Herniated Lumbar Disc

Structural Yoga Therapy Research paper

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1 a – Initial intake, review of symptoms, subjective pain level, self assessment and goals

Sue is a 42-year-old mother of two; bright, lively and full of vigour. She leads a positive and active life including many years of dance; tap and contemporary. She also enjoys gardening and owns her own allotment plot where she and her husband spend much time in the summer. She gives an initial impression of holding strong boundaries, clear in what she wants and needs.

I first met Sue when I instructed her at a busy beginners Yoga course I was leading in September 2006. At the beginning of the class Sue explained to me that she had been diagnosed with a herniated disc in February of that year and had been working with visits to the Physiotherapy department at the hospital ever since.

Due to the nature of the class (being so busy) I was filled with a foreboding sense about Sue. Not knowing her as I do now, I feared that she might over push herself and end up aggravating her condition and finding disappointment with Yoga. I made it extremely clear that she was to listen to herself and avoid strong pain.

Sue has been a regular attendee of classes since this time. She has proved herself to be aware of her body and her needs, always working with respect for herself. I have watched a very slow but steady improvement in her capabilities in class.

In April 2007 I asked her to become a case study for Structural Yoga Therapy. She readily agreed due to a strong motivation to move out of pain and be able to engage in the active lifestyle she once enjoyed.

Sues Structural Yoga Therapy goals were primarily to move out of pain. She was finding it hard to complete a day at work without moving into strong pain and wanted to be able to face a working day without pain through the second half of it. Longer term there is a desire to get back into Gardening/allotment time. Initially she was keen to get back to tap dancing but now feels that Yoga is replacing this. “I have a vision of the future; I would like to come to your intermediate class one day” This statement is indicative of Sue’s fiery determination and will, showing a strong Pita characteristic to her nature.

The first herniated disc happened in October 2000. Sue suspects the cause to be over doing it in the garden. The MRI scan at Oxford’s Radiology Department, dated 16/11/2000 states “Chronic low back pain, no Sciatica. Sagittal T1 and STIR, and Axial T2 images through the L5/S1 disc. There is disc desiccation at L5/S1 with a very large central disc protrusion. This compresses the theca and the origins of both S1 nerve roots. Otherwise the appearance of the Lumbar spine is normal”.

The second herniation happened in February 2006. Pain started after a physical day, standing most of the day. An MRI scan at the Nuffield Orthopaedic Centre dated 27/4/06 states "Normal Lumbar spine alignment. No pars defect or focal bone lesion seen. There are satisfactory appearances of the lower thoracic and upper 4 lumbar discs. At L5/S1 there is posterior disc bulge with an 11mm right paracentral disc extrusion that compresses the traversing right S1 nerve root within the central canal/lateral recess. There is mild swelling of the right nerve root in addition. No other spinal stenosis or neural impingement has been demonstrated. Normal appearances of the lower thoracic cord, conus and cauda equine. No paravertebral abnormality. Comment – Large right paracentral disc extrusion with compression of the right S1 nerve root within the lateral recess as described"

With this second Herniation Sue experienced Sciatica for the first 4-5 months from initial slippage.

Sue visited Oxfords Physiotherapy department for treatment from May 2007. She found the exercises given to be very challenging, not enjoyable and was infrequent in her practice of them, lacking in trust for the treatment.

From September to December 2006 sue experienced her pain as "a firework", particularly if sneezing or engaging in sudden movements.

1 b - Physical Assessment APRIL 2007

Body Reading

Sue is roughly 5ft 7inches and weights 110lbs, Dark Hair, Hazel Eyes, fair skin.

She presented a slight awkwardness in standing; afraid to allow the natural curves of her spine to flow – there was much tension and stiffness in her lower back area. She had the appearance of somebody who was holding on tightly and a slight awkwardness to the way she carried herself. Her gate was restricted on walking.

The right side of her sacrum dipped down in the Sacral Stabilising assessment, the left side remained neutral.

Sue carried a sunken look to her face; she looked chronically tired and drawn of energy.

On a pain scale of 1 to 10, sue reported a 4 on the day of assessment and a general 4,5 rising to 7 at the end of a working day

There is a significant reduction in Sue's lumbar curve. No scoliosis present.

ROM Testing 18TH April 2007

Carrying angle of 10°

Sue presented average or, in some cases, above average range of motion for most of the tests. Some tests we're more difficult than others, particularly hip rotation and flexion, due to the nature of her condition. We had to work slowly and give plenty of breaks.

The chart below outlines all excessive/restricted ROM tests

Range Of Motion		**18/4/07**	
	Standard	**Left**	**Right**
Hip Flexion (straight leg raise)	90°	105°	95°
Hip External Rotation (prone)	45-60°	45°	50°
Spinal Lateral Flexion (aprox 45°)	45°	45°	40°
Shoulder External Rotation	90°	80°	85°
Shoulder Flexion	180°	170°	170°
Shoulder Extension	50°	60°	60°
Neck Lateral Flexion	45	44	28
Neck Lateral Rotation	70	70	66

Muscle testing was done on a second session dated 25th April 2007. Again, due to the nature and intensity of pain experienced with this condition it was hard to get clear readings for the muscle groups around her lower back. Weak/below average Muscle Testing results were as follows:

Muscle Testing	**Left**	**Right**
Hip Flexion (rectus femorus, psoas)	1	2-3
Psoas (isolation)	1	1
Sartorius (isolation)	1	2-3
Lower Erector Spinae	1-2	1-2
Upper Erector Spinae	2.5	2.5

1.c Summary of Findings

From the assessment it became clear that the muscle groups supporting the lower spine were weak.

- Psoas and Erector Spinae tested significantly weak, especially compared to the client's overall body strength.
- There is no standard assessment for ROM through spinal flexion and extension so this is left more to the eye and becomes subjective. It was clear to me from watching her move here that she had a much more limited ROM than many of the students I have observed in class.
- Slight differentiation (10%) between left and right internal rotators.

The reduced ROM readings for her shoulders and neck were of a secondary importance. Sue experienced no pain in this area, possibly because of the severity of her lower back condition, thus masking more subtle discomfort. It seamed prudent to concentrate on the priority of the herniation.

Muscle Testing presented a chronically weak Psoas and week Lumbar Erector Spinae muscles. On observing Sue moving into Cobra pose for the Erector Spinae muscle test there was a clear lack of muscle definition supporting the Lumbar spine.

Strengthen	Stretch	Release
Psoas	Left external rotators	Erector Spinae
Lower Erector Spinae		
Gluteus Maximus		
Gluteus Medius		

1.d Recommendations

First & Second Session 2nd and 9th May 2007

From the initial intake, Sue was given Joint Freeing Series and SI stabilising exercises to practice each day for two weeks, aiming to promote proper movement of prana and to reduce pain and tension in the lower back area. The first session we took time together to work on understanding the exercises in a general way. I outlined the importance of breath with the postures and to take her time with the series, suggesting a minimum of 25/30 minutes to complete the program

The following week (9/5/07) we polished the exercises. She had really got into the practice and had lots of questions. It was taking her 45-50 minutes to run through the series and I was pleased to see that the pace of her approach was having a very calming and soothing effect on her disposition. She

reported a mild improvement in her general pain levels but seeing through a whole working day still presented a problem for her. She did experience pain moving through the series. It is hard to tell if the series created this as she was almost constantly aware of pain.

Third Session 16th May 2007

Sue reported on a number of successes in her practice from the previous weeks. She had experienced a significant reduction in her overall pain levels and an increased tolerance to her working day. Whilst still in pain by the end of each day, she could now go up until and hour before home time before she felt she needed to stop and lie down. She no longer experienced her pain as a stabbing sensation but still felt a little “pinching” in her lower back.

She had a scheduled appointment with the Physiotherapy department at Oxford NHS Trust on Monday the 14th May and worked with a senior consultant who informed her that the prolapsed disk had now stabilised and moved back into position. The recommendation from the department was that she continue with what she had been doing over the last few weeks and start to exercise more to build strength in her lower erectors. This was her last appointment with Physiotherapy Department.

With this knowledge and by direct observation, we decided to incorporate some new exercises and specific Asanas into Sue’s daily routine.

From week three Sue was give an alternate practice. We agreed a schedule of 6 days a week practice, 3 of which were to be the Joint Freeing Series and the alternate day a new program of Asana’s focusing on the specifics of her weakness. The sacral Stabilising exercises and Shivasana we’re standards in both practices.

Apanasana/Knees to Chest:
Supine, bringing in knees to chest and then engaging hip flexors/psoas and relaxing alternately on inhalation and exhalation. Up to 6 rounds.

Psoas Isolation Test/Exercise:
Due to weakness in her Psoas, the first exercise was to lie supine resting on elbows and practice leg raises to strengthen the Psoas. We had to be very gentle to start with; just three repetitions on each side and two rounds of this, building up three rounds of six over two weeks.

Setu Bandhasana - Dynamic Bridge Pose:
Starting in a supine position. Bend knees and place feet below knees, hip width apart. Push down with feet and shoulders/arms and raise pelvis on inhalation, exhalation keep pelvis high and roll spine back down along the mat, back to start position. Initially 3 repetitions, flowed by a held Bridge for 4-5 breaths.

Pelvic Tilts
12 times knees together, 12 times knees apart.

Badhakonasana - Bound Angle Pose
I decided to incorporate this pose as it was a favourite of Sue's from classes and she found it easily achievable and enjoyable.
Bhujangasana - Cobra Pose
Lying prone with hands under shoulders elbows and chin tucked in, legs together. On inhalation lifting through erectors and coming up only a few inches, exhalation returning to start position with control. I placed my hands on Sue's weak lower back and asked her to focus on this specific area and remain aware of it through the exercise. Three repetitions to begin with and then to relaxation.

Pranic healing exercise
From her prone position here, I kept my hands on Sue's lower back and encouraged her to breath into that area. After a few rounds, I asked her to visualise prana flowing to this place and inhalation. Finally, the instruction was to direct breath and Prana to the area and then exhale the breath, holding the prana in her lower back.

Salabasana - Locust Pose
From a prone position taking the hands down to the sides and tucking in the chin, then alternately lifting one leg then the other alternately. Inhalation raise leg, exhalation lower leg. Again, focus on engaging gluteus maximus and lower erectors.

Ardha Matsyendrasana/Half Spinal Twist
Sitting on heels in Virasna. Move feet to left and bottom to the right. Take the top foot over the alternate knee. Sit tall, extend the spine. Finally, place left hand behind for support and right arm over thing for leverage. Hold for up to 12 breaths. Repeat on other side.

Yoga Nidra/Shivasana – Relaxation
Relaxation with legs bent over a bolster to ease pressure on the lower back and sacrum. Guided physical relaxation followed by Viloma II breath; following exhalation and extending Kumbaka (natural rest point of the breath at the end of Exhalation) to 2 seconds before inhaling once again. Finally a paring of opposites practice. Awareness of heaviness and feelings of being held by the floor then revolving attention to look for the opposite of weightlessness or lightness and then alternating between these sensations before finally bringing both into awareness simultaneously.

23rd May 2007

We polished the following exercises together:

- *Knees to chest*, good, even strong now. Can do without hands support.
- *Bridge* improved ability to hold and to arch. Was holding for 3 breaths. Now encouraged to hold for 6, moving to 12 over two weeks.

- *Sitting Psoas strengthening.* Massive improvement. Client resistive as difficult but pushed now from 3 each side two rounds up to six, moving to 12
- Cobra six raises, then holding for three breaths, two rounds. Very good. Keeping her at this level as seams right for her in terms of challenge.
- *Locust* Was using arms and legs a lot for support. She cannot come up too far and finds the exercise very exhausting. Was doing 3 rounds, now moving to 6 each leg.

6th June 2007 – One to One

A brief session today, observing Sue move through the Asanas give two weeks previously and supporting her with listening to her progress. I felt it important to leave the program as it was to help with familiarly and to reassure Sue that all was on track and progress was good.

Sue explained that she was missing gardening. I suggested a compromise; that she practices joint freeing and relaxation in the garden so that she could maintain her connection to this environment and the sense of peace she felt from being in nature.

1.e Results from Recommendations

2nd May 2007

Sue was quite overcome at the end of our session, particularly after Yoga Nidra. She didn't have any words to describe how she felt but upon leaving she threw her arms around me and welled up with tears.

I was left with the impression that Sue felt a sense of relief that somebody was prepared to take the time to listen to her feelings and hope for a more pain free future.

16th May 2007

Sue had been working with the Joint Freeing Series for 2 weeks. The news from her physiotherapy assessment on Monday the 14th showed clear improvements in her condition. The herniated disc had moved back into alignment, indicative of the power of the Joint Freeing Series to promote healing and the proper placement of Prana in Pranamaya Kosha. Sue looked like she had regained some her life force; an aspect that seamed to be lacking on initial intake.

23rd May 2007

The client experienced stiffness after last weeks exercises but no sharp or stabbing pain, just lots of aching. She explained it as 'good ache'. She

explained a sense of determination and that she had tried to move into the shoulder stand in one of her practice sessions the week before and was pleased that she had been able to do so, although was sore afterwards.

She told me that on her last visit to the Physiotherapy department the consultant had pushed her legs into chest and commented on her sacral area needing freeing. I explained the importance of SI Stabilising exercise and gluteus stretches.

Sue reports to "feeling that I am 60% better". Her pain levels are now 2/10 – sore but not aching or stabbing. Her general outlook this week was positive, uplifted and determined.

28th May 2007 – Telephone conversation

I had encouraged Sue to call with any problems, questions or difficulties arising from the practice and felt sure that, due to her nature, she would follow this instruction. She called to explain that she was in a lot of pain. I asked her about her activities leading up to this and she explained that she had been doing JFS and the recommended Asanas each day and had decided to take up swimming again as she was feeling so much stronger and more capable. She was angry, frustrated and fearful. I took this in two ways. This was a clear representation of trust; "when Pita constitution trusts you they show you their anger" *(Mukunda Stiles, SYT Training May 2007)*. I also saw the fear to be a Vata imbalance. I suggested that she refrain from all other exercises other than Shivasana and SI Stabilising and work with a stretch to both glutei to release the pain in her sacrum (starting in the preparation to bridge then bringing outside of foot to alternate knee and then drawing knee to chest with hands). It was not possible for us to see each other that week as I was scheduled to train for the 3rd week of the Yoga Therapy Diploma. I left it that she should call again if needed.

3rd June 2007 – Telephone Conversation

We spoke again today. Sue explained that the rest from exercise had quickly taken her out of pain. Within two days things we're better and by the end of the week she was back to her schedule. She reported feeling stronger for the rest, both physically and mentally/emotionally. We discussed the importance of discernment and approaching her practice with an attitude of Ahimsa (non-violence) and Santosha (contentment with what is possible). I observed weariness in Sue's tone of voice and a sense of resignation. "I feel like I have taken one step forwards and six steps back"

6th June 2007 – One to One

A brief session today, observing Sue move through the Asanas give two weeks previously and supporting with listening. Sue now reports being able to go the entire day without strong pain, although is glad to come home and rest after work; it is necessary for her to lie down for up to an hour before she works through her agreed practice for that day.
She became totally immersed in yoga Nidra/Shivasana and reported "It felt like I was floating" in the paring of opposites practice.

Sue explained that she was missing gardening. I suggested a compromise; that she practices joint freeing and relaxation in the garden so that she could maintain her connection to this environment and the sense of peace she felt from being in nature.

27th June 2007 – Final Assessment
The primary focus of this final assessment was to determine improvements in muscle strength and flexibility and to find out if our initial agreed goal to reduce Sue's pain had been achieved.

Sue now explained that she could manage a full day at work without pain or even discomfort, thus the primary goal of our work together had been achieved.

Muscle Testing showed the following results:

	25th April 2007		27th June 2007	
Muscle Testing	**Left**	**Right**	**Left**	**Right**
Hip Flexion (rectus femorus, psoas)	1	2-3	3	3.5
Psoas (isolation)	1	1	2.5	3
Sartorius (isolation)	1	2-3	3	3
Lower Erector Spinae	1-2	1-2	3	3
Upper Erector Spinae	2.5	2.5	3	3

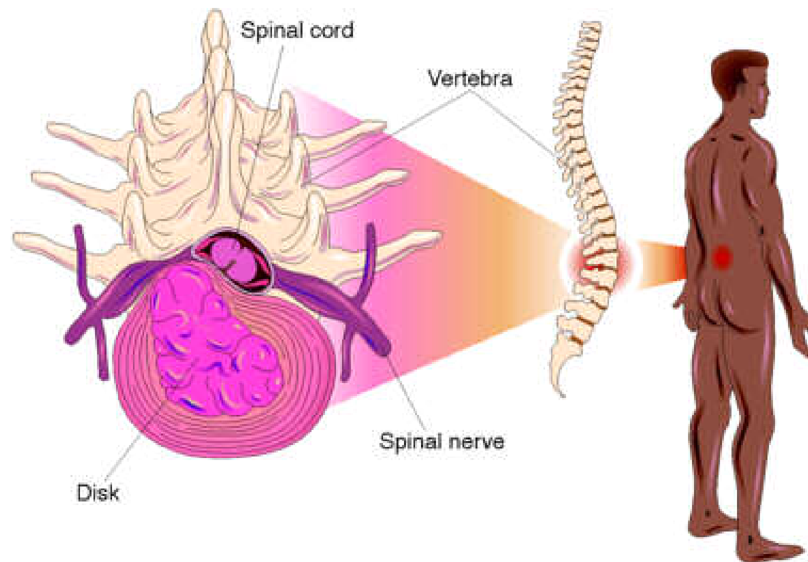
ROM was as follows:

Range Of Motion		**18th April 2007**		**27 June 2007**	
Area of focus	**Standard**	**Left**	**Right**	**Left**	**Right**
Hip Flexion (straight leg raise)	90°	105°	95°	105°	95°
Hip External Rotation (prone)	45-60°	45°	50°	**49°**	**51°**
Spinal Lateral Flexion (aprox 45°)	45°	45°	40°	45°	**45°**
Shoulder External Rotation	90°	80°	85°	**88°**	**90°**

Shoulder Flexion	180°	170°	170°	**180°**	**180°**
Neck Lateral Flexion	45°	44°	28°	44°	40°
Neck Lateral Rotation	70°	60°	60°	**70°**	**70°**

The results show that strength has returned to Hip flexor/Psoas and Lower Erector Spinae muscle groups. In terms of ROM, Lateral Spinal flexion has improved, as has ROM through Sue's shoulders and neck.

2. a - name and description of condition



Disk herniation is a rupture of fibrocartilagenous material (annulus fibrosis) that surrounds the intervertebral disk. This rupture involves the release of the disk's centre portion containing a gelatinous substance called the nucleus pulposus. Pressure from the vertebrae above and below may cause the nucleus pulposus to be forced outward, placing pressure on a spinal nerve and causing considerable pain and damage to the nerve. This condition most frequently occurs in the lumbar region and is also commonly called herniated nucleus pulposus, prolapsed disk, ruptured intervertebral disk, or slipped disk.

Description

The spinal column is made up of 26 vertebrae that are joined together and permit forward and backward bending, side bending, and rotation of the spine. Five distinct regions comprise the spinal column, including the cervical (neck) region, thoracic (chest) region, lumbar (low back) region, sacral and coccygeal (tailbone) region. The cervical region consists of seven vertebrae, the thoracic region includes 12 vertebrae, and the lumbar region contains five vertebrae. The sacrum is composed of five fused vertebrae, which are connected to four fused vertebrae forming the coccyx. Intervertebral disks lie between each adjacent vertebra.

Each disk is composed of a gelatinous material in the centre, called the nucleus pulposus, surrounded by rings of a fiberous tissue (annulus fibrosus). In disk herniation, an intervertebral disk's central portion herniates or slips through the surrounding annulus fibrosus into the spinal canal, putting pressure on a nerve root. Disk herniation most commonly affects the lumbar region between the fifth lumbar vertebra and the first sacral vertebra.

Predisposing factors associated with disk herniation include age, gender, and work environment. The peak age for occurrence of disk herniation is between 20-45 years of age. Studies have shown that males are more commonly affected than females in lumbar disk herniation by a 3:2 ratio. Prolonged exposure to a bent-forward work posture is correlated with an increased incidence of disk herniation.

There are four classifications of disk pathology:

- A protrusion may occur where a disk bulges without rupturing the annulus fibrosis.
- The disk may prolapse where the nucleus pulposus migrates to the outermost fibers of the annulus fibrosis.
- There may be a disk extrusion, which is the case if the annulus fibrosis perforates and material of the nucleus moves into the epidural space.
- The sequestrated disk may occur as fragments from the annulus fibrosis and nucleus pulposus are outside the disk proper.

b – Gross and subtle body common symptoms

Pain is the most common symptom of a lumbar herniated disc and may be isolated to the lower back or it may radiate in a nerve root pattern. The pain may be exacerbated when coughing or sneezing.

If the disc herniates into the spinal cord area, the disk herniation may also present with myelopathy (spinal cord dysfunction). This may be evident as sensory disturbances (such as numbness) below the level of compression, difficulty with balance and walking, lower extremity weakness, or bowel or bladder dysfunction.

Presenting lower back herniated disc symptoms often correlate with the size and location of the disc herniation. The herniated material may protrude in a central, lateral (to the side), or centro-lateral direction with the majority having a central component. Typical symptoms for each include:

- *Central disc protrusion.* This type of herniation usually causes lower back pain and/or myelopathy, depending on the size of the herniated disc and the amount of pressure on the spinal cord. In extreme cases herniation in this area can put pressure on the cord and affect the related nerve function. In serious cases, a lumbar herniated disc can lead to paralysis in the lower body.

- *Lateral disc herniation*. When the disc herniates laterally, or to the side, it is more likely to impinge on the exiting nerve root at that level of the spine and cause radiating lower back or abdominal pain.
- *Centro-lateral disc herniation.* This type of lumbar disc herniation may present with any combination of symptoms of lower back pain, radiating pain, or myelopathy.

Any direct, forceful, and vertical pressure on the lumbar disks can cause the disk to push its fluid contents into the vertebral body. Herniated nucleus pulposus may occur suddenly from lifting, twisting, or direct injury, or it can occur gradually from degenerative changes with episodes of intensifying symptoms. The annulus may also become weakened over time, allowing stretching or tearing and leading to a disk herniation. Depending on the location of the herniation, the herniated material can also press directly on nerve roots or on the spinal cord, causing a shock-like pain (sciatica) down the legs, weakness, numbness, or problems with bowels, bladder, or sexual function.

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

Due to the severity of this condition many of the activities that a healthy person takes for granted become limited or entirely impossible. Simply standing can place pressure on the herniated disc, therefore causing pressure on nerve tissues and creating pain. Walking, sudden movements, slipping/loss of footing, awkward posture, sneezing, bending and lifting all have the potential to cause pain.

Just about any prolonged physical activity can lead the patient to feel like they need to stop, lie down and rest.

Such a condition can have a huge impact on lifestyle. Due consideration of any potential activity is necessary to assess its possibility.

Sciatica is also a common symptom of this condition. Sciatica causes a numbness of a portion of or the entire leg. If herniation occurs to the right, Sciatica is experienced in the left leg and vice versa. It is important that a client experiencing this symptom is cautious of any activity which could cause injury to the area including exposure to extremes of temperature. For example, a person experiencing sciatic symptoms would not be aware of scolding water from a hot bath or over exposure to heat from a fire due to the lack of sensation in the leg area.

3 - <u>Ayurvedic assessment</u> and Ayurvedic based yoga recommendations for the condition

A) Ayurvedic assessment

Sues Ayurvedic constitution is Pitta-Vata. Her personality displays strong determination and discrimination, sometimes courageous (Pitta) and a fear around her condition and the ability to recover from it (Vata).

General Pitta Excess for Sue:

- Overworking with exercises
- Frustration/Anger
- Compulsive overachievement
- Self criticism/judgement
- Consistent hunger (always rumbling tummy when in treatment)
- Sharp, cutting speech

Pitta Treatment/Recommendations:

- Water – to drink 2 litres a day
- To stay aware of stretch and strength in JFS – not to achieve range of motion but to feel muscle groups in agonist/antagonist relationship
- To accept limitations of condition and work with discernment, not over pushing
- To allow for and become aware of uprising emotions/sensations within the practice

General Vata Excess

- Intermittent and chronic pain (6 years)
- Hyper mobile in some joints
- Always Cold
- Fear of not getting better

Vata Treatment Strategy

- Joint Freeing Series to balance Prana
- Yoni Mudra in relaxation/Yoga Nidra to encourage Vata home to its seat in the colon
- Self Study to encourage awareness of self and needs
- Yoga Nidra/Relaxation to sooth Vata imbalance
- Breathing technique in Cobra; to breath into area of weakness and visualise leaving prana in the lower back on exhalation
- In relaxation/Yoga Nidra Sue experienced an immediate reduction in pain which gave her hope and reduced her fear of non recovery

When pushed, Sue showed her anger (Pitta) and her fear (Vata). See results from *recommendations* section for further details.

B) Ayurvedic recommendations for the condition

Disc herniation is defined as an inflammatory condition, thus it's primary Doshic presentation is that of Pitta. However, when the herniated disc impinges on nerve root, this becomes a Vata issue. The primary cause of a disc herniation is weakness of the muscles systems supporting the lower back (Psoas, Erectors) and this is defined within the Kapha Dosha.
We can see from these definitions that a lack of Kapha (strength/structure) leads to Pitta (inflammation) and goes to Vata upon affecting the nerve roots.

Recommendations include balancing Vata through JFS and relaxation. Water and gentle, restrained exercise with awareness of stretch and strength not moving to extremes of ROM to sooth Pitta. Once these criteria are met and the Vata & Pitta Dosha's are balanced, we can work on the Kapha quality of strengthening muscles around the Lumbar spine.

4 – Common body reading

- Depending on the specific area of herniation (L4,5, or 6) it is likely that there will be instability in the sacral joint.
- There is likely to be a reduced curvature of the lumbar spine, either due directly to weak Psoas/and or Erector muscles or indirectly to the patient's tendency to hold this area of the body in tension to discourage movement and aggravatory pain.
- Difficulty/awkwardness in standing/sitting
- Slow, deliberate movements
- Tilting pelvis

5 - Contraindicated yoga practices and general activities to modify or eliminate

For the person practicing Yoga Asana, either therapeutically or otherwise, forward bending is contraindicated for posterior herniation (disc moving backwards, either central or para-central) and backward bends are contraindicated for anterior herniation (disc moving forwards, towards the abdominal wall). The most common type of lumbar disc herniation is posterior and to the right, thus the general contraindication for this condition is to not forward bend. Without the insight of MRI scans to be certain of the position of slippage it is necessary to work with the client to establish where the pain is felt and which postures/positions are aggravatory.

As disc Herniation is seen as a Pita condition (inflammation) Pita yoga practice (heating/stretching) should be avoided. Instead, focus on Vata (breath based) practices and Kapha (strengthening) practices to manage stress and pain and build structure and support in weak muscle groups.

6 – General recommendations for the condition

A) Pain Relief

Relief from pain, if only temporary, allows the patient to feel that there is a possibility to become healed and well from this condition. Because of the severity and nature of the condition, those suffering with medium or long term symptoms and pain begin to give up hope and feel helpless. This can lead to depression and a sense of giving up. Therefore the value of relieving the

client's pain is twofold, both for immediate relief and to provide hope for a long term recovery.

B) Stabilise situation and lifestyle change recommendations

To stabilise herniation of the Lumbar spine it is important for the herniated disc to be encouraged back into alignment. Whilst the protrusion is impinging on nerve tissue, pain will be almost continuous therefore to stabilise the condition it is necessary to encourage stabilisation of the herniated disc. Gentle exercise concentrating on lengthening the spinal column and encouraging bending in the same direction as the herniation is recommended. Perhaps the most important aspect of stabilising this condition is relaxation. When the body, and ultimately mind, loose their tension, the body has a tendency to heal itself. As we have seen from this study, the joint Freeing Series proves an excellent tool for encouraging stabilisation of the herniated disc, as does Yoga Nidra and Shivasana.

Life change recommendations include addressing and reducing/removing altogether any activities that aggravate this condition, including long hours of sitting or activities that include much forward bending or lifting of weight away from the central axis of the body e.g., gardening, manual labour, car maintenance etc.

It is key for a recovering patient to keep up with fluid intake. Herniation is seen as an inflammatory condition and we must put out fire with water. Further to this, the spine needs to be hydrated to form its full extension.

As compression is aggravatory, it would be recommended that a client carrying excessive weight find a program of diet and exercise that will reduce weight. Cardiovascular or weight reducing exercise is typically more appropriate once the client's condition is stable i.e. the herniation is addressed.

c) – <u>maintenance</u> and long term considerations.

"*tapah svadhyaya Isvara-pranidhanani kriya yoga" – The practical means of attaining higher consciousness consist of three components: self discipline and purification, self study and devotion to the lord*

Sutra II, 1 Yoga Sutras Of Patanjali as interpreted by Mukunda Stiles

Tapas - Longer term, the client must consider exercises that stabilise the core and lower back muscles. A continued general Hatha Yoga practice would be a strong recommendation for those suffering with this condition, as well as specific exercises to strengthen Psoas and Lumbar Erectors: Bridge, Cobra, Locust and Sittings Psoas leg raises/Sun Bird would all be powerful Asanas to practice to maintain strength in these areas. Sutra I, 12 states "Consistent earnest practice".

Svadhyaya - Continued self-study to ensure awareness of activities that could be aggravatory to the condition and awareness of ones own physiology and

prana would be helpful. To be aware of all of our activities in life to remain sure of their positive contribution to well being and happiness

Isvara-Pranidhanani – To engage in activities that make us feel connected to spirit, be that regular walks in nature, time with our beloved or devotional/religious practices. Any activity that connects us with a sense of the divine in life helps take us out of our own sense of self and reduces our stress and tension.

7 – Questions and Answers from www.yogaforums.com

Not used as a resource

8 - References and websites

The Concise Book Of Muscles, Chris Jarmey, Lotus Publishing *ISBN 0-9543188-1-1*

Yoga Sutras Of Patanjali as interpreted by Mukunda Stiles, Weiser Books 2002 *ISBN 1-57863-201-3*

Structural Yoga Therapy, Mukunda Stiles, Weiser Books, *ISBN 1-57863-177-7*

Back Care basics, Mary Pullig Schatz, Rodmell Press, *ISBN 0-9627138-2-1*

Yoga & Ayurveda Self Healing and Self Realisation, Dr David Frawley, Motilal Banarsidass Pubishers PVT ltd *ISBN 81-208-1879-2*

Health A to Z - http://www.healthatoz.com/healthatoz/Atoz/common/standard/transform.jsp?requestURI=/healthatoz/Atoz/ency/herniated_disk.jsp

9 - Appendix

10 – Biography

James qualified with a diploma in Stress Management in June 2004 and as a Yoga Teacher in 2005 at the Sivananda Yoga Vedanta centre in Kerala, India. Upon completion of the Yoga Teaching Diploma, he began to teach open Yoga classes in and around the Oxford area. Realising that his qualification left a gap in knowledge of Anatomy and Physiology of Yoga, James chose to study with Mukunda Stiles to gain insight into this area of study, motivated by a strong desire to help those students who suffered with specific anatomical challenges and problems.

James' interests encompass many of the healing arts. He regularly practices Vipasana or 'Insight' Meditation, studies Ayurveda and the Sutra's of Patanjali, and his interests also include Western Astrology and Astronomy and Psycho-Therapy.

His intention is to use the content of the Yoga Therapy course to specialise in the area of back care recovery through Structural Yoga Therapy