

Chronic Neck Pain  
Structural Yoga Therapy Course  
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New York, New York

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## **1 - Case study details**

### **a - Intake**

M is a 53 year-old female who presents with long-term neck and upper back pain. Her stated goal is pain relief and realignment of her physical body, and also to prevent further pain and injury as she ages. She incurred a left side lateral whiplash in a car accident 23 years ago, resulting in pain in her neck and upper shoulder region as well as decreased sensation and numbness in her left hand. Numbness, pain and reduced sensation in the left arm in the C5-C6 region of nerve distribution (Hendrickson 2003), persists today, and she has “learned to live with it.”

She describes the current pain as “knots at the base of her skull and between her shoulder blades.” She says the pain is dull and constant and that she feels “emotionally stuck and stagnant” as a result. She receives a massage twice per month and notes that her whole body grows tense as the pain increases over the course of the two weeks leading up to the massage. As the pain builds she becomes tired, more easily frustrated, more stressed and less grounded in her body. She describes a recent “fluttering” in her abdomen and difficulty sleeping, attributed to stress in her life related to family issues. Her diet is primarily vegetarian with some eggs and fish, and she usually enjoys long, full nights of sleep.

M works as a marriage and family therapist. She and her husband adopted a child 13 years ago after a long and difficult trial of fertility treatment and diagnosis of endometriosis. She is currently taking hormone replacement therapy and medication to increase the function of her thyroid. Her husband is in remission from brain cancer but continues to have occasional seizures which require medical attention. Her son has special needs, and uncertainty about where he will attend school adds strain to the family system. M is considering making a job change to earn the additional income needed for their child to attend a private school.

She participates in yoga class 1-2 times per week and enjoys long holdings of poses so that she can “get grounded” and “feel nuances.” M belongs to a local gym where she does spin class 1-2 times per week and takes leisurely walks once per week. She has a tall yet feminine build, fair skin and light hair. She says she is frequently cold and loves warm weather. M smiles easily and is soft, warm and approachable. She has a strong spiritual commitment and is highly motivated by her longtime faith of Catholicism.

### **b – Physical assessment**

M's head and shoulders are carried slightly forward, and her right shoulder is noticeably higher than the left. She has a carrying angle in both arms (L 15°/R 20°) and her left SI joint drops approximately .5 inches on the stability exam. From observing her movements in yoga class, her body appears to be highly mobile and unstable. She breathes deeply and audibly, and has no difficulty relaxing in savasana.

Range of Motion Assessments							
Joint Action	ROM	4-2-8	4-2-8	5-14-8	5-14-8	6-11-8	6-11-8
	Norm	Left	Right	Left	Right	Left	Right
<b>NECK</b>							
Extension	55°	40°	-	50°	-	50°	-
Flexion	45°	55°	-	50°	-	50°	-
Lateral Flexion	45°	30°	20°	40°	40°	45°	45°
Rotation	70°	60°	70°	65°	70°	70°	70°
<b>SHOULDER</b>							
Abduction	40°	40°	45°	35°	40°	40°	40°
Adduction	130°	120°	130°	130°	130°	130°	130°
Ext. Rotation	90°	110°	100°	95°	95°	95°	95°
Int. Rotation	80°	85°	75°	85°	75°	80°	75°
Flexion	180°	175°	170°	175°	180°	175°	180°
Extension	50°	65°	85°	65°	75°	65°	75°
Carrying Angle	-	15°	20°	20°	18°	15°	20°

Muscle Testing Assessments						
Joint Action	4/11/08	4/11/08	5/14/08	5/14/08	6/11/8	6/11/8
	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5
<b>NECK</b>						
Extension	2	-	3	-	2	-
Flexion	2	-	3	-	2	-
Lateral Flexion	1	2.5	2	2.5	2.5	2
Rotation	1.5	2	2	2	3	2
<b>SHOULDER</b>						
Abduction	2.5	-	2	-	1.5	-
Adduction	2	-	2	-	1.5	-
External Rotation	3	3	3	3	2	2
Internal Rotation	3.5	2.5	2.5	3.5	1.5	3
Flexion	2.5	3	2	2.5	3	2.5
Extension	2.5	2.5	2	2.5	2.5	2.5

**c – Summary of findings**

Muscles to Strengthen	Muscles to Stretch	Muscles to Release
Neck extensors (upper trapezius, semispinalis capitis, splenius capitis, splenius cervicis)		

Neck flexors (sternocleidomastoid/SCM)		
Neck lateral flexors (upper trapezius, SCM)		Neck lateral flexors (scalenes, levator scapulae, SCM)
Shoulder extensors, especially R hypermobile +20 (latissimus dorsi, teres major, teres minor)		
Shoulder internal rotators (pectoralis major, latissimus dorsi, anterior deltoid, teres major)		
Shoulder flexors (anterior and middle deltoid, biceps brachii, pectoralis major)		

M's assessment revealed limited ROM in neck extension and lateral flexion, and overall weakness in the muscles associated with these movements. Since her pain is relieved by massage, it seems reasonable to include a release position for the muscles involved with neck extension and lateral flexion. The primary issue for M appears to be hypermobility and collateral instability in the neck, shoulders and hips. Because she describes feeling pain mostly in her neck, the primary focus of this case will be the neck and shoulder region.

The initial recommendation is to strengthen these muscle groups using the JFS. As an experienced yogini, she has practiced pranayama regularly so I recommended simple samavritti ujjayi breathing to help stabilize pain and the fluttering in her abdominal area due to stress. Movements to increase strength and stability in the shoulders will gradually be introduced as the JFS becomes comfortable. Hypermobility in hip adduction and abduction is also noted, along with tightness in the quad/psoas restriction test. This will be addressed initially through the Joint Freeing Series.

**d – Recommendations for loss of tone and flexibility**

April 2, 2008

Initially noticed forward head position and offered M a static neck release position, as in Janu Sirsasana A, but with the upper body rotated laterally so that the head can hang, thereby releasing the lateral neck flexors. I also recommended a gentle shoulder opening exercise and cobra on elbows with head lifts to strengthen middle/lower trapezius. With my guidance, she practiced samavritti ujjayi breathing and guided relaxation into savasana with cues for deep, full breathing. Discussed requirements of the case study. Initiated general observation/body reading.

April 11, 2008

Began ROM assessment, postural reading. Introduced JFS 12-21.

April 21, 2008

Continued with ROM assessment, began muscle testing procedure. Introduced complete JFS.

April 25, 2008

Completed muscle testing and reviewed full JFS series. Recommended 6 repetitions of each movement, emphasizing quality over quantity. M found that cobra with arms off the floor and head lifts made her feel strong, and she reported that it was helping her neck, so we retained this exercise as part of her program, in addition to the JFS.

May 2, 2008

M has practiced JFS 5 times since our last meeting one week ago. She stated that she feels better, and that her massage therapist noticed an improvement in her posture since her last visit there. Her body appears to be stronger and more stable, and she is able to isolate movements in the neck and shoulders without recruiting other muscle groups or relying on her flexibility to complete the movement. She is delighted, and says that her body "has been wanting this."

Polished JFS, including fire hydrant variation of sunbird to strengthen gluteus maximus. Noticed instability in thoracolumbar spine during JFS #13, included instruction to stabilize by engaging rectus abdominus during shoulder flexion. Noticed L elbow dropping during JFS #14, encouraged M to view motion in mirror to stabilize L shoulder/elbow during exercise. Our session generally emphasized slowing movements down, beginning with a steady breath and then moving in rhythm with breathing. On #17, I encouraged M to keep her eyes closed during the movement to develop sensitivity in the upper trapezius and SCM.

M had difficulty with JFS #19, so we broke the exercise down into three separate parts. 1) chin lift; 2) slide cervical vertebrae (C3-C5) posteriorly; 3) draw base of occipital bone down toward tailbone. M reported that this was very helpful in that it helped her with precision and proper muscles engagement rather than dropping her head back, due to hypermobility.

May 14, 2008

M reports that her massage therapist noticed that she seems to have a younger body after several weeks of JFS practice and savasana, and that she feels more physically stable in her body. She reports that her stress has increased, while the quality of her sleep, eating and exercise has decreased. She attributes these challenges to ongoing, increasing concerns about her son and choosing a school

for him, along with the concomitant strain in her marriage, her feelings about work, and finding the most supportive social and academic environment for her child.

Polished JFS #8, taking arms slightly wider to smooth movement and using a strap between her hands to synchronize the movement from side to side. Introduced the SI stabilizing exercise, Part 1, and recommended that she complete 12 repetitions on each side. M found JFS #5 easier on one side (R internal/L external hip rotation). She also noted that she does not feel as stable balancing on her L leg in standing poses as on her R.

Discussed intercostal breathing, and M noted that her anterior rib cage feels hypermobile while her posterior rib cage feels “dead.” We practiced intercostal breathing, experimenting with a hand position on her rib cage that was comfortable for her shoulders.

M reported tightness and pain in her L gluteal area, and was responsive to my suggestion of trying a release technique. With client prone, I placed her leg in passive external rotation and applied alternate pressure at origin/insertion of gluteus medius and the belly of the muscle. While M reported that this action felt good, the problem seemed to be deeper. After locating the piriformis and feeling uncharacteristic muscular tension, she was responsive to another release technique. This time, I externally rotated her hip passively as shown in class and applied pressure to the piriformis. M reported two weeks later that the release technique had helped her significantly and that the effect appeared to be lasting.

M asked about why the JFS is so effective. I explained the kosha system of Yoga/Ayurveda and we discussed how the JFS affects all layers of the system, but that it was not uncommon for a person to feel immediate results in the physical layer initially.

Wednesday, May 30, 2008

Challenges regarding ongoing diagnostic testing and appropriate academic placement for M's son adds stress to her role as a mother, her marriage, her job, and the entire family system. In an effort to get a break from the constant strain of this challenge, M attended a spiritual retreat over the weekend. She found that the experience added stress overall rather than ameliorating it, as she had some responsibility for the execution of the retreat and found herself handling logistical and administrative problems rather than relaxing. She reported that practicing the JFS was helping her sleep significantly.

We discussed the practice of uddiyana bandha, something she has done in the past, as M has expressed an interest in becoming more attuned to her digestion and eating patterns. After some discussion, we agreed that adding uddiyana bandha or another pitta-raising practice might aggravate her stress at this time and agreed to postpone it.

I recommended that she streamline her practice as follows, based on her report of elevated stress, the need for a quiet nighttime practice, her desire to maintain the JFS as the focal point of the practice, and time constraints:

1. meditation/centering (5 min)
2. SI stabilizer exercise (2 min)
3. JFS (15 min)
4. baby cobra with lift (strengthen upper erectors, middle trapezius) (1 min)
5. samavritti ujjayi pranayama (5 min)
6. savasana w/yoni mudra (10 min)

Wednesday, June 11, 2008

M expressed deepening concern at finding an appropriate medical diagnosis and academic placement for her son, and explained that the family was now considering moving to another school district in an effort to secure a public school with suitable resources. The family has been looking at homes in the new potential school district. She believes that her son's symptoms matched those of a particular genetic disorder and had him tested, and also arranged for a neurodevelopmental assessment to determine appropriate brain function. She is currently waiting to hear results from the neurology lab work. Her son was on a trial of anti-psychotic and anti-seizure medication, and after an initial positive response to the medication, his symptoms worsened to the point that they took him off of the anti-psychotic medication. She said that her sleep continues to be problematic, that she is very clingy toward her husband and yet they argue often about the impending decision about school for her son.

M noted that, in the course of her disrupted sleep, she recently injured her neck and now has a diminished range of motion. Isolated muscle tests demonstrated slight weakening in the neck muscles where her pain has increased over the past week. M verbalized "I take all the stress in my body . . . how do I NOT do that?" We discussed this pattern, as well as the fact that her eating patterns have worsened, that she feels emotionally exhausted and feels the need to lie down and rest 2-3 times per day for at least 10 minutes, something she has never experienced before. She noted that massage helps, as does the piriformis release performed two weeks ago. She feels as though her energy is "clamped down," and that when she gets massage something inside her shifts, allowing the energy to move through her so she can let go.

She asked about the SYT book and what else Mukunda had written. I suggested she purchase both the SYT big book and the Yoga Sutras, as his was a

straightforward, compassionate rendering of Patanjali's text. I directed her toward Chapter 2, Sutras 46 and 47, in an effort to help her be gentle with her body, with her efforts both in yoga and in determining an appropriate path for her son and, therefore, her family.

2.46 "Yoga Pose is a steady and comfortable position."

2.47 "Yoga pose is mastered by relaxation of effort, lessening the tendency for restless breathing, and promoting an identification of oneself as living within the infinite breath of life."

As with most students, she was relieved at this rendering of the sutras, and adopted a softness toward her practice and herself upon hearing it. She was also pleased to realize that she could access relevant yoga philosophy without compromising her longstanding spiritual beliefs. In reflecting upon Sutra 2.47, she described her symbol of the infinite breath of life as God's love represented through Jesus, with whom she has a close, revered relationship.

In addition to the previously outlined practice, we polished dynamic salabhasana (lifting and lowering) at M's request as below. She feels that the movement decreases her neck pain.

1. Salabhasana lifting arms only in Superman position, 2-3 inches off the floor and held for 3 breaths. Repeat 3x.
2. Salabhasana lifting trunk only, held 2 breaths and repeated 3x.

Continue with prior recommendations.

July 2, 2008

M reports that her son is doing much better, and as a result feels she is doing much better. She believes there are many issues related to her son and his adoption that are surfacing as he enters adolescence, and her "standing up" to him and to her husband helped her feel more confident and at peace with how she is handling things. She sees a slow transition for the entire family to accepting her newfound ability to vocalize feelings, and that her own stress level has decreased as a result of the change. She reports difficulty on a recent vacation to Arizona, and was plagued with heat rash and bug bites to the point that their trip was cut short. I would interpret this as a pitta imbalance, resulting from the obvious over-exposure to heat, along with stress related to the family and travel).

Despite the improvement in her family situation, however, M reports that she experienced a notable increase in pain during her vacation when she was unable to perform any of the exercises. She would like to return to a routine of practicing JFS 4-5 times per week.

September 5, 2008

M reported today that she had been very busy and stressed during the summer, and had in fact cancelled several of our previously scheduled appointments. She said she was unable to perform the exercises during the last two months, and appeared quite stressed at the time of our meeting. She reported some anxiety about her son's school situation, as well as strain in the marriage related to decisions about her son's education and medical care. She wanted to keep our session as short as possible and was clearly in a rush to finish.

**Post Case Assessment (3 month Follow-Up), September 5, 2008**

<u>Joint Action</u>	<u>Normal ROM</u>	<u>Left/Right ROM</u>	<u>Strength Assessment (L/R) 1-5</u>
Neck Extension	55°	45°	2
Neck Flexion	45°	55°	1.5
Neck Lateral Flexion	45°	L 50°/R 40°	L 2/R 2
Neck Rotation	70°	L 65°/R 85°	L 1.5/R 1.5
Shoulder Abduction	40°	40°	1.5
Shoulder Adduction	130°	120°	1.5
Shoulder External Rotation	90°	L 110°/R 90°	L 2/R 2
Shoulder Internal Rotation	80°	L 85°/R 75°	L 1.5/R 2
Shoulder Flexion	180°	L 175°/R 170°	L 1.5/R 2
Shoulder Extension	50°	L 65°/R 85°	L 2/R 2.5

The follow-up table shows that both ROM and muscle strength diminished considerably with the cessation of the JFS, strengthening exercises, and relaxation. Imbalances noted in the initial session in both muscle strength and ROM returned. For example, standard ROM for lateral neck flexion is 70, and M had attained this laterally over the three months of regular JFS. After eight weeks without JFS or strengthening exercises, M demonstrated 65 L and 85 R, essentially reversing the progress toward a sattvic state of movement. This pattern was consistent with the other ROM assessments.

Likewise, strength in the neck and shoulder region diminished overall, sometimes regressing only to mid-study levels and sometimes regressing to pre-study levels. The combination of stress and not performing the exercises had a

destabilizing effect, increasing vata and decreasing overall strength, ROM and general coping ability.

M also reported feeling more self-conscious about her body, her weight, her eating and a general sense of dissatisfaction and dissociation at not being as present in her body now as she was while performing JFS regularly.

### **e – Results of your recommendations**

In general, M believes that regular practice of JFS has greatly reduced her level of stress and her level of pain. Her experience is corroborated by the results of the ROM and strength assessments, which showed improvement during the study and declined after she discontinued the exercises. While doing the JFS, she reported improved posture and strength, a feeling of increased youth and vibrancy, relief from the physical pain in her neck and shoulders, and improvement in sleeping and diet. She described feeling “lighter” when performing JFS regularly, and noticed decreased tension and increased energy flow in the piriformis area following the release technique.

The perceived stress related to issues within the family system appears to be the primary challenge to her healing, affecting most obviously the physical system (anna-mayakosha) but the other koshas as well. When I posed her question to Mukunda regarding how not to hold stress and tension in her body, he reframed it as a positive adaptation, noting that because the body is the place we hold these things, our responses teach us how to be sensitive and discerning. I shared this interpretation with her and the cognitive reframing allowed her be less judgmental and more compassionate with herself.

The persistent imbalance of vata appears to make discernment and decision-making very real challenges for her, and this instability affects many things, such as the way she approaches her relationship with her son and husband, the process of selecting an appropriate school, assessing the risks and benefits of traditional medical versus alternative therapies, and in making decisions for her own health.

## **2 a – Name and description of the condition**

Cervical strain is usually the result of a stretch injury to the muscles and/or ligaments of the cervical spine. Although most people experience neck pain at some point in their lives, cervical strain can be acute, lasting hours to a few weeks, or chronic, lasting several weeks or longer. Cervical strain is one of the most common musculoskeletal problems encountered by general physicians and neuromusculoskeletal specialists.

While most causes of cervical strain are not serious, chronic pain associated with the condition can interfere with normal, day-to-day movements, causing recruitment and overuse of other muscles which can lead to further tightening and/or weakening of specific muscle groups, thus decreasing range of motion and increasing pain over time.

Clinical studies show a high correlation between chronic pain and depression, along with the possibility that chronic pain may contribute significantly to mood and sleep disorders.

Chronic neck pain generally results from several causes, including:

- Muscle strain, in which the posterior neck muscles become fatigued and eventually strained. This is of particular relevance for people who remain in one position for many hours at a time such as painters, computer users, those who drive for long periods, surgeons or assembly line workers.
- Worn joints, which experience wear and tear over time and may lead to osteoarthritis. Cervical osteoarthritis can cause chronic pain and stiffness in the neck.
- Disk degeneration, which leads to a narrowing of the space between the vertebrae and may lead to nerve irritation and neck pain. Bone spurs (growths) can also put pressure on the nerves as they exit the spinal cord, causing pain.
- Automobile accidents. Rear-end collisions often result in whiplash injuries, which occur when the head is jerked forward and back, stretching the soft tissues of the neck beyond their limits. A history of neck injury of this type is a significant risk factor for chronic neck pain.

Chronic pain associated with cervical strain is most likely to affect the facet joints, intervertebral disks, and upper cervical ligaments. The C5-C6 region is the most common source of cervical and referred arm pain. Cervical facet joint pain is typically a unilateral, dull, aching neck pain with occasional referral into the occiput or interscapular regions. The cervical facet joints can be responsible for a substantial portion of chronic neck pain. The cervical facet joints refer pain overlapping with both myofascial and diskogenic (caused by intervertebral disk) pain patterns.

The clinical description of this condition is consistent with M's description, and it was clear that her symptoms worsened as the stress in her life increased. She also noted that a persistent feeling of being "emotionally stuck or stagnant" was correlated to the pain and that as the pain lessened, she felt her internal energy increase and become more accessible.

### **b – Gross and subtle body common symptoms**

Upon intake, M presents with a slight forward lean in her posture, a slightly forward-rounded shoulder and a forward head. There is a softness in her physique and her manner, and yet there is the appearance of tension in her shoulder area related to the forward head. These postural cues are consistent with the findings of the strength test and ROM testing performed later in the case study.

### 1. Annamayakosha (Body of Food)

M reports that her diet is largely vegetarian and healthy. When stressed, she reports that the quality of her food declines and she finds herself eating more salty, fatty snack foods. This creates a vicious cycle of negative thinking (3<sup>rd</sup> kosha) that makes her feel less in touch with her body (1<sup>st</sup> kosha) and further away from her true self (4<sup>th</sup> kosha). Her report is a good indication that consistent effort in the annamayakosha would be likely to result in positive energetic movement and more positive thoughts.

### 2. Pranayamayakosha (Body of Energy)

M reports that her energy is “stagnant and stuck” when in pain, and that her energy is “clamped down” when under stress. It is indicated that continued practice of the JFS, samavritti ujjayi breathing and savasana are important in keeping her energetic body mobile and responsive. She reports that massage and muscular release techniques (as learned in the SYT program) help unlock her energy, allowing her to “let go and go on.” Persistent pain and stress would help explain why her emotional state is unstable and highly reactive to the stressors in her child’s life, guiding her to consider a broad array of potentially unrelated options in response.

M also reports that she typically enjoys long, full nights of sleep and it is reasonable that these periods help refresh her energy body as well. When her sleep is disrupted, as it has been occasionally throughout our case study, the quality of her eating declines, her stress level increases and she feels less capable of making good decisions.

M also reports that she enjoys gardening and making/presenting beautiful food. She likes to take walks regularly, and I would encourage her to make both these practices a regular part of her life in order to feed the 2<sup>nd</sup> kosha and create movement toward the 3<sup>rd</sup> kosha.

### 3. Manomayakosha (Body of Thought/Mind)

M reports a high level of mental stress in relation to life circumstances, and her ability to weather these circumstances seems largely influenced by the level of awareness and attention she gives to the physical body. I noticed that when she performed the JFS with consistency, her thoughts tended toward a more positive, more proactive state. During these times she was able to discern more specifically where she felt pain or comfort, what foods and activities would be most beneficial for her, and how her moods came about. She was more creative in problem-solving and generally more compassionate with herself. In contrast, when she was not performing the JFS, relaxation and other exercises regularly, her moods seemed more arbitrary and less within her control. Her discerning capability in regard to eating, sleep and finding solutions for life’s challenges was diminished.

Given her spiritual background and commitment, prayer has always been an important part of M’s sadhana. Although prayer is not exactly mantra, there are qualities that serve the same function as mantra, such as transforming the mind to a higher, more generous and peaceful state. My assessment is that for M, either physical exercise or

prayer performed in isolation are not nearly as powerful as the two performed together. The combination feeds her need for physical awareness and depth, along with her desire for spiritual connection and a higher purpose.

#### 4. Vijnanamayakosha (Body of Transcendent Thoughts)

M appears to have a well-established awareness of the wisdom body, and she can access it regularly through prayer and meditation. Interestingly, it is her detachment from the physical body that allows her to function through difficult times, including the concomitant challenges of eating, sleep and exercise that often accompany stressful life circumstances. However, this can also be problematic when the awareness essentially circumvents the Annamayakosha because then discernment is abandoned even when there is physical pain. There does not appear to be true transcendence of the physical body, but rather an intermittent lack of awareness and responsiveness to it under times of stress.

M has a strong spiritual practice in relation to Catholicism, prays and attends religious services and occasional religious retreats. She attributes her ability to deal with life to God and her relationship with Jesus. It is reasonable to conclude that her physical pain would be significantly greater and her discernment significantly diminished were she not engaged in regular spiritual practice.

#### 5. Anandamayakosha (Body of Bliss/Happiness)

M is capable of accessing the anandamayakosha periodically, and I have frequently seen her speak or act from the selfless, joyful state of being. This was especially obvious after or during relaxation exercises, a nurturing savasana, or any kind of hands-on support. M felt very relaxed and deeply appreciative during and after the piriformis release process, and her entire demeanor softened. As is common with the transition from the gross to subtle bodies, physical pain or stress maintains attention and awareness at the most superficial layer, while release of pain and stress, plus a sense of nurturing and/or connection with the Divine, transports M to the Vijnanamaya and Anandamayakosha bodies.

#### **c – Related challenges – lifestyle, diet, limitations on activities**

M has an understandable desire to provide the best possible care, treatment and educational/social setting for her son. She tends toward movement, so that she is constantly seeking a better educational alternative, a different kind of doctor or specialist who can provide new information, or an unexplored treatment modality. From my perspective, it appears that this effort places undue strain on her personally, as well as on the marital relationship and family finances. She perceives her role as managing her son's diagnoses and treatment but often feels that she is on her own in making decisions, without support from her husband or adolescent son.

In her vocation as a therapist, M spends long periods of time sitting. She realizes that this is not healthy and feels much better when she exercises regularly. M says that her husband and son do not appreciate the effort she puts into preparing meals, and so her

incentive to provide food that is healthy and presented beautifully is diminished, even though she enjoys the process of preparing and presenting meals.

Currently, there is no notable limitation on her activity, other than movements or positions that cause pain during occasional flare-ups in her neck and shoulder region. In general, M finds that movement of any type tends to improve her symptoms.

### **3 – Ayurvedic assessment and Ayurvedic based yoga recommendations**

M uses language to describe her pain that is consistent with a kapha-predominant individual. She said that her pain was dull, achy, constant, and that she feels emotionally “stuck” and “stagnant” as a result of her pain. She states that she enjoys long holdings in poses and feels grounded in them, giving her a chance to appreciate nuances. Her body is soft and full, eyes and hair light, skin light and smooth. M says that she likes hot weather and is always cold in the winter. When her diet is not balanced, she gravitates toward nuts and other crunchy, oily foods. The importance of her spiritual practice and devotion to Catholicism are consistent with her kapha nature.

M also displays elements of imbalanced vata and pitta, such as constant movement and quick responses to stress. While physical symptoms related to a summer heat rash indicate a pitta imbalance, vata is indicated as another predominant dosha. Anxiety and fear of not doing enough, combined with a widely varying commitment level and presentation of symptoms during the case study indicate a vata imbalance. M's presentation and symptom description are consistent with the dual constitution described in Ayurvedic Yoga Therapy:

*Vata/Kapha – This constitution tends to be quite healthy but is plagued with minor upsets that can create emotional havoc in their lives. It is an unsettling constitution in that one is constantly struggling to balance the extremes of their subtle and gross natures and desires.*

My suggestion to M is to find a yoga class that includes an element of devotion, that can be practiced in harmony with her religious beliefs. She can use yoga poses such as bridge, fish and peacock to help move energy from the kapha region. M would most enjoy classes that include a combination of poses, some held and some dynamic, to satisfy both kapha and vata. She also responded very well to the JFS, pranayama and savasana, indicating that these practices help balance vata.

I recommend that M continue to follow a primarily vegetarian diet, and that she practice what I call “prophylactic” eating and food preparation. We discussed how this requires some forethought and planning so that one is not suddenly famished with only a bag of salted nuts in the car! I suggested that she pack fruit, fresh water, and any other foods that are appealing to her that she would feel good about eating. This way they are available when she is hungry, and she improves her chances of eating in a way that is fulfilling and satisfying to her. She might avoid the cycle of regret and declining body image that tends to accompany impulsive overeating.

I would encourage M to employ elements of her faith, and trust that her son will be okay regardless of which particular school or neighborhood or sports program he is enrolled in. A slight shift in her perspective might free her to enjoy the time he is with her, and relieve her from the burden of having continually to seek a better, more appropriate setting for him. This might allow her to re-establish an internal awareness of her own health, including making regular exercise, attention to food and sleep, and creating time for gardening and cooking. She might enjoy unstructured time with her husband that is not focused on their son. She can take advantage of kapha in staying committed to one decision once she's made it. Kapha can thus balance the vatta, which tends to push her into the mode of continually searching for a better alternative.

**4 – Common body reading**

Head and shoulders carried slightly forward, thoracic area rounded (protection). R shoulder high, bilateral carrying angle.

Postural Change	Tight Muscles	Weak Muscles
Forward head	Sternocleidomastoid	Neck extensors, Neck flexors, Neck lateral flexors, Shoulder Extensors
High R Shoulder	Levator Scapula, Upper Trapezius	Shoulder extensors, Shoulder internal rotators

**5 – Contraindicated yoga practices and general activities to modify or eliminate**

Modifications to yoga practice and other forms of exercise include slowing down and staying attentive to breathing. Sarvangasana (shoulderstand) may exacerbate the forward head position, further tightening and shortening the sternocleidomastoid muscles bilaterally, and it may be best for her to avoid this pose while she is stretching that muscle group and strengthening the opposing muscle groups.

**6 – General recommendations for the condition**

**a – Therapeutic/free of pain**

Create time and space on a regular basis for JFS. Rest the body when needed, begin to notice areas of weakness that, with strengthening practice, will add stability to the physical and subtle bodies. Engage in regular practice of yoni mudra and savasana to reduce stress. Continue with bi-monthly massage and spiritual practice to stay grounded in body and maintain regular relief of physical symptoms.

**b – Stabilize situation including lifestyle recommendations**

M notices greater physical comfort, spiritual presence, discernment capability and increased self-esteem with regular JFS/asana practice and pranayama practice.

A consistent practice -- including stretching and strengthening (stabilizing) the cervical and upper thoracic spine -- will help to create proper space between the vertebrae so that the nerves can be released and thus pain reduced, thereby re-establishing health in that area of the body. In turn, this would lead to regaining full feeling, strength and function of M's left arm and hand over time.

Along with regular practice of JFS and the recommended asanas, continued practice of breathing will provide added benefit to M. Because of the forward position of the head and neck, it is possible that breathing has become slightly compromised due to the pressure of the lungs on the diaphragm. This may explain why M's inhale seems to be exaggerated and her exhale somewhat passive. Practicing sama vritti ujjayi breath with regularity will help strengthen and stabilize the breathing muscles as her posture is corrected with practice of the JFS and asanas. Continue with yoni mudra in savasana to ground vata.

Also recommend ongoing massage for pain relief and developing positive body image.

**c – Maintenance** and long term considerations

Ongoing attention to stabilizing the physical body through balanced strength and stretch. Realize that instability in the physical body contributes to instability in the deeper koshas, and instability in the deeper koshas contributes to instability in the physical body. Slowing down, stopping, and paying attention to what is being felt in the heart will ultimately provide the necessary guidance for decision making. Practice saying and feeling the words:

*With great respect and love*

*I honor my heart*

*My inner teacher.*

*Namaste*

## **7 – Questions and answers on Yoga Therapy from [www.yogaforums.com](http://www.yogaforums.com)**

### Question #1, 2002

My 17 year old son has been having trouble with his neck for some time. A recent x-ray reveals congenital fusion of C1 & 2 as well as C6 & 7. He is constantly making abrupt movements with his head from side to side to "adjust" his neck. He has been getting Craniosacral work and chiropractic about once a week, but I'm now worried about the chiropractic. He also possesses the unusual ability of being able to make himself faint if his shoulders come up to close to his ears (e.g. it happened once in cobra when his

shoulders were too high). My sports doctor said he has hypermobility in the upper body and was pinching arteries into the brain. My son is also a mouth-breather, and nothing I have tried over the years will convince him that nose breathing is healthier. I look forward to your answer.

#### Answer #1, by Mukunda

In this world, let us understand what he has going on and see how you can relax your personal stress levels. Knowledge is a great reliever of tension and often brings an ability to access the true wisdom of God. I agree with sports doctor, your son very likely has occlusions of the vertebral arteries that run through the transverse processes of the cervical vertebrae. Look at a good anatomy book to see them. The ideal is for his muscles to become stronger in flexion and extension and minimize lateral flexion and rotation. Of course these are the very motions he is undoubtedly doing to adjust his own neck. Adjustments (whether done by yourself or a DC) increase vata and contribute to chronic instability. Definitely do not do neck rolls, they are rarely beneficial and in his case could lead to fainting. Unless chiropractor is a teacher of others I would not recommend use of this method for your son. Much better would be a highly skilled cranial sacral practitioner or polarity therapist.

There are many other reasons to justify nasal breathing, such as back pain and actually most pain (including neck) is often accompanied by mouth breathing. By correcting breathing one major portion of the pain cycle is broken. Pain is a vata imbalance and nostril breathing in descending vertical wave on inhale and reverse on exhale (described in more detail in my book) is a simple solution if done consistently. For more details on nostril breathing and its benefits to top athlete's performances see *Body Mind and Sport* by John Douillard, DC. I don't know what your son will need to convince him but perhaps this book and its evidence may help.

#### Question #2

I have a person who came to me seeking help. He is in his late fifties and suffered a severe neck injury 20 years ago and lives in constant pain. He has limited range of movement because almost anything he does causes pain in the neck. Just a quick examination with him lying on the floor caused pain in his lower left back. He has been watching one of my classes for several weeks and has decided that yoga may help him. He wants to change his nutrition and begin some kind of movement to improve his condition. He is a Native American and approaches life in a deeply spiritual way. What may I do to help this person?

#### Answer #2, by Mukunda

Again I would start this man with the JFS and pranayama. Breathing exercises beginning with seated or lying simply breathing into the painful area is the way to begin. If he can learn to direct his energy the pain should lessen or even subside to a great degree. For pain I find the major path to go is pranayama and meditation practices. Opening to the Great Spirit who can allow his body to heal. For people in long-term pain, the key is to focus on helping someone else who is in pain. That teaches them by proxy how to alleviate their own pain.

#### Question #3

I would like to ask about ways that I could strengthen my spine And shoulders after recently being diagnosed with cervical stenosis on the basis of a congenitally narrowed cervical canal as well as bulging of the C5-6 and C6-7 discs. There is no associated foraminal stenosis. I appreciate that you have knowledge of therapeutic yoga, and realize the benefit to myself as I recently have begun to practice yoga. Background Information: I have been employed as a Licensed Practical Nurse for 21 years. Mainly I have worked in Long Term Care where heavy lifting and transferring of patients is part of my duties. On October 12, 2001, I assisted in lifting a patient who had fallen, to her feet. I had both arms extended under patient's arms and patient pushed back into me as she stood. At this time I did not feel any discomfort. The next morning I woke, sat up on the side of the bed and heard and felt 3 distinct 'thunks' in my neck region. This was followed by momentary dizziness, and pain radiating from my middle neck across my left shoulder and down my left arm. It was uncomfortable, but tolerable, so I used ice and heat and rested for that day. The next day the pain had significantly increased in my left arm, especially elbow and hand. I went to the doctor and was told it was a muscle strain. The next day I woke to find that my left thumb and next 2 fingers were numb. The intense pain lingered 6 weeks. During this time I went to physio and regained some mobility and the pain gradually decreased. Triceps remain very weak as well as weakness to left wrist, and finger extensors. I continue to have diminished sensation in my fingers. After an MRI done in November I was sent to an Orthopedic Surgeon for assessment. His advice is that surgical intervention is reasonable (within the next 6 months). As I had started yoga and stress reduction (based upon mindfulness meditation) in September of 2001-I felt that not only the meditation, body scan, and yoga poses helped me with pain, but I have seen improvement in flexibility, mobility, and stress reduction. At the present I am on no medication and am practicing yoga daily as well as walking 5 km daily. I would appreciate any information or direction you could give to me in regard to my situation. At present I am researching alternative solutions to this condition. I sincerely appreciate your time and attention to this matter.

#### Answer #3, by Mukunda

First of all I commend you on your working together to address this difficult challenge. Secondly my advice is to only do those motions that alleviate pain, build strength and promote sensitivity to your comfort zone. I would highly recommend you do my Joint Freeing Series daily in harmony with breathing rhythmically as you do the motions. The thought is that as I move my joint I send the breath energy into the joint and free it up for ease of mobility and heightened energy throughout my body. As you do this always remember to extend (open) the joint before moving it. With regard to the neck region do not go to full range of motion but rather hold yourself back to 50% and emphasize feeling spaciousness between the vertebrae. Be especially cautious on extension (looking upward).

#### Question #4

My question is about the neck strengthening exercise in your book. I was wondering if this would be a good thing to do for people who have a forward head? From your book I see that the sternocleidomastoid muscles are tight and the upper trapezius is weak, so it would seem to me that it would be more appropriate for a person with a forward head

to lie face down and lift the head up. If this were correct, would you place the hands behind the head and then lift up? I thank you in advance for your reply.

#### Answer #4, by Mukunda

Yes, this is indeed more for someone with a forward head though I would check as they can be forward and still have the later neck muscles weak too. In that case I would give both but with the head lift on belly done more and last.

#### Question #5

I have a student who is in his mid 50's whose head goes forward when he's standing. I started to observe many of the "older" students and noticed several others have forward heads. I always take time at the beginning of the standing postures to work with Tadasana and by the time they've stayed in it for several breaths, they seem more balanced. This deteriorates more or less slowly and by the end of class as they're leaving the heads are back in their forward position. I realize it can take time to make these adjustments in the structure of the body but just was curious what you might suggest to help me in working with this.

I am also interested in what you would say about these people doing Shoulderstand. With the head already going forward, is it a good idea to have them do Shoulderstand, which might make the situation worse? Perhaps a half Shoulderstand Viparita Karani?

#### Answer #5, by Mukunda

I find that most people have a 10-degree forward posture to the neck. It is not correctable by adjustments in poses like mountain. This is accompanied by having weakened lower trapezius and latissimus muscles. The crucial issue is to strengthen these muscles. This can be done in bridge, cobra, and cat bows as they are described in my book. Yes, a half Shoulderstand is best for this; this is one of the many reasons why I put it in my book and not the full pose.

#### Question #6

A female student, between 55-65 years of age, has begun complaining of a tingling sensation in her arms and hands. Last night she could not do the neck strengthening pose (on back, arms framing head, lifting head and turning). She did not do the pose because it caused her discomfort (good for her). But she feels it in warrior, shoulder opener, or any pose with her arms at shoulder height, whether supported or not. She has been practicing with me since January and has now discovered this issue. I suggested that she see her physician, and that in practice she not rise her arms, or hold them raised to the point of discomfort. Can you please advise?

#### Answer #6, by Mukunda

When there is numbness, caution is advised. The motions given should relieve this and tone the range of motion (ROM) so that any diminished ROM is restored to normal (see my book Structural Yoga Therapy for angles of normal ROM). I would suggest since the lying toning is a problem that the student instead do all the joint freeing series (ROM)

but extra slowly for all shoulder and neck motions. Ideal would be to feel each motion in the specific muscles specified in chapter 16 of my book.

#### Question #7

I had pain around the right side of neck and right shoulder for several years working long hours at the computer (my education was delivered/relied on the computer). I continue to have this pain whenever I use the computer or do chores where I have to stretch out my arms or raise my arm. A pop and grating can be heard at the back of my neck and pops as well when I move my shoulder. I frequently do all chores and carry groceries(I live alone), I seemed to have strained my other left side of neck and shoulder as well. Now my upper back feels tight. It did not worsen this much when I was staying with my family. I think my delicate frame is not strong enough for many activities. Now I have used a proper chair and adjusted height of my computer which seem to lessen the pain on the right side.

I did the JFS which I feel seem to release much of the tightness and pain, although I could hear the clicking while doing them. I felt like a weight has been lifted away during and immediately after the session. Then, when I start to move my arms again for one or two times for my errands, the pain would come back. I could not stop my chores as there is no one else to do them. How can I fully benefit from the JFS even after the session? Should I have to stop certain movements of my upper body daily for a while?

#### Answer #7, by Mukunda

I would suggest you do the JFS very slowly and learn to focus attention on the currents of sensation in your body. They are likely to be pronounced not just the specific joint you are addressing but at diverse regions. So encourage that awareness. As long as your body is having a discharge of strain, pain or spontaneous motions (kriyas) keep doing whatever you are doing. just be gentle. If this is the way your body is healing then send me personal email to [yogimukunda@comcast.net](mailto:yogimukunda@comcast.net) and begin the Tantra lessons they can deepen this subtle body reaction to more effective JFS.

If you fatigue while doing JFS then you simply need persistence to build muscle tone. In that case follow guidelines in SYT book chapters 17 & 18. If tone is not coming by being progressive then it is a sign that rest is appropriate. Often rest is needed when injured tissue is recovering from physiological changes of stress leaving your body. The joints are often where pre arthritis changes are stored. If that is the case then search this site for arthritis diet 10 day cleanse.

#### Question #8

I attended the 2 day London sessions last month which I found inspiring and beneficial. Following the therapy session, you recommended a target of 6 flexion of the head and 4 lifts with the head rotated to the right for the following fortnight, followed by 2 head lifts in sphinx. I have practised JFS and the additional movements daily. I do feel stronger - there continues to be much change - sensations particularly in fingers and wrists, not always pleasant; generally less shoulder and jaw pain. Computer problems stopped me

getting in touch sooner - I have now moved on to 7 and 5 but would like your recommendation for a further target.

Answer #8, by Mukunda

This series of motions is described in Structural Yoga Therapy book page 180. The goal for optimal tone of each movement of the body is to isolate the muscles and repeat their natural ROM for 12 times.

Question #9

I have been suffering from cervical spondylolysis. After seeing my x-ray the doctor informed me that it was not very serious. However, I do feel pain when I turn my neck towards right side, especially in the mornings. I do those neck exercises but there is no improvement. Could you please tell me what asanas are good for this problem and what asanas should be avoided. For the past 8 or 9 months I have STOPPED doing Sarvangasana, Halasana, Sirshasana, Yogamudra & Mayurasana. I have been doing Padmasana, Vajrasana, Trikonasana, Bhujangasana, Shalabhasana, Dhanurasana, Supta Vajrasana, Paschimottanasana, Ushtraana, Matsyasana & Chakrasana. Please let me know if any of these are not advisable for me.

Answer #9, by Mukunda

You have eliminated most suspect practices and done what is a safe practice but it is not therapeutic. For therapeutic practice you need to be evaluated for what is weak and what is tight and given specific asanas to address those general challenges. Later on the program can be extended to consider Ayurvedic qualities underlying the symptoms. For this to be made a SYTherapist is best. See my website for graduates or come see me when i travel to your area. In general i know you will need to do neck strengthening so for now do exercise for the sternocleidomastoid muscles on page 180 of my book and tone neck in all directions.

Question #10

I saw someone with both palms facing back. I asked her if she had heart disease in her family & she said no & that she didn't have it either. After assessments were done I asked her about her husband & if he was still alive. She is 71 & had 7 children & was in prison for 3 months due to being a peace activist. Her husband had been buried last November so I asked her if he was the "love of her life" & she said no. I am thinking that the correlation of the heart & the hands facing posteriorly may be on a more emotional level so we talked about that & she agreed that it was a significant thing. Does this happen very often, that emotional traumas or feelings cause significant changes to the physical body?

Answer #10, by Mukunda

A very intriguing discussion. To me heart is multidimensional organ. So I suspect that the correlation of emotional heart being closed would hold true here. How often we see this when people are depressed heart is not open and then have rounded shoulders. Who can say where this line is drawn between chronic and acute heart aches? Is it

postural or structural? That is, temporary due to emotional state or more durable due to persistent mental state. By asking these questions you can come to conclusions about which kosha (dimension) is affected. Each of the five dimensions require different approach to Yoga Therapy.

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## **9 – Appendix**

### **10 – Biography**

Angela Lynn Norwood, M.Ed., discovered her passion for yoga after a career as a family therapist and social worker. She has worked with children, teens and families in crisis and also as a group facilitator in women's drug and alcohol recovery programs.

Her yoga background includes training in the Iyengar, Ashtanga, Shadow and Viniyoga styles. Angie has studied with master instructors Shandor Remete, Ana Forrest, Andrey Lappa, and Baron Baptiste, and most recently completed the 700-hour Structural Yoga Therapy training with its founder, Mukunda Stiles. She continues in-depth study with her local teacher, Mark Horner.

Angie lives in the San Francisco Bay area and teaches public classes and workshops, along with private therapeutic consultations. She has also developed corporate yoga programs, and trains and mentors new yoga teachers. Her classes typically integrate an emphasis on breathing, bandhas and bits of philosophy into a flowing asana practice.