

# Osteoarthritis of the Hip

Structural Yoga Therapy Course

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## Case Study

### A. Initial Intake

In August 2006, Margaret, a yoga student for many years, experienced pain while out hiking with her husband. She describes as sudden and intense “like a spasm” in her groin. The pain was so intense that she felt as if her hip was dislocating from the socket. Due to the intensity of the pain she and her husband returned early from their outing. At the first opportunity she met with her physician who referred her to a physiotherapist. The physiotherapist made the initial diagnosis and recommended x-rays. X-rays confirmed the diagnosis of osteoarthritis of the right hip.

Margaret’s pain is intense. On a 1-10 scale of 1 being non-existent and 10 being extreme, she rates the pain as a 10 when at its worst, but is often around an 8. However, there are times when she has no pain at all. The pain is located in the right hip joint and surrounding hip area. She has difficulty getting out of her car, her leg being unable to open outward. She compensates by twisting both legs toward the open door at the same time, placing them on the ground then pushing herself out of the vehicle with the help of her arms. She is no longer able to hike on uneven terrain, therefore the long hikes that she and her husband enjoy are no longer an option. Even walking to work has become difficult. An enjoyment for years, now after walking only 50 yards the pain begins. She would like to be able to resume her activities and be pain free.

Margaret is an active 65 year old. She is married and has four children, one set of twins. She works part time at an art gallery and enjoys part-time retirement with her husband. She hikes regularly and enjoys the outdoors. Her weight is normal for her height. She appears physically healthy. She reports no health problems other than the osteoarthritis. She has worn orthotics in her shoes for many years due to “poor feet,” which she believes may be a contributing factor to her condition. She infrequently experiences mild cramping in her right foot and lower leg. She reports eating and sleeping well, although she avoids sleeping on her right side because of the pain it causes.

Margaret drinks at least one liter of water daily. She has noticed that when she does not maintain hydration on any given day, the following day she is more likely to experience an increase in pain. When she began this study Margaret attended 2 yoga classes weekly. Practicing for “many years,” she directly attributes her health to yoga and remaining active.

Margaret requested to be a subject for this structural yoga therapy case study. She is extremely motivated and agreed to follow all recommendations to the best of her ability and to meet regularly with me to discuss her progress. She has also agreed to participate in the SYT course of treatment exclusively with the adaptation of the initial exercises given by the therapist. These correspond with minor changes to the Joint Freeing Series and Yoga Asanas. Margaret’s goal is to resume the activities that she and her husband enjoy; hiking, gardening, playing with grandchildren; living pain free.

### B. Physical assessment and Posture Body Reading

Upon examination it was found that Margaret's right hip was slightly elevated and that she favored it when walking. It appeared as if she was dragging her right hip with her as she stepped her right leg forward with no independent movement between her hip and thigh. Her body seems to be leaning slightly backward, stomach slightly forward of mid-section (abdomen). Her head appeared to be slightly forward of mid-line.

No evidence of scoliosis indicated.

Margaret's SI joint tested as level upon lifting of both knees.

Range of Motion Assessments							
Joint Action	ROM	31	31	16 May	16 May	2 Sept	2 Sept
		March	March	Left	Right	Left	Right
<b>ANKLE</b>							
Dorsiflexion	20°	>10	>10				
Plantar flexion	50°	70	70				
Eversion	20°	5	5				
Inversion	45°	>45	>45				
<b>KNEE</b>							
Extension	0°/180°	180	180				
Flexion (Supine)	150°	142	140				
<b>HIP</b>							
Flexion (Bent Knee)	135°	123	122				
Flexion (Straight-Leg Raise)	90°	90	90				
Flexors-quad/psoas restriction	NSS						
External Rotation (Supine)	45°-60°	33	2	30	22	25	16
Internal Rotation (Supine)	35°	30	13	30	18	28	10
External Rotation (Prone)	45°-60°	34	10	30	20	45	20
Internal Rotation (Prone)	35°	20	10	28	20	35	35
Adduction (Side Lying)	30°-40°	**	**	**	**	25	22
Abduction (Side Lying)	45°	**	**	**	**	42	40

\*\* Assessment not completed due to pain

Muscle Testing Assessments						
Joint Action	31	31	16 May	16 May	2 Sept	2 Sept
	March	March	16 May	16 May	2 Sept	2 Sept
	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5	Left, 1-5	Right, 1-5
HIP						
Hip Flexors & Abs (Supine)	4	4	4	4	2.5	2.5
Trunk Flexion (Supine)						
Hip Flexors - Bent Knee (Supine)	3	2.5	4	4	2	3
Iliopsoas Isolation (Supine)						
Sartorius Isolation (Supine)					4	3.5
Abduction (Side Lying)	3.5	3.5	4	4	4	5
Adduction (Side Lying)	1	1	4	4	3	4
Gluteus Maximus Isolation (Prone)						
External Rotation (Prone)	2	1	3	3	5	3.5
Internal Rotation (Prone)	2	1	3	3	4.5	4

Note: Scale of 1 to 5 with 1 being weak and 5 being strong, client self-report.

### C. Summary of Findings

Range of Motion Assessment: Initial findings indicate plantar flexion is 70° more than normal. The internal and external rotations of both hips, particularly the right side, are limited. Any internal rotation of the right hip causes Margaret some degree of pain. This pain is limited to the hip/pelvic area. According to medical x-rays the osteoarthritis is isolated to her right hip. She also is aware of infrequent though persistent cramping in her right foot. Dorsiflexion and eversion are limited on both sides, though Margaret states she has no pain or concern for her feet at this time and has been under the care of a chiropodist (podiatrist) for many years. Range of motion of the rotators on the right side increased over the course of treatment particularly internal rotation of the right side. During the first assessment we were unable to test abduction and adduction of both hips. Although below “normal range” it is important to note that we are now able to test both abduction and adduction whereas in March these tests were prohibited due to pain.

Muscle Testing: At the time of the first assessment it was felt that muscle testing would be limited to Margaret’s hip flexors, internal and external hip rotations and adduction/abduction of the hips. This was due to the pain associated with any excess movement. Margaret’s hip flexors and abdominal strength tested as a 4 in supine position in the initial and second assessment. This decreased to a 2.5 on the final assessment. Individual hip flexors (bent knee) tested as a 3 on the left side and 2.5 on the right side during initial testing. This increased to a 4 during second testing and then decreased again to 2 (left side) and 3 (right side). During the first muscle testing, internal and external hip rotation was both weak and tight on both sides. This is also the case for Margaret’s hip adduction. Second testing indicated that strength had increased in both areas. Third testing indicated a loss in muscle strength in the hip flexors and L adduction of the hip. This corresponds with Margaret’s report of not keeping up with her daily exercises due to family visits.

It is clear that while Margaret remained compliant with the structural yoga therapy regime, both range of motion and muscle strength increased; and, when she was unable to exercise regularly due to family concerns movement and strength decreased. It is also apparent that the program helped to eliminate pain for although Margaret did not exercise regularly she remained active with her family and was able to do so without pain.

TIGHT	WEAK	MUSCLES TO BE STRENGTHENED AND/OR STRETCHED
Hip abductors	Hip adductors	Strengthen: Pectinius, adductor longus, brevis and magnus, gracilis  Stretch: gluteus medius and minimus, tensor fascia lata
Hip external rotators	Hip internal rotators	Strengthen: Gluteus medius and minimus, tensor fascia lata  Stretch: Iliopsoas, sartorius, gluteus medius and maximus. External rotator group.
Hip internal rotators	Hip external rotators	Strengthen: Iliopsoas, sartorius, gluteus medius and maximus. External rotator group.  Stretch: Gluteus medius and minimus, tensor fascia lata

Table 3 Summary of Testing

#### D. Recommendations

Initial recommendation: Taking into consideration the pain Margaret is experiencing and the results of the assessment, the following is recommended:

1. JFS #5 to increase mobility and tone of the internal and external rotators; 4x each side. Each movement is to be done with the breath.
2. JFS #1, 2 and 3 for the cramping in her foot.
3. Asanas to develop strength and increase range of motion: The asana should be done with the breath, moving in and out of the posture. Once the asana becomes more comfortable she is to go into the asana – hold for 3 breaths -- and then come out of the asana. Slowly and carefully building strength and increasing range of motion without adding stress to the joint. (See page 8 for additional asanas for specific dosha types.)

Warrior I:       to build strength in the hip adductors  
                      to stretch gastrocnemius, tensor fascia lata

Warrior II:       to build strength in the hip abductors and hip external rotators  
                      to stretch gastrocnemius, soleus, and hip adductors

Cobra: to build strength in the erector spinae  
to stretch rectus abdominus and the pectorals

Locust: to build strength in the hamstrings, gluteus maximus, erector spinae  
to stretch hip flexors and rectus abdominus

4. Supplements: Glucosamine and Chondroitin.

5. Maintain hydration, increase intake of water to a minimum of 1½ liters daily.

6. A diet based on the guidelines of the Ultra-Prevention Diet (Hyman, M. and Mark Liponis. (2003) is recommended. This diet is based on whole grains, fruits, vegetables, legumes, seaweeds, sprouts, herbs, etc. If meat and or poultry is to be eaten, then it should be organic and eaten in moderation. Fish should be not be farmed.

## E. Results

**April 16:** Margaret telephoned after returning from holiday. She reports no pain but no change in range of motion. I asked Margaret to continue with the JFS series exercises and we agreed to meet in one week to discuss her progress. Margaret is complying with all recommendations except dietary. She stated that she eats well and is careful about what she prepares for her and her husband. She does her exercises 2x daily, is drinking at least 1 liter of water on a daily basis, is walking regularly, and taking 2 yoga classes per week. She also is taking her supplements daily.

**May 2:** Margaret reports that she does not think she is improving, but states she is not declining in range of motion. She also reports that she is experiencing little to no pain (2 to 3 on a scale of 1 to 10). However, when asked regarding her JFS exercises she responded that she is “now able to complete 12 repetitions of the hip internal and external rotation exercise.” I pointed out that her strength is increasing if she is now able to do 12 repetitions whereas four weeks prior she struggled with four. Margaret responded with surprise and elation, and stated she hadn’t thought of it in that manner.

**May 16:** Retest. During subsequent testing, due to some time restraints, focus was on the internal and external rotation of the hips. It was evident that Margaret’s range of motion as well muscle strength had increased significantly (see ROM assessment chart and Muscle Testing Chart: columns dated May 16). She stated that she now attending four yoga classes weekly and has been religiously doing her exercises. She mentioned also that during a recent visit with her grandchildren she was unable to do her exercises for several days, but did play and walk with her family. She reports that she felt fine upon returning home, experiencing no pain. During her visit she continued to drink water and while she did not do her prescribed exercises she was physically active with her family and did not feel that her activities were limited in any way.

**July 4:** Margaret is unable to meet me due to family commitments but wanted to call and provide a report of her status. She is currently experiencing no pain, increased mobility and strength. She is able to hike with her husband, play with her grandchildren, work in the art gallery, and is enjoying a life without pain. She continues to do the Joint Free Series, exercises regularly, attends 4 yoga classes weekly, takes glucosamine and chondroitin, and drinks at least 1 liter of water daily.

**August 1:** Margaret, in a telephone call, stated, “I feel great. I have been able to play with my grandchildren and walk with my husband without pain or discomfort. I’m fine.” Margaret reports that she continues to do her exercises 2x daily, attend 4 yoga classes weekly, work part-time in the gallery, and enjoy the time she spends with her husband. She is again hiking, although she tends to

take shorter hikes and is always aware of any pain and discomfort. She takes her supplements and drinks water daily. She knows what she must do to remain healthy; she understands that it is her responsibility.

**September 3:** Margaret stated that she is feeling rather stiff this day. She has not been as diligent about her exercises of late due to having her family visit throughout the summer (four children, their spouses and 13 grandchildren). She also reports a recent diagnosis of vaginal prolapse and having to change her exercise routine at the request of her physiotherapist. She is no longer doing any abdominal exercises avoiding any exercises that would put strain on the vaginal walls. She feels that she has lost tone and strength in her abdomen due to this change and appears somewhat distressed. She also stated that she is trying everything necessary in order to avoid any surgery of any kind.

Testing today indicated that external rotation range of motion had diminished from 30 to 25 in her left hip and from 22 to 16 in her right hip. External rotation (supine) decreased from 18 to 10. In prone position external and internal rotation had increased or remained the same. Margaret's strength had also decreased in her hip flexors from 4 to 2.5 (supine). I was able to test her sartorius (left side), Margaret reports a 4 on the muscle testing scale. Muscle testing of the sartorius right side instigated a cramping of the right peroneus muscles. Upon standing and walking around she was able to release the cramping. Testing of the sartorius (right) was suspended as I was unable to externally rotate Margaret's left hip in order to isolate the muscle. Abduction and adduction of both legs remain strong. Prone internal and external rotation also remain strong.

It would appear that Margaret has lost some of the progress she has made, however, it is important to note that although she has lost some range of motion and some strength she is also experiencing no pain, which was her objective. Also, despite the loss in both areas her range of motion and muscle strength is higher than when first assessed in March 2007. She reports that she will continue with her original routine now that the summer is finished and she and her husband have no visitors taking up space and time.

When Margaret began this process she reports that she would walk to work (a 20 minute walk) and by the time she had walked 50 yards she would feel some degree of pain in her hip. She now has no pain when walking to work and is able to walk for approximately one hour with no discomfort. She also stated that she is now able to sleep on her right side without pain. Four months ago she unable to do so. "I feel lucky" was Margaret's response to the Structural Yoga Therapy process and its outcome. She is able to walk and play: live life without pain. Today Margaret is pain free and although her range of motion is still somewhat limited, the strength and stamina she has exhibits is an inspiration to others suffering from osteoarthritis.

Further recommendations: To be done daily.

- 1) Continue with JFS # 1, 2, and 3 in order to increase ROM and to strengthen peroneus longus and brevis, tibialis anterior and posterior, stretch and strengthen gastrocnemius and soleus. Done with the breath.

- 2) Continue JFS #5 to increase ROM and tone of the internal and external hip rotators, each done with the breath.

- 3) Asanas: The client should move into and out of the asana with the breath 4 to 6 times. The last repetition of the asana should be held for several comfortable breaths.

- a) Continue with phase 1 of cobra, lifting head and shoulders with the in-breath and releasing to the floor on the out-breath to increase strength of erector spinae and the lower and middle trapezius muscles.
  - b) Locust: lifting and extending the legs with the in-breath, releasing with the out-breath: to increase strength of the gluteus maximus and hamstrings, stretch the hip flexors.
  - c) Warrior I: to stretch the gastrocnemius and tensor fascia lata; strengthen the hip adductors, bending the knee with the in-breath and straightening it with the out-breath.
  - d) Warrior II: To stretch the hip adductors; to strengthen the hip abductors and the external rotators. This should be done with small movement, bending the knee with the out-breath, straightening it with an in-breath.
- 4) Continue with hydration. Drinking a minimum of 1½ liters of water per day.
  - 5) Continue taking supplements: glucosamine and chondroitin.

## **2. Osteoarthritis**

### **A. Description of the Condition**

Arthritis is the inflammation of the joints, of which there are over 200 diseases. Osteoarthritis is the most common of these. It is a degenerative disease that affects the cartilage of the feet, spine, knees and hips. While there is no known cause when it is a primary condition, the most common reason is aging, hence being called the “wear and tear” type of arthritis.

Osteoarthritis occurs when a layer of cartilage thins and becomes damaged. The bone beneath the cartilage begins to thicken in order to protect the joint, changing the shape of the bone itself. Bony Spurs can develop, inflammation occurs. In the most severe cases calcium crystals form in the cartilage and cause the joint to become red, hot, swollen and painful.

Osteoarthritis can be a secondary condition to another disease or condition such as obesity, repeated trauma or surgery to the joints, congenital joint abnormalities, gout, diabetes and hormone disorders. Osteoarthritis is a “type” of arthritis. It differs from arthritis because of the disintegration of the cartilage located between the joints while arthritis is the inflammation of the area around the joint.

Currently, in the United States, over 20 million people suffer from osteoarthritis. Men are more likely to develop OA prior to age 45; women over the age of 50. For women this appears to coincide with menopause and changes in hormone secretion. Osteoarthritis is responsible for the high incidence of hip replacement surgery.

### **B. Gross and subtle body common symptoms of Osteoarthritis**

Osteoarthritis pain symptoms vary greatly between patients. Some individuals affected will experience little to no symptoms while others will suffer debilitating pain. The symptoms of osteoarthritis include pain, swelling and limited range of motion. Pain is often the result of activity and is relieved by rest; stiffness is the result of inactivity. Individuals living with osteoarthritis, the cartilage of the joint effected begins to flake or form tiny crevasses. This degeneration of the cartilage causes the bones of the joint to rub together resulting in varying degrees of pain and limiting the affected joint’s range of motion. Bone spurs, caused by inflammation, may develop around the joint as well. In the most severe of

cases (the total loss of cartilage) the two bones will rub together causing pain and swelling. Osteoarthritis is the most common reason for total joint replacement surgery in the United States.

Those suffering from osteoarthritis find that their lives change dramatically. The once active individual now experiences pain when doing the most simple activities; getting in and out of a car; sleeping on the side affected; gardening; walking short distances, etc. Once active, the sufferer becomes sedentary in order to avoid pain. Yet exercise is the most beneficial act for the individual suffering with osteoarthritis.

Aging is the primary cause of osteoarthritis in patients. The repetitive use of joints over the years the cartilage to become inflamed and swell. Over time the cartilage begins to crack and disintegrate. The inflammation can also cause bone growths or spurs to form around the joints affected. Individuals who have worked throughout their lives and have finally reached the age of retirement and when the children are out of the house, and are diagnosed with osteoarthritis, find that all the activities they have put off due to life responsibilities are now impossible due to the pain associated with the condition.

Obesity causes osteoarthritis due to the stress placed upon the joints. It is the second highest risk factor in the development of osteoarthritis of the knees. Weight lifters have shown to have a higher incidence of OA due to their body weight and the additional weight placed upon joints with training. Athletes (soccer, football, jumpers, etc.) who repeatedly traumatize their ligaments, bones, and cartilage are more prone to develop early onset of osteoarthritis.

Hormonal instability such as diabetes, growth hormone disorders and individuals who are born with abnormally formed joints that are subject to uneven mechanical wear, are also known to develop early secondary osteoarthritis.

### **3. Ayurvedic Assessment and Ayurvedic based Yoga Recommendations for Treatment Osteoarthritis**

As we enter into old age we enter into the “vata stage” of life. It is the accumulated vata that moves to the bones (Frawley, 2000, p 253 and 52). In ayurveda osteoarthritis is called “Sandhighat Vata” (Verma, [www.usenature.com](http://www.usenature.com)). The excessive vata energy results in the drying of joints, which is followed by symptoms of pain, swelling and stiffness. According to David Frawley (2000, p 17) “most forms of arthritis consist of Vat (dryness and wind) invading the bones (asthi dhatu) called Vata in the bones (asthi gata vata).”

In “The Complete Book of Ayurveda Home Remedies” (V. Lad, 1998 p 128) Vasant Lad states that if the arthritis is due to vata then the joints will “crack and pop.” Margaret’s symptoms included a “feeling of popping” and a “scraping feeling” when she is in pain. The pain is associated with stressful repeated movements that include excessive walking on uneven terrain and even the carrying of bundles of groceries in her right hand. Also she feels stiff when she remains stationary for long periods of time (sitting at her desk, watching television, etc). It is this combination of pain and stiffness that she experiences. If she does too much she experiences pain. If the movement stresses the joint she experiences pain. If she does little physical activity she becomes stiff and this then causes more pain when she attempts movement. It is a cycle that is broken by quiet, gentle movement, never taxing the joint but encouraging it to move with the breath.

Margaret is 65 years old, her hair and skin tend to dryness and she is postmenopausal. This later period in a woman’s life is when dryness naturally occurs. Margaret’s joints are dry, stiff and painful when unattended to. However, with adequate exercise, continued hydration, and positive rest she has been able to live with little or no pain.

Ayurveda holds that arthritis starts in the colon. The “agni” or digestive fire slows down resulting in the toxic “ama” being present in the body. From the colon the ama travels throughout the system and settles in the dbatu (bone tissue) and in the joints. Therefore the aim of treating arthritis is to remove the “ama” from the joint and bring it back to the colon and then to eliminate it. Thus, keeping the colon clean and functioning properly is vitally important in removing arthritis from the body. It is the continued hydration of the body, via drinking of water, that keeps the colon clean and thus, the joints hydrated. There are some ayurvedic herbs that can be taken to assist in keeping the colon clean. According to Dr. Vasant Lad (1998, p 129) if the dosha type is unknown, the client should take 1 teaspoon of triphala at night with some warm water or 1 tablet of yogaraj guggulu twice a day and at night 1/2 tsp of gandbarva baritaki with warm water or ginger tea with castor oil. Assessment and Treatment for each dosha is unique to that particular dosha type.

	VATA	PITTA	KAPHA
JOINTS	Dry, not swollen, cold to touch, painful upon movement, strenuous activity aggravates the pain	Swollen and painful without movement. Appears red, hot to touch	Stiff and swollen, feels cold and clammy. little movement relieves pain. pain greater in morning when movement begins then diminishes
FOODS	Warm easy to digest foods; avoid cold foods and drinks, beans, barley, corn, tomato, potato, and eggplant.	Avoid spicy hot foods, pickles, spinach and tomatoes	Avoid dairy products and no cold drinks
ASANAS	Forward bend; chest-knee pose; maha mudra; half bridge	Boat, Bow, camel cow, and locust.	Tree, Triangle, Forward Bend, and Spinal Twist.
AYURVEDA REMEDIES	Take yogaraj guggulu 1 tablet 3x daily; apply mahanarayam oil followed by moist heat	Take kaishore guggulu 3x daily and 1 teaspoon sudarshan 2x daily; apply cooling sandalwood powder paste; ice-bag for pain and inflammation;	Take purnarnava guggulu 1 tablet 3x daily. Apply paste of vacha powder. If joints filled with fluid: paste of purnarnava powder and ginger powder (mix 1 tsp of each with warm water to make paste.

Table 4: Assessment and Treatment of Doshas by Type (Frawley, D., 2000 and Lad, V., 1984 and 1989).

#### **4. Common Body Reading**

Individuals suffering from osteoarthritis experience varying degrees of pain in the area of the joint effected. This pain may or may not be perceived at the joint site. They will, more than likely, favor the area affected. Walking becomes difficult; a “dragging” of the hip affected may occur. There may also be an elevation of the hip on the side of the body affected. They may suffer from stiffness in a joint after getting out of bed or sitting for a long time. Prolonged inactivity causes the joint to stiffen; therefore, exercise such as simply walking on a regular basis will keep the joint supple. Limited range of motion, swelling in one or more joints, crunching feeling or the sound of bone rubbing on bone, and the creaking of the joint may be experienced.

#### **5. Contraindicated Yoga Practices and General Activities to Modify or Eliminate**

Any activity that puts excess stress on the joint affected is contraindicated. Yoga, swimming, and walking are recommended as long as they do not stress the joint. “Power Yoga” or Ashtanga Yoga, with its fast moving, jumping movements is contraindicated. Baddha konasana (cobbler’s pose or bound angle) can be quite painful and Margaret reports that this asana is “especially difficult and painful” as it forces the external rotation of the leg. Also contraindicated in Margaret’s case is standing garudasana; this asana with the internal rotation of the upper leg and the squeezing together of the thigh muscles. Therefore, any asana that taxes the joint, causing pain or discomfort is not recommended. The client should take to heart Patanjali’s Yoga Sutra (II, 46) “Sthira sukham asanam,” translated by Mukunda Stiles as “the asana should be comfortable and steady”. Any activity that is not “comfortable and steady” should be avoided. However, this does not mean that exercise that gently challenges the individual should be avoided. It is recommended for the client to become aware of his or her body and the messages it is providing, becoming aware of the end point or edge indicating enough.

#### **6. General Recommendations for the Condition**

##### **A. Therapeutic/Free of Pain**

##### **1. Weight Reduction and Exercise**

Eat less – exercise more! According to studies even minimal weight reduction can have a positive effect on decreasing pain. Excess weight puts stress on joints. This stress then causes the joints to rub together, furthering the disintegration of the cartilage. Even the slightest loss of weight can benefit the individual with osteoarthritis.

Exercise is reported to be extremely helpful as long as it does not stress the joint as it strengthens the muscles around the joint and prevents the joint from freezing. It also improves and maintains joint mobility and helps with weight loss and weight maintenance. Gentle Yoga, walking, swimming, light bicycle riding are recommended and encouraged. Yoga should incorporate gentle movements instigated by the breath.

##### **2. Water, Water, and More Water!**

“When I drink 1 to 1 ½ liters of water on one day, the next day I do not have pain,” Margaret reports. Water intake is extremely important in order to keep the joint/cartilage moist and supple. Margaret reports that water has become an important part of her daily routine. Water intake for the OA sufferer it is essential. People who drink at least 1 to 1 ½ liters of water a day report fewer periods of pain with

the pain less intense than when they have taken less water. The National Institute of Health recommends that people drink 6 to 8 glasses of water daily for optimum health (McGee, <http://www.nlm.nih.gov/medlineplus/ency/article/002471.htm> ).

In addition to water, herbal teas may be taken between meals. Green tea is encouraged. In a study conducted at the University of Sheffield UK, green tea catechins were shown to help alleviate inflammation. This is thought to be due to their anti-inflammatory properties as well as an antiproteolytic effect that protects the cartilage ([www.aboutjointhealth.com/LEWH.htm](http://www.aboutjointhealth.com/LEWH.htm) March 11, 2002: Green tea extracts protect cartilage). Coffee, tea, anything with caffeine should be avoided as caffeine dehydrates the body.

### **3. Diet**

Diet is extremely important in helping the individual eliminate symptoms of pain and inflammation. Omit or cut down caffeine as it dehydrates the body. This includes carbonated drinks. Eat less red meat; increase intake of fresh fruit, fresh vegetables, and whole grains. Avoid sugar, excess salt, white flour and other “white” products such as white rice and potatoes. (Basmati rice may be taken.) If meat is a part of the diet the client should buy organic products and intake should be limited.

#### **a. Indra Devi’s Anti-inflammation Diet**

Indra Devi’s anti-inflammation diet has shown to be effective in relieving the symptoms of inflammatory conditions. For ten days eat three meals daily consisting only of 90% whole grain (brown or basmati) rice and 10% of any type of cooked squash. Cook one cup of rice for two cups of water. Every spoonful of rice is to be chewed at least 50 times until only a watery gruel remains in the mouth. Every two hours between meals have a relaxing non-caffeine tea. During the diet consume no other foods—no coffee, sugar or condiments. Drink as much water as possible. For those individuals that need more protein (diabetics or low blood sugar) soybeans or tofu may be added.

#### **b. Ultra-Prevention Diet**

A diet that reduces toxins is essential for the individual suffering with osteoarthritis. If the client refuses to participate in the Indra Devi Anti-Inflammation diet then a diet based primarily on grains, vegetables, seaweeds, legumes, sprouts, herbs, micro algae, omega3- and FLA foods and oils, and a small amount of spices is recommended. The food should be cooked. Whole fruit should be eaten regularly and juices taken in moderation. The percentage is as follows: 45% grains, 35% vegetables, 10% fruit, 5% legumes, beans, etc (Hyman, M. and Mark Liponis, 2003).

### **4. Pain Relievers**

The pain that is experienced is often intense. At the beginning of treatment, Margaret gave her pain an “8” out of 10, but there has been times when she experiences a “10” when it was at its worst. This pain along and the inflammation can be dealt with effectively with aspirin and acetaminophen. These painkillers must be taken regularly in order to work effectively on the pain. For those with severe symptoms ibuprofen, nambumetone, naproxen may be used, although these can cause gastrointestinal side effects. Pain-relieving creams have shown to be effective. Although taking painkillers may not be something the client wants to do, it may be essential for the short-term as it helps to relieve pain and inflammation and allow the individual to begin treatment.

### **5. Food Supplements and Vitamins**

Food supplements have shown to be effective in helping to eliminate pain and swelling. Natural anti-inflammatories such as tumeric, ginger, willow bark, and cinnamon can be taken in food. Glucosamine

and chondroitin may help to relieve the symptoms of pain and stiffness in some patients and restores joint function. Fish oil supplements and/or dietary fish intake may help to reduce the inflammation. Devil's Claw (*Harpagophytum procumbens*) has been shown to be effective in relieving pain. Vitamins help in the healing process. Zinc, Vitamin C with bioflavonoids, Vitamin E and the B Vitamins help to heal the joint effected by the condition.

## **B. Stabilize the Situation**

The worst thing that can be done by the individual suffering from osteoarthritis is nothing: no activity, no treatment, no diet change, etc. Activity must be continued, although it must also be adapted to the individual. Diet must include enough water to remain hydrated. Rest is also important. Margaret stated that her sleep is often interrupted when she inadvertently lies on her right side. The lack of sleep or the interruption of sleep patterns does unbalance the individual. Savasana should be an integral part of all practice as it allows the body to fully relax; also, Yoga Nidra is recommended whenever possible as it has a calming effect on the body that also affects the inflammation of the joint.

## **C. Maintenance**

The Joint Freeing Series, with special emphasis on the particular exercises that address the individual's condition, should be done daily. The individual should also continue to exercise in a manner that promotes movement but does not stress the joint, i.e., yoga, walking, bicycle riding, etc. Yoga asana practice that involves the breath, moving into and out of the posture helps to maintain joint health, muscle strength and flexibility. The individual must use a balanced forum of rest and exercise that incorporate a holistic approach to personal care to maintain a pain free (and surgery free) lifestyle.

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

October 16, 2006: Q - I did want to share one story with you. One of the class participants has a significant degree of osteoarthritis and had been doing a very mild chair yoga, which was quite limited. She decided to try the JFS on the floor and to her surprise the first week she was able to do most of it on the mat. She now uses it in the evening before bed and finds it leaves her calm and centered and the quality of her sleep is much enhanced by this asana practice. I know you have seen for yourself how it works for people, but thought you might like to hear about its effects in a setting other than traditional yoga practice. Her's is the clearest case, but several others have clearly benefited as well. Thanks once again for allowing me to use the JFS in my class.

A - Such a wonderful response. Doing it on the floor is the sign of a vata imbalance getting harmonious. In such cases I would also encourage her to do the Yoni Mudra and receive my Tantra lessons at least up to #3. Anyone can receive who just sends email requesting it. It is also very simple yet potent. Blessings. Mukunda

September 24, 2003 Q: I have searched your database of previous Q & A's pertaining to SI joint pain and have tried several things to no avail. I have pain in my Right SI joint that results in tightness in the hip flexors & rotators and side of leg. I have been through 11 weeks of physical therapy with little relief. The therapist diagnosed it as an unstable SI joint that "gets stuck" out of position coupled with tight hip muscles (he felt that the SI joint was moving instead of the hip). I have also sought chiropractic adjustments to ease the pain recently -- the chiropractor said that the joint was "frozen" and "locked into place" and is adjusting to free it up and thinks the joint is "too tight." I was also X-rayed due to my Doctor being concerned about Spondylitiis. (X ray should very mild Osteoarthritis - no sacroilitis.) I presently teach about 7 classes a week (Kripalu style) and feel the pain mostly when doing twists and some forward bends. I have modified those to make sure I am moving the hip in

relation to the pelvis to ease any strain on the joint and also do gentle stretches/Asanas for the hip muscles daily. Before teaching I had a desk job for 14 years and frequently sat cross-legged (R over L leg habitually) which is probably the precursor for the problem. Any thoughts or advice? Namaste, T

A: I always prefer to see those who are outside the general guidelines. Is that possible? Perhaps even videotape yourself and send me tape to evaluate. If not or until then some ideas are to use only muscles of tone during asanas. Do not try to stretch. Only work to feel muscles contracting, especially during twists and forward bends. Use hip flexors for strength. If this does not help it within a week then I would also suggest doing my joint freeing series daily for 2 weeks and nothing else. Other thoughts are what is the major stress in your life? Are you tending to it? Or is there something big you are avoiding? This is often accompanying lower back pains -- especially not dealing with an intimate or business relationship issue that is a "pain in the back,"

April 10, 2003 Q: Hi. I am 28 years old and have just been diagnosed with cervical spondylosis. I also have problems with my knee and hip on my left side. I have been practicing yoga for about a year now and my condition doesn't seem to affect my ability, but I do notice a weakness on my left side. As I am still quite young, I am keen to do whatever I can to slow down the degenerative process. Can anyone give me some advice about which asanas would be most beneficial. Also, does anyone know how effective an anti-arthritis diet is against osteoarthritis rather than rheumatoid arthritis? Any info would be greatly appreciated.

A: You can do a search function on this web site to see what other posts have covered this topic. Searching "arthritis" brings up 17 prior posts, including the anti-arthritis diet from Indra Devi. You can also search "spondylosis". I have had several students who have reported tremendous relief of arthritic symptoms from a regular practice of the Joint Freeing Series. As your condition relates to the neck, you may need to take extra care and I would recommend that you please post this topic to Mukunda's Q&A for his comments. Hope you find the information which will be helpful for you!

April 28, 2002 Q: I wonder if you would take the time to address osteoarthritis in general. I'm looking for what people can do to avoid it and to stop it from attacking joints. (Pretty big subject, but I know you have ideas on it.) Also, I have a new student with a rotator cuff problem. How should I handle that as far as telling her which poses to do and not to do? Thank you. I always enjoy your messages.

A: For any form of arthritis I recommend my joint freeing pose series from my book. This is best to do by itself without any other form of exercise for 2 weeks minimum. This can relieve much of the pain. I also mentioned the arthritis diet from Indra Devi, which is a cure. The anti-pitta diet from Ayurvedic diets is recommended as a long-term solution. If you didn't get that I can send it to you.

For rotator cuff problems again I recommend Joint Freeing series do the entire series and the motions for the shoulder do twice as many as others. In general it is a vata imbalance and needs gentle but persistent activity. Stretches can irritate it. I do not recommend trying to stretch out the shortened muscles or trying to increase range of motion. Do all poses but do not try to stretch the shoulder. When you feel the shoulder stretching, back off. Best is Vinyasa form of motions, go into and out of pose -- inhale in, exhale out repeatedly. Do not try to hold the poses especially if you feel the effect in the shoulder whether it is a stretch or a feeling of strengthening. Either way can irritate problem.

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## **9. Biography**

Cathy Winslow Foley, MA RYT LPC, is a licensed psychotherapist and a registered yoga teacher. She has been practicing yoga since 1989 and in 2004 attended the Kripalu Yoga Teacher Training Program at the Kripalu Center for Yoga and Health in Lenox, Massachusetts. She began studying with Mukunda Stiles in September 2006 in London. She is a practicing Buddhist in the Karma Kagyu tradition. Cathy lives in a small village near Harrogate, North Yorkshire, UK, with her husband, John and their three Tibetan Terriers.