareness expanding through the koshas to release cellular trauma, to feel the expansive anahata (heart chakra) rather than being stuck in archaic wounding.
- “The back of the heart can often hold our hidden treasured wounds”, Mary Burmeister, Jin Shin Jyutsu.
- Rolling Bridge (SYT – p.168) with pelvic lift to 5", legs apart and feet externally rotated, to take any pressure off the sacrum and to open the pelvic bowl.
- I encouraged her to continue to participate in the group yoga class focused on Pavanmuktasana.

February 3, 2006, Shuddha was faithful to her practice both in coming to group yoga and her private work with SYT. Pranayama was introduced with intercostal breathing and wave breath. Both practices were initiated with the cue to drop her shoulders, release the armpits to the waist and feel length in the neck. Her sweet sattvic nature was drawn to pranayama and dharana (concentration). The asana practice was becoming more exciting as she had the awareness of muscle compensation and also her strength, confidence was growing. The right hip was sore in Locust so I suggested a variation to adapt. She felt unsteady in Warrior I, adjusting the stance brought stability. She rested with Cranial Sacral Therapy to calm and balance overwhelm in the nervous system.

- Intercostal Breathing (SYT- p, 55) open vulnerable diaphragm
- Wave Breath (SYT- p. 53) open diaphragm and expand lung capacity (SYT- Ch.7. p. 51)
- Locust (SYT-p. 232) variation, feet to outside edge of mat with external rotation, rather than lifting, extending with L – focus on strengthening Glut. and R- focus on passive hip flexors to release a tight Psoas
- Warrior I (SYT- p. 198) adjust stance for stability, less distance between R and L feet.
- Cranial Sacral Therapy to balance vata.

February 15, 2006, private session with Mukunda to report on finding and recommendations.

February 17, 2006 – she was frustrated because of a sinus infection so there was no reason to push, less asana more presence and listening. Her right hip was sensitive in resting pose, the left Psoas tested tight and the right weak She continues to come to Pavanmuktasana class and is anticipating adding Rolfing to her therapies.

- Locust with legs wide apart and lifting the upper body felt comfortable strengthening the Erector Spinae.
- SI Stabilizer “helps with the hips”, she says.
- Continues with Pavanmuktasana class.

February 24, 2006, we talked about journaling, dreams and her work situation, her life is full. She is dedicated and enthusiastic, her breath is deepening. The Intercostals and Diaphragm are more engaged rather than the Trapezius. In her private practice she notices more strength in the thoracic spine with opening and stretch in the Pectoral.

- Intercostal Breath
- SI Stabilizer

March 3, 2006, she mentions her hips feel more balanced in Warrior and her feet feel more stable. To free prana in her back, arms and hands, I had her float the arms up and down while in Warrior I, three breaths with floating arms and three breaths with arms at 90° angle. Tree pose feels unstable, a variation we named Nataraj, arm at 45° angle with palms up, rather than foot touching the inner thigh, she did hip

abduction with the foot extended and the knee not as flexed. Right felt more balanced and left tight, the cue was to drop the hip and stretch out of the hip socket. She can now lift both arms in Locust feeling scapula adduction. Rolling Bridge vinyasa executed slowly and restoration with Vipariti Karani.

- Warrior I with arm variations
- Vrksasana (SYT- p. 201) variation, named Nataraj for balance.
- SI Stabilizer
- Locust with arms – feeling scapula adduction
- Rolling Bridge executed slowly to balance vata
- Vipariti Karani, restorative, passive stretch for Psoas

March 10, 2006, more right hip, femur head felt sore in the socket, she had been playing horseshoes. I used CST to balance the Sphenoid which supports balance in the hip and shoulder girdles. The bijaksharas Lam and Vam are the tones for the first and second chakras, I had her focus the nada (sound) into the areas around the hip congestion. She now has purchased her own yoga mat and I gave her a copy of Patanjali's sutras.

- Cranial Sacral Therapy to balance the Sphenoid bone was rotated internally on the right with a slight shear and the left was rotated externally.
- Chanting Lam and Vam for Muladhara and Svadhishtana
- Pavanmuktasana to free joint and pranic blocks
- Introduction to Yoga Sutras of Patanjali by Mukunda Stiles

March 15, 2006, I scheduled a session with Mukunda for Shuddha and myself. Mukunda made a profound assessment that the ribs were maligned not the spine, the right rib cage from T-3 through T-10 was 10" greater than the left which was 0° - 5". His suggestion was Dolphin rather than Down Dog with focus on bringing the lower right Scapula and elbow to mid-line. He also added Cat Bow (SYT- p. 179) for strengthening this was a challenge. Warrior I as vinyasa with more repetitions He checked her prone right external hip rotation which is now 48° from the initial intake of 55°. She showed him her favorite the Nataraj which he added the swivel for twist. Mukunda gave her a yogini stress doll for the hectic times at work.

- Dolphin to strengthen the lower and upper Trapezius
- Cat Bow (SYT- p.179) to develop strength in the Triceps, mid-Trapezius, Latissimus Dorsi and Posterior Deltoid
- Warrior I with focus on the Pectorals with arms at 90° angle as a vinyasa
- Gomukhasana (SYT- p. 238), right leg on top, not using the arms and releasing forward to open the back
- Dancing Nataraj, engaging the QL with lateral movement and to swivel and gently twist the spine
- Rolling Bridge
- Tarasana is like Baddha Konasana (SYT- p. 240) but releasing forward over the legs to counter Bridge
- Intercostal Breath while in Savasana (SYT-p. 240)



March 31, 2006, we met after the group yoga class, she had been practicing the additions per Mukunda's suggestion, not all easy but rewarding. She also continues with Roling sessions. I taught her the Tara chant as she enjoys the Tarasana to honor the Goddess of Compassion. She is becoming stronger in the posterior Deltoid, Infraspinatus and Teres Minor because of the external shoulder rotation in Warrior I. The cue to stretch out, expand from Sternum to shoulder and from spine to Scapula helps her create space. Standing with the wall to support her back is like an image of spirit that is always there. We discussed Patanjali and the beauty of sadhana (spiritual practice) which she has been devoted to all of her life.

- Gomukhasana for meditation
- Tarasana to counter balance
- Warrior I with 90° arms is creating more strength in the posterior Deltoid, Infraspinatus and Teres Minor
- Tara chant ([Mukunda Chants](#), CD)
- Patanjali Sutras for sadhana

April 5, 2006, private session with Mukunda to review the work

April 16, 2006, today the bicycle and car accident of July 2004 is coming up, I used Trauma Touch Therapy™ to support her around the hip trauma, pranayama with awareness brought fluidity, warmth, relaxation and peacefulness as her back began to open. The SI Stabilizer gave release and the rhythm felt like being rocked and comforted. We discussed Sutra II – 33 about cultivating positive thoughts, while feeling negative emotions.

- Trauma Touch Therapy™
- Back Breath for ojas
- SI Stabilizer
- Gentle Bhujangasana (SYT- p. 230) brought thoracic and scapular awareness
- Patanjali's Sutra II – 33 for balancing vrittis (mind waves)

May 5, 2006, Shuddha was ecstatic she had a breakthrough in Nataraj she experienced balance and the beauty of the cosmic dance enhanced tejas. We discussed her thoughts on the sutras and her dhyana (meditation) practice. I introduced her to the Mudra of Compassion, lightly touching the four fingertips to thumbs on both hands then bringing the ten fingertips together, to form a ring of compassion around her own heart. Her home practice is consistent but not all of the asanas.

- Nataraj breakthrough with tejas
- Mudra of Compassion
- Home practice, asanas she likes
- Dhyana

May 12, 2006, she doesn't come to the group class. She needed the support of Cranial Sacral Therapy to support her emotionally around her father's diagnoses with cancer. We prayed together.

- Cranial Sacral Therapy to balance pranas
- Prayer and meditation more important than asanas

May 22, 2006, private session with Mukunda to review the research data

June 2, 2006, Nataraj still her favorite, fun and is building self-confidence and balance. She needs more intense strengthening of external shoulder rotation, so I had her image standing in the wind, lifting her chest while the Scapulas adducted, she felt release in her heart and strength in her spine. Dolphin is a huge challenge. Salambasana cue is to reach out of the hip sockets creating strength, she then raised both arms and reaches back with a feeling of flying.

- Nataraj for self-confidence and balance
- Warrior I with Scapula adducted opening the heart and strengthening the spine
- Dolphin a challenge
- Salambasana is creating strength in the hamstrings, gluts, spine and quads
- Meditation and spiritual discussion

June 9, 2006, today I suggested back breathing, using breath for more insight (SYT-p.58), the unconscious can be imaged as the back, as prana flows through the nadis (channels) opening to more Shakti (energy). She accepts my invitation to visit Mukunda again.

- Back Breathing (SYT- p. 58)
- Sutra discussion and meditation

June 14, 2006, session with Mukunda, Shuddha enjoys asking questions about her practice. Mukunda give suggestions on variations to couple of poses and demonstrates Bharadvajasana, the sage who may have been a "crooked guy" as the twisted posture is named after him. We chant Bhadra Kali (Mukunda Chants, CD) on the auspicious form of Kali.

- Warrior I, variation to rotate the pinkies toward center line with arms in a 90° angle, to strengthen the flexor and extensor Radialis and Triceps Brachii
- Marichyasana (SYT- p.226) but twist only to right, strengthening the SCM, Lattisimus and Triceps
- Nataraj vinyasa with twist and lift as a two breath movement, lengthening fingertips to toes, flowing arms
- Bhadra Kali chant

June 30, 2006, life is easier but she is no longer attending the group classes. Discussion of Sutra II- 16, staying present with breath awareness and meditation to avoid suffering that has not yet arisen.

- Nataraj variation with twist and turn, flowing arm movements
- Sadhana and meditation

July 17, 2006, private session with Mukunda to review research data

July 21, 2006, we celebrated Shuddha's 27<sup>th</sup> birthday, personal asana practice not as often during the summer, outside activities more fun.

- Meditation
- Chanting
- Celebrating

August 2, 2006, private session with Mukunda to review the research work.

August 14, 2006, I taught her the Ganesha chant to remove obstacles, "Om Gam Ganapataye Namaha". She is making plans for Japan to study organic farming and harvest apples. We discuss one more session with Mukunda before she leaves in October.

- SI Stabilizer
- Pranayama practice, wave breath, back breath and intercostals
- Meditation

September 11, 2006, we review the JFS and I asked her if she would want to move into Adho Mukha Swanasana (SYT- p. 208) as most regular classes include the asana, I am hoping that she will integrate into a group class. The asana is difficult, so we stop. Her SI joint is manifesting dimples, "I have never seen these before", she says. She feels Rolfing and SYT are opening the rights side of the body and the left feels longer in shoulder flexion and extension.

- JFS, review
- SI Stabilizer, dimples manifest at the joint
- Psoas, tight on right and left, JFS helps

September 25, 2006, she is excited about her upcoming to journey to Japan. I suggest we move through Sun Salutation (SYT- p.63-67) but modify with Dolphin

instead of Down Dog. The ROM assessment and muscle evaluation produced small change.

- Sun Salutation variation
- Sutra II – 28
- Second ROM assessment and muscle evaluation

October 2, 2006, third session with Mukunda, Shuddha moves through the asanas with focus and awareness, grace and ease. I asked him if he had any suggestions for Down Dog, he said, "Bend both elbows and align from the bottom, hands with thumbs toward center, align wrists." This gave her support and symmetry, she had found balance in Nataraj and symmetry in Down Dog. She had tears for those words had never been part of her description of her body. Mukunda checked the assessment and reminded us, "Structural Yoga Therapy™ is about adaptation with an attitude of openness, bringing support into the area rather than adjusting the body to fit a model, balancing the unique structure of the individual with honor and respect."

- Down Dog variation for symmetry
- Salambhasana, lifting the arms slowly to find a "felt sense" of balance and height, kinesthetic sense of symmetry
- Bridge with heels wider than shoulders and shins perpendicular

November 14, 2006, private session with Mukunda about updating research paper if new material comes presents

## E – Results of recommendations

- The JFS and SYT asanas with variations facilitated the needed support to strengthen and release.
- The asanas that I chose were therapeutic and beneficial even if the assessment numbers were slightly changed. The benefit of the overall therapy was great than the sum of the sessions.
- We were working with in utero body misalignment, the fact that Shuddha was experiencing an internal awareness of balance and symmetry was huge.
- She felt the left side of the body longer, less constricted, not as tight.
- She had the awareness that the right side of her body didn't feel as weak and bound to cellular patterning.
- The experience of SI dimples brought the practice into a physical sign of change which was enlightening to her.
- Visually I could see a drop in the right upper Trapezius and her body and mind had understanding of muscles and ROM that had previously been considered limitation.
- The Iliopsoas balanced, the Lattisimus released and strengthened, the QL released, the upper Trapezius on the right released and the right Anterior Deltoid,

- Teres Minor, Infraspinatus and Posterior Deltoid strengthened. The Gluteus Maximus, Gluteus Medius, Gluteus Minimus and TFL strengthened on the right.
- The pranayama, meditation and sadhana were integral within the program, she was dedicated to raising her consciousness.

## 2. a- Name and description

Klippel-Feil syndrome is a rare disorder defined as the congenital fusion of any two of the seven cervical vertebrae. It is caused by a failure in the normal segmentation or division of the cervical vertebrae during the early weeks of fetal development. The most common signs of the disorder are short neck, low hairline at the back of the head, and restricted mobility of the upper spine. NINDS Klippel-Feil Syndrome Information Page: [www.wrongdiagnosis.com](http://www.wrongdiagnosis.com)

Sprengel deformity is a condition where the scapula on one or both sides are underdeveloped (hypoplastic) and abnormally high. It is due to the failure of descent of the scapula during embryonic development from its position in the neck to its normal position in the posterior thorax. It probably happens around the 9<sup>th</sup> to 12<sup>th</sup> week of gestation. It happens usually in girls, and may have a genetic basis in some instances. The obvious problem is cosmesis, or how it affects the person's physical image. But there is often also a functional problem. The hypoplastic (underdeveloped) scapula is usually tethered to the spine and posterior ribs by tight bands and even an omohyoid bone ( Origin, suprascapular ligament and adjacent scapula, Insertion, inferior border of body of hyoid bone, Action, depresses hyoid bone and hence larynx, Nerve, ansa cervicalis nerve (C1,2,3) which restricts scapular movements., and therefore abduction of the arm. There are also frequent associated problems, like absence or hypoplastic trapezius, deltoid and rhomboid muscles on the affected side, spine and neck problems like torticollis, scoliosis and Klippel-Feil syndrome. Orthoseek, Orthopedic Topics, Sprengel's deformity, [www.orthoseek.com](http://www.orthoseek.com), [www.emedicine.com](http://www.emedicine.com)

MRKH (Mayer-Rokitansky-Kuster-Hauser) syndrome, this results from the failure of development of Mullerian (paramesonephric) duct system to genotypic females around the fifth gestational week, the embryonic Mullerian ducts normally fuse, creating the uterus, cervix and upper two thirds of the vagina. In patients with MRKH, the failed development results in a variety of internal abnormalities but the external genitalia develop normally. It was nine years after this diagnoses that the skeletal issues of Klippel-Feil syndrome and Sprengel deformity were noted as related symptomology to my student. MRKH is not within the scope of this study. MRKH syndrome [www.magicfoundation.org](http://www.magicfoundation.org), [www.mrkyorg.homestead.com](http://www.mrkyorg.homestead.com)

## b- Gross and subtle body common symptoms

- Klippel-Feil
- Low hair line

- Short neck
- Spine/vertebrae/pelvis anomalies
- Abnormal rib
- Hearing loss
- Scoliosis
- Agenesis/hypoplasia of kidneys
- Torticolli
- Other symptoms more rare check website : [www.wrongdiagnoses.com](http://www.wrongdiagnoses.com)

- Sprengel deformity
- Shoulder asymmetry
- Restriction of shoulder abduction
- Sometimes bilateral which is functionally more disabling
- Left side more commonly affected than right
- Male to female ratio is 3:1
- Torticolli
- Scoliosis
- May run in families (autosomal dominant pattern of inheritance)

- Klippel-Feil, Sprengel deformity, MRKH
- Low self-esteem
- Self-image issues
- Depression
- Anxiety
- Grief

#### e- Related challenges

- Teasing from children as physical structure out of norm.
- Not able to physically play some sports because of shoulder impairment.
- Extreme care of neck because of neck instability.
- Insensitivity of adults for lack of education to the anomalies in bodies.

### 3 - Ayurvedic assessment

My Guru Sri Karunamayi says, "The mind is always in one of three states – rajasic, tamasic, or sattvic. It is through these layers that we see and understand everything. In the rajasic state people become very angry and aggressive. There is a high percentage of rajasic people in this world. A tamasic nature makes people lazy, dull and inert. A sattvic nature gives us humility, calmness and goodness. We are never permanently in one state, we always go up and down between the three states. The dominating nature in us is due to purva janma samskaras, the residue of our own past karmas that has given us this birth." ( Sri Karunamayi, The Nectar of Jnana p.- 228)

Vata is primarily ether in substance and air in motion. It exists as the air that we hold in the empty spaces of the body, like in the hollow organs, joints and bone cavities. (Frawley, David, Yoga and Ayurveda, p.-41) Vata derangement can often be seen in twisting or turning of the skeletal system, causing imbalances as with scoliosis. Although the anamaya kosha was visually not straight, her prakruti presented tri doshic, her sattvic nature was obvious proof of spiritual work in this life and those before. In our first meeting she showed trust – vata- balance, discernment- pitta balance and compassion- kapha balance.

- Vata sattvic - sattvic
- Tall frame
- Brown eyes
- Twist in the thoracic area of the spine
- Dark, curly hair
- Appetite, variable
- Pitta rajasic - sattvic
- Strong digestive fire
- Tolerant of hard work
- Has strong, firey hug
- Moderate muscular development
- Stamina, strong then drops off quickly
- Kapha tamasic - sattvic
- Soft pleasing look
- Loves sitting and reading
- Creates warm, nurturing relationships
- Skin, soft and cool
- Soft, big, calm eyes
- Speech, slow, calm, melodious
  
- Anamaya kosha
- Tri- doshic
- Vegetarian, ate some fish
- Always ate organic
- Clean diet
- Pranamaya kosha
- Adi-prana, Udana and Apana pranas were not balanced
- My reason for choosing wave breath and intercostal pranayama.
- Her breath pattern would become shallow as she focused
- The asanas were practiced in sync with the breath to balance the vata instability
- Fear would arise during the asana practices as her trauma history with the bicycle accident was not resolved and she would feel anxious
- Kriya (action) shakti manifested with asana and pranayama as she literally felt the purification of her breath
- Manamaya kosha
- Svadhyaya (SYT, p. 235) she was very open to self inquiry
- Studying and discussing Patanjali's sutras delighted her
- Chanting was soothing to her mind, she totally understood that mantra was to protect

- Iccha (will) shakti arose during her daily sadhana
- Dhyana (meditation) arose naturally for her, there was no effort (sutra II:1)
- Vijananamaya kosha
- Jnana (wisdom) shakti emanated from her
- She was sattvic by nature so wisdom was not uncommon to her
- Her friends came to her for support and insight
- Anandamaya kosha
- She would feel bliss when we would meditate or pray together
- She loved to be in nature which brought her into this kosha without any effort
- Having good relationships held her in this state of bliss and joy

Shuddha is a spiritual person so during our sessions she was comfortable moving through all the koshas, this awareness she would access either through her own self inquiry or questions that I would pose. This was fluid and organic.

- Prana vital energy
- She experienced this through asana, pranayama and meditation practice as her practiced progressed she was very aware in pranic shifts and would adjust her breath to meet the prana and move the prana to restore balance.
- Tejas inner radiance
- She experienced this visually within her meditations and as the fire that created the awareness the day she had the insight that her body had internal balance even when the outside proved otherwise.
- Ojas life juice
- As she performed Nataraj and found balance, her life juices were elevated, when she laughed and told me stories that made her eyes dance with delight, ojas flowed. She has the gift to move towards life and love, in large and small ways. When she told me of her trip to Japan to work on an organic apple farm and her dreams of becoming a sustainable organic farmer, her ojas would flow because she truly loves what she loves.

Past conditioning was melting away as her awareness heightened. "The suffering from pain that has not yet arisen is avoidable." Patanjali Sutra II:16

#### 4- Common body reading

- Lateral balance
- Forward, anterior posture
- Head and shoulders
- Right shoulder pulled up and rotated in
- Left shoulder, not elevated
- Spine and back
- Right side- winging of the shoulder blade
- Right thoracic scoliosis
- No discomfort but feels tight
- Knees
- Right hip rotation



- Fluctuating pain since bicycle accident
- Ankles and feet
- Normal ankle line

#### 5- Contraindicated yoga practices

- Headstand
- Arm balances

#### 6- General recommendations for the condition

- a- Therapeutic free of pain

There was no pain just tightness, through practice with the conditions she had learned to move with more prana. She did find more strength in the Lattisimus, upper Trapezius, middle Trapezius and Rhomboids, and a relaxing of both right and left SCM, QL and Psoas.

- b- Stabilize situation

Shuddha found that the SI stabilizer to be a daily practice even when she did no other asana work, that and meditation were the best tools she learned from SYT to enhance her life and keep her in balance.

- c- Maintenance

We met again May 3, 2007, to check in as seven months had passed since our last session. She had been to community yoga classes and felt comfortable with the variations. Her stance was tall and strong with only a slight differentiation from right to left, the right Scapula still winged but not as noticeably. Her life had been full, with hiking, biking and dancing, joy emanates. My plan was to take a third physical assessment but Shuddha asked if we could focus on her breath as it had been shallow. There were factors in her life that needed to be addressed and she felt pranayama to be the best way to access answers. SYT is about adapting to the individual's need during each session. I chose Sama Vritti Ujjaye, equal wave breath, focusing the breath through all five koshas. She felt her hips begin to shift as the Samana Prana flowed through the Transverse Abdominus and she had the realization that it was the uncertainty of life which was blocking her breath at both sternum and ribs. As the Vjnanamaya Kosha began to release Understanding, the flow of prana opened the Manamaya to the intensity stifling the joy. The image was one of choice, floating on the ocean of uncertainty with freedom of breath or being washed upon the shore like a dried piece of kelp.

- SI Stabilizer
- Sadhana practice of meditation, reading elevated teachings and journaling
- Sama Vritti Ujjaye
- Practice favorite asanas
- Having fun with friends
- Right livelihood
- Riding her bike with no fear
- Plans to meet again in the future

#### 7- Questions and answer on Yoga Therapy from [www.yogaforums.com](http://www.yogaforums.com)

- None found

## 8- References

- Clemente, Carmine D., Clemente's Anatomy pub. In 1997 by William and Wilkins
- Frawley, David, Yoga and Ayurveda, Self – Healing and Self Realization, pub. In 1999 by Lotus Press, P. O. ox 325, Twin Lakes, WI, 53181
- Karunamayi Sri Sri Sri Vijayeswari Devi, The Nectar of Jnana, pub. In2006 by Sri Matrudevi Viswashanti Ashram Trust, Penusila Kshetram, Nellore Dist., Andhra Pradesh 524342, India
- Meyers, Thomas W., Anatomy Trains, pub. In 2001 by Harcourt Publishers Limited, Harcourt Place, 32 Jamestown Rd. London NW1 7BY
- Milne, High, The Heart of Listening, pub. In 1995 by North Atlantic Books, PO Box 12327, Berkeley, CA 92712
- Stiles, Mukunda, Asana Theory and Practice, pub. In 1996 by Patanjali Press
- Stiles, Mukunda, Structural Yoga Therapy, pub. In 2000 by Red Wheel Weiser LLC, 368 Congress St., Boston, MA 02210
- Stiles, Mukunda, Structural Yoga Therapy Manual
- Stiles, Mukunda, Yoga Sutras of Patanjali, pub. In 2002 by Red Wheel Weiser LLC, 368 Congress St., Boston, MA 02210
- Swami Venketesananda, The Concise Yoga Vasistha, pub. In 1984 by State University of New York Press, Albany
- VanHowten, Donald, Ayurveda and Life Impressions Bodywork, pub. In 1997 by Lotus Press, P.O. Box 325, Twin Lakes, WI 53181

## Websites

- Cranial Sacral Therapy certification program, [www.csha.net](http://www.csha.net)
- Mishra, RK, Transdermal Marma Therapy™, [www.vaidyamishra.com](http://www.vaidyamishra.com)
- MRKH, Mayer-Rokitansky-Kuster-Hauser Syndrome, [www.magicfoundation.org](http://www.magicfoundation.org)
- NINDS, Klippel-Feil Syndrome Information Page, [www.wrongdiagnoses.com](http://www.wrongdiagnoses.com)
- Smith, Chris, Trauma Touch Therapy™ certification program, [www.csha.net](http://www.csha.net)
- Sprengel's Deformity, [www.orthoseek.com](http://www.orthoseek.com)

## 9- Appendix

### 10- Biography –

I was initiated into the Eight Limbs of Yoga by a Mahatma of Guru Maharaji in Boulder, CO at the Divine Light Mission Ashram in 1972. I began teaching asana in 1982 in Texas to high school students and women. My initiation into Sri Vidya in 2002 at the Penusila Ashram in Andhra Pradesh, India by my Sadguru Karunamayi, led me to Mukunda Stiles and the study of Structural Yoga Therapy™ in 2002.

Sadgurunath Maharaj Ki Jay!

Jagadambe Mata Ki Jay!

JAI MAA!

## 11- Shuddha's reflections

Balance and symmetry are two words which had never been used to describe my body as kids teased me and questioned me into adulthood about looking different. I didn't learn to ride a bike until ten and there was no way that my body would let me do a cartwheel. I was twenty- six years old before learning that my physical anomalies previously unnamed, though I was aware of them, were associated with MRKH syndrome. The doctors diagnosed me at seventeen with the symptoms of this syndrome but it was nine years later that I discovered my skeletal issues were related to MRKH syndrome. I have scoliosis, Sprengel's deformity and mild Klippel Feil's syndrome. My right shoulder blade is mal-aligned and I have a shorter neck than most people. While these "problems" are not physically painful, I do have a limited range of motion in my neck and right shoulder.

Moreover, a series of incidents led me to believe I didn't have or had lost my balance. While generally coordinated, bicycles have been problematic. Aside from learning to ride a bike later than most, in 2004 I slid out on an icy turn and that experience kept me from biking for a month. Later that year a vehicle ran a red light and struck me on my bicycle. Badly bruised, I was pitched into further imbalance and my recovery was slow. Over one and a half years of pain troubled me, as did the physical therapist's lack of confidence in being able to relieve it. Friends suggested yoga and meditation to help clear my head from post traumatic stress disorder, but it was the encouragement of another friend to try a therapeutic yoga class that got me into a studio for the first time.

Yoga is intimidating to a woman who feels disabled and lacks balance. To be in a room full of strangers who I expect can twist and bend in unfathomable ways scared me. With great reassurance I timidly attended my first class and felt welcoming energy and support. The ability of the other women in the class gave me perspective, as most had MS and limited mobility. Bound up tight as I was, I still felt subtle confidence in my physical abilities and strength. Rebecah spoke to me after class and invited me to come back the following week and talk after class about working together. This attention had not been previously offered by any medical staff, and it gave me hope. When I began learning and practicing yoga, I felt bound up and pretty tight, with pain in my right hip and occasionally in my low back. I felt weak in spots and tight in others, I noticed very quickly that yoga was affecting me. Soon after learning SI stabilizer, I could feel the dimples in my low back, a physical awareness that I had not known before. Not only was there an internal sensation of the SI but a physical placement.

### On Balance

Through the past months, I needed balance in many ways. I worked on balancing my weight front to back on my feet and front to back in my legs for Warrior I. I struggled to balance my time to be able to do all that feeds me. I challenged myself to find balance in my desire to do it right the first time and to do what is best for my body. After the discovery of my SI dimples, the next remarkable impact of yoga came in Tree Pose and Natarajāsana. I could balance on one foot well. It was a significant boost for me.

### On Symmetry

I am an optimist and idealist but still a realist. I did not initiate working with Rebecah to alter my skeletal deformity and shift a malformed bone into a "normal" bone. Physical symmetry had eluded me and I was okay with that. So a further blessing of yoga came when Rebecah brought me to work with Mukunda. Typically in life I have an image or example of what is right and try to make everything match it. Hanging in Down Dog, I heard from Mukunda that I had beautiful lines of symmetry. Instead of trying to force my right arm into position it would not go into, he had me match my left arm to the

right. It still overwhelms me emotionally to believe I can be symmetrical. How radical it was to think about creating a new concept of right or normal!

#### On the Asanas

Admittedly, I knew nothing about asanas pranayama, I still have not learned the Sanskrit names for the poses. Maybe I am a distracted student, or maybe the names are less important as the doing and being. I attended my first regular yoga class in October of 2006. Not all of the poses were easy for me, though just being there and breathing was enough. Mastering all of the physical postures may or may not be my journey. I am not going to give up trying. I have favorite and not-so-favorite poses. Natarajasana is my favorite. It reminds me to balance, but it is also a “still” dance. And I love to feel energy flow through me in dance. I also like Bow and Cobra poses: I feel my heart and chest open. As Rebecah introduced more poses, my feelings of disability diminished though I accept my body despite some limitations.

#### On the Sutras

Studying Mukunda’s “Interpretation of Patanjali’s Sutras” has been encouraging to me. I feel connected and grounded in them. The mental posture of yoga is really important to me. Studying the sutras and myself, I desire to hold a mental posture of acceptance, but not complacency. I wish to be at peace and to make peace in our world.

In my recovery and healing, yoga is more than an effective tool. It is a way to live that I embrace. It is a challenge to be in this world, but not of this world, and in yoga I find support. The energy that flows, renews me to find balance and symmetry in my life.

7 October, 2006