Elbow Tendonitis
Structural Yoga Therapy Paper

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Vivian Mastroianni
Woodbury, CT
203-263-2106
vmastro@charter.net

I examined and followed one female client with a six month history of elbow tendonitis. This subject was of particular interest to me because I had suffered from this condition intermittently for seven years. I had one private session with Mukunda regarding this injury. Through my own experience I concluded that the primary focus for recovery is avoiding the movements that aggravate this condition.

1. **Case Study**

Grace is a 41 year old married female. She lives with her husband of three years, two dogs and one cat. She has no children but her husband has three older children from a previous marriage.
She is 5"5' tall and weighs 140lbs. She is physically active including exercising with weights and doing cardiovascular routines two times a week. Yoga is an integral part of her life both with her own practice and teaching on a weekly basis. She enjoys teaching, meditates sporadically and practices pranayama breathing intermittently.
She loves animals, friends, connecting to people, organizing, and listening to chanting. She maintains a healthy vegetarian diet with a very light breakfast and lunch consisting either of yogurt, fruit, a protein bar or shake. Her dinner is her biggest meal with a variety of vegetables and protein. She has addictions to food and caffeine.
She has lived in various places in the US and has decided to remain in New England to be close to her family. Her father is deceased and her mother has a history of depression. There are three siblings but she only remains close to one.
Grace is highly motivated, energetic, intelligent and very analytical. She has many projects going on at once and volunteers her services to many people. She is very organized, clear minded, and a practical thinker. She is opinionated and is intolerant of injustice.
Grace has a hectic travel schedule and has a tendency to over-book herself.
She has had several jobs over the last 20 years, most recently it has been predominantly office work. She has changed jobs in the last month. Her prior job required constant sitting and keyboarding where ergonomics were not applied. She also answered telephone calls but only sometimes did she use a headset. Her new position allows her to walk around.
Responsibilities include keyboarding, telephone calls and developing office policy.
Her relationship with her husband has been very disappointing. He shares none of her spiritual beliefs or practices and overindulges in alcohol. She is currently under great financial pressure and is feeling trapped. She lost her dog approximately 3 months ago and is mildly depressed.

a. Initial Intake

Grace presented to me with a 6 month history of right elbow pain which she attributed to poor ergonomics at work while keyboarding and holding a phone several hours a day. This however has improved with her new job since, she is keyboarding less and when she does it is ergonomically appropriate. She states her pain is 4 out of 10 at rest and reaches as high as an 8 with certain movements. It is aggravated when holding the phone, which

is something she was doing quite often including in her car, as well as when she tries to fully extend her right elbow. It is also exacerbated with any weight lifting particularly triceps exercises. She does state that by nature "a lot doesn't bother me". Perhaps that is both physically and emotionally.
Her right elbow has gotten progressively worse with complaints of pain and burning in the forearm and intermittent numbness in her wrists. It seemed to be developing in her left elbow but has resolved on its own. It is interfering in her everyday life in and out of work. Her goal is to resolve the pain and increase her range of motion so that she can perform daily activities without pain or weakness.

She has a medical history of osteoarthritis of the lumbar spine and a right shoulder injury from weight lifting for twenty years (while doing overhead presses). She also fractured her right foot while dancing ten years ago. Her bone density is above normal.

b. Physical Assessment

Given my background as a Rheumatology Physician Assistant I was able to do a brief exam to reconfirm her diagnosis. The exam revealed tenderness over the medial epicondyle and the surrounding area including the forearm. Her pain was exacerbated by squeezing and resistance to wrist flexion. There was no radiation of pain down her arms and no pain over the olecranon. There was no reproducible numbness or tingling in her fingers. Her diagnosis appeared to be right medial elbow tendonitis. A pitta condition (inflammation) coupled by vata (pain).

Postural Body Reading 1/29/05
Head tilted to the right
Right shoulder internally rotated
Right wrist slightly pronated
Right shoulder blade more prominent
Left shoulder more prominent and externally rotated

The scoliometer reading showed no more than a 3 degree change.
The following charts are findings from my initial assessment on 1/25/05 and my final assessment on 10/8/05.

Range of Motion Assessments

Joint Action	ROM	1/29/05 1st Date	1/29/05 1st Date	10/8/05 2nd Date	10/8/05 2nd Date
ANKLE	Norm°	ROM° left	ROM° right	ROM° left	ROM° right
Dorsiflexion	20°				
Plantarflexion	50°				
Eversion	20°				
Inversion	45°				
KNEE					
Extension	0°/180°				
Flexion (Prone)	135°-150°				
Flexion (Supine)	150°				
HIP					
Extension					
Flexion (Straight-Leg Raise)	90°				
Flexion (Bent Knee)	135° - 150°				
Adduction	30°- 40°				
Abduction	45°				
Internal (Medial) Rotation (Prone)	35°				
External (Lateral) Rotation (Prone)	45°- 60°				
SPINE					
Extension	NSS				
Flexion	NSS				
Lateral Flexion	Approx. 45°				
Rotation	NSS				
NECK					
Extension	55°	40		42	
Flexion	45°	53		48	
Lateral Flexion	45°	27	30	28	33
Lateral Rotation	70°	53	70	36	38
SCAPULA					
Adduction	NSS				
Abduction	NSS				
SHOULDER					
Abduction	40°	37	35	52	45
Adduction	130°	144	144	136	132
External Rotation	90°	101	97	86	95
Internal Rotation	80°	103	108	98	97

Range of Motion Assessments

Joint Action	ROM Norm°	1st Date 1/29/05	1st Date 1/29/05	2nd Date 10/8/05	2nd Date 10/8/05
SHOULDER (Continued)					
Flexion	180°	175	171	184	184
Extension	50°	45	52	50	50
ELBOW					
Extension	0°	-7	-2	-3	0
Flexion	145°	151	147	145	150
Carrying Angle		3	8	3	8
WRIST					
Flexion	90°	67	90	95	86
Extension	80°	72	70	72	73
Radial Deviation	20°	21	18	25	24
Ulnar Deviation	30°	36	42	30	30

No entered value = norm range or not relevant

Muscle Testing Assessments

Joint Action	1st Date 1/29/05	1st Date	2nd Date 10/8/05	2nd Date
ANKLE	LEFT, 1-5	RIGHT, 1-5	LEFT, 1-5	RIGHT, 1-5
Dorsiflexion				
Plantarflexion				
Eversion				
Inversion				
KNEE				
Extension				
Flexion				
HIP				
Flexion (Straight-Leg Raise)				
Flexion (Bent Knee)				
Internal (Medial) Rotation - Prone				
External (Lateral) Rotation - Prone				
Rectus Femoris - Supine				
Iliopsoas Isolation - Supine				
Sartorius Isolation - Prone				
Hip Flexors + Abs - Supine				
Gluteus Maximus Isolation MT - Prone				
NECK				
Extension	5		5	

Joint Action	1st Date	1st Date	2nd Date	2nd Date
NECK (Continued)	LEFT, 1-5	RIGHT, 1-5	LEFT, 1-5	RIGHT, 1-5
Flexion	5		5	
Lateral Flexion	3.5	5	5	5
Lateral Rotation	5	4	5	5
SHOULDER				
Abduction	5	5	4.5	5
Adduction	3.5	5	4.5	5
External Rotation	3	4.5	3.5	5
Internal Rotation	4	5	4	5
Flexion	5	4	5	5
Extension	4	5	4.5	5
ELBOW				
Extension	3	5	5	5
Flexion	5	5	5	5
WRIST				
Flexion	5	5	5	5
Extension	5	5	5	5
Radial Deviation	3	5	5	5
Ulnar Deviation	4	5	5	5

No entered value = norm range or not relevant

c. Summary of Finding

Strengthen	**Stretch**	**Release (none needed)**	**Reassessment Findings 10/05**
R - posterior deltoid	L - triceps		Stronger
R - infraspinatus	L - posterior deltoid		Stronger
R - teres minor	L - teres minor		Stronger
R - pectoralis major	L - bicep brachii		Stronger
R - biceps brachii	Latissimus dorsi		**Stronger**
R - triceps brachii	Teres major		**Stronger**
R - sternocleidomastoid	Anterior deltoid		**Stronger**
R - upper trapezius	Palmar longus		**Stronger**
R - flexor carpi radialis	Flexor carpi ulnaris		**Stronger**
R - extensor carpi radialis			**increase rom**

***stronger** = 5. Grace had been weight training for over 15 years which explains her unusual strength. Her strength had been comprised by pain so her eventual increase in strength was more accurately due to being out of pain.

d. Recommendations

January 29 2005

1. Arthritis diet to reduce pitta.
2. Wave breath for relaxation.
3. Head set for telephone to avoid overuse of right elbow.
4. Elbow strap to be worn on right elbow during activity to reduce movement of the tendon.
5. Massage right elbow and forearm including techniques called "muscle stripping" and "cross fiber friction" to break up any calcification or scar tissue. Must apply ice immediately after to reduce inflammation (pitta) (see appendix B).
6. Consider natural anti-inflammatories ie. ginger, garlic, bromelains or aloe vera (a constitutional remedy for pitta)
7. Yoga postures: JFS standing to avoid any weight bearing on wrists with special consideration to 9-21. The movement should be gentle and dynamic with decrease rom to avoid pain. Do repetitions of six with a goal of twelve, five days a week. 9-11 (wrist flexion, extension, radial and ulnar deviation and rotation) should be done gingerly bilaterally to begin some movement in the wrist flexors and extensors with mild strengthening and stretching. Due to the fact that Grace experienced transient left elbow pain suggests vulnerability on the left as well. 12-17 (elbow flexion and extension, shoulder flexion and extension, abduction, adduction and internal and external rotation). Avoid complete extension of right elbow to avoid pain while strengthening triceps and stretching biceps. Continue flexion as tolerated to strengthen biceps and stretch triceps. Extension and flexion of the shoulders will strengthen and stretch the posterior deltoids and stretch the anterior deltoids. It will also strengthen the pectoralis major and strengthen the latissimus dorsi. Internal and external rotation of the shoulder will strengthen the infraspinatus, teres minor and teres major and stretch the teres major and minor as well. If Grace experiences any discomfort to her elbow, wrist or shoulder she is to decrease her efforts until she finds a comfort zone. If she cannot she is to stop the movement and report to me.

March 28, 2005

Grace was feeling much better after approximately six weeks. Her pain has decreased to a 1 at rest and a 4 with certain movements. Once she noticed improvement she started to challenge herself with weights and yoga poses that required weight bearing on her wrists. However, every time she attempted this she would have setbacks with increased pain and inflammation forcing her to go back to the original recommendations. This of course, was typical of her constitution; always pushing herself to perform. She did learn that if she stopped doing activities that aggravated her elbow her pain would significantly subside. She did not wear an elbow strap nor did she follow the arthritis diet. Grace found these too restricting. Given that she was very hard on herself I did not push these

recommendations. She was wearing a headset at work to answer the telephone and continued with appropriate ergonomics while keyboarding. She did consistently practice the JFS five times a week; ingested aloe juice daily, received a massage specifically targeted to the elbow including the stripping technique followed by icing. She was able to practice the wave breath daily. She seems more relaxed but is still over worked and in constant motion.

Additional Recommendations:

1. Yoga Nidra practice three times a week to increase relaxation.
2. If pain decreases to 0 at rest, she may incorporate her wrists for demonstration purposes while teaching yoga; a request strongly pursued by Grace. It was clearly stated that she was to stop if there was any discomfort.
3. Increase JFS to nine repetitions.

May 27, 2005

Grace's mood was much lighter. Her pain had subsided at rest. She was able to incorporate simple upper body exercises (chest, back, shoulders and biceps) with light weights. She still was unable to do any triceps exercises without pain. She did nine repetitions of the JFS five times a week in a standing position. She was able to incorporate JFS while sitting 1 time a week for demonstration purposes only. She tried doing all of the Structural Yoga postures on her own, but was unable to do Ustrasana (camel), Marichyasana (seated spinal twist), Adho Mukha Svanasana (downward facing dog), Salamba Sarvangasana (supported shoulder stand) without pain. She also noticed very minimal discomfort intermittently with Utthita Trikonasana (extended triangle), Gomukasana (face of light), Dandasana (stick pose), and Bhujangasana (cobra).
She decreased the frequency of her massage to every ten days. Grace was doing the wave breath ten times before going to bed and yoga nidra three times a week. She found them both very relaxing and noticed her sleeping patterns had improved.
Grace is very happy at her new job and feels it is much more suited to her. Her finances have also slowly improved. She still has a very hectic schedule but states she is less overwhelmed.

Additional Recommendations:

1. Increase JFS standing to twelve repetitions three times a week while holding the pose for three to six breaths to increase strength.
2. Add JFS sitting six repetitions two times a week, increasing repetitions as tolerated. Apply very light pressure when using hands. Apply ice afterwards.
3. JFS #9, do one hand at a time using the other hand to apply resistance in order to strengthen and stretch the wrist extensors and flexors. JFS # 11 before wrist rotation clench fists and then release at completion. Apply ice afterwards.
4. Incorporate the Eagle Pose moving arms up and down to strengthen triceps.
5. Meditation 1 time a week, increasing as tolerated.
6. Dandasana supported by a wall, Bhujangasana, and Utthita Trikonasana with light pressure on wrists to strengthen wrist extensors, 1 time a week.

7. Gomkasana limiting internal and external rotation of the shoulders, avoid clasping hands to avoid strain to the elbow.
8. In Pachimottanasana hold feet to stretch wrist flexors and extensors for a release.

July 30, 2005

Grace was happy to report that she has had no pain in the last two weeks. She has decreased her professional massages to every three weeks and has learned to do self massage including the muscle stripping cross fiber friction techniques. She is incorporating this after her workouts followed by ice. She has been able to do the JFS both sitting and standing. While sitting she has applied minimal pressure to wrists. She has also been able to do all of the Structural Yoga postures still avoiding Marichyasana, Adho Mukha Svanasana, and Salamba Sarvangasana. She has increased her weights during her exercise routine and has added tricep exercises. She is meditating 3 times a week and continues with yoga nidra and the wave breath. She takes aloe vera juice daily. She has actually scheduled a vacation. She and her husband are communicating more. She feels and appears to be much more relaxed.

Additional Recommendations:
1. Salamba Sarvangasana with wall support to strengthen biceps and triceps.
2. Marichyasana (strengthens triceps) and Adho Mukha Svanasana (strengthens deltoids) with minimal pressure on wrists.
3. JFS sitting with twelve repetitions five times a week except #6 through 8 only increase to three times a week with a goal of holding the pose for twelve full breaths.
4. When weight bearing on wrists, elbows should not be fully extended and hands should be turned in to avoid strain on wrists.

October 8, 2005

Grace has been able to maintain all recommendations without pain. She feels she has much more energy. She is much more aware of her body and has stopped pushing herself by recognizing when she is tired and honoring that.
She has been doing yoga postures two times a week and the JFS sitting five times a week. She has been able to add muscle strengthening to the JFS by holding the pose for ten to twelve breaths. She no longer requires a massage and continues to weight lift. She is still using light weights for triceps exercises.
Grace continues to have some weakness with right shoulder external rotation. I have suggested that she continue aloe vera juice daily to keep pitta balanced along with meditation, yoga nidra and the wave breath.

Additional Recommendations:
1. JFS # 14 with resistance against the floor or wall to right shoulder to strengthen her external rotators (posterior deltoids, infraspinatus, and teres minor).

2. Camel pose with blocks for support to strengthen external rotators.
3. Slowly increase pressure on wrists during JFS as tolerated to increase strength.
4. Incorporate chanting daily.

e. Results of your recommendations

Grace was most pleased with being pain free. This allowed her to get back to her daily routines including some form of yoga and walking her dogs, both bringing her much happiness.
In January she had a pain level of four, and by avoiding movements that aggravated her elbow it significantly reduced her pain. In combination with massage, ice and aloe vera juice she dropped her pain level to a one by March. She slowly embraced most of the recommendations. It was initially very difficult for her to sit in meditation but she was able to do the wave breath daily.
In four months Grace's pain had subsided at rest. She was able to begin some weight lifting exercises and increase the repetitions of the JFS standing and include the series sitting once a week. She did continually try to push her limits when exercising or doing yoga, a very familiar behavior to her. However, she realized the importance of stopping if she was in pain and was learning to accept that. She also began to meditate weekly which helped her to slow down and become more self aware.
In six months Grace was out of pain. Her whole being was much happier. Her work and home environment had improved considerably. She was slowly incorporating postures.
By eight months Grace was out of pain and was able to do most postures. Her r.o.m. had settled into a more normal range. All of her muscle testing had improved with some continued weakness with right shoulder external rotation. She was and felt much stronger.
Grace was definitively more relaxed which she attributes to yoga nidra, meditation and the wave breath. She realizes how important these are to her constitution and is thankful that she was able to reclaim her joy and balance.

2. **Elbow Tendonitis**

a. Description of condition

Elbow tendonitis is an inflammation of the tendons that are attached to the elbow. Tendons are the fibrous cords that attach muscle to bone. There are tendons that insert to both the inside (medial epicondyle) and outside (lateral epicondyle) of the elbow. Inflammation of the tendons that insert on the inside of the elbow are called medial tendonitis/medial epicondylitis or tennis elbow and those on the outside of the elbow are called lateral tendonitis/lateral epicondylitis or golfers elbow. Of the two, the lateral side is the most commonly affected tendon of the elbow.

b. Gross and subtle body symptoms

On the gross level:
Lateral tendonitis/epicondylitis presents itself with localized tenderness over or surrounding the lateral epicondyle. The tendons involved are the wrist extensors. Pain can occur with a handshake, playing tennis or simply lifting a briefcase. Only ten percent actually get it from playing tennis. There is increased pain with resisted wrist extension. The wrist extensors include extensor carpi radialis (brevis and longus) and extensor carpi ulnaris.
Medial tendonitis/epicondylitis presents itself with pain over or surrounding the medial epicondyle. This is less common and disabling than lateral tendonitis. Pain can occur with gripping, squeezing, and golfing. Resistance to wrist flexion exacerbates pain. The wrist flexors include flexor carpi radialis, flexor carpi ulnaris and palmarus longus. Flexor carpi radialis is usually the primary culprit.
Pain can range from mild to to being incapacitating. It does not just prevent someone from playing sports but it can substantially interfere with daily activity.
On the subtle level
With tendonitis there is both excess pitta and vata. Tendonitis is an inflammatory condition that produces pain. The inflammation is excess pitta and the pain is displaced vata. On a physical level, one would expect digestive problems since this is primarily a pitta imbalance.
On an emotional level there maybe displays of anger, anxiety and or depression.
Pitta translates as "that which digests." Vata means "that which moves, metabolizes and expels." (Stiles, p.23, 2005)
This also implies what is taken in ie thought and what is expelled or retained can be harmful or beneficial depending on how we assimilate that thought.
As such, the Yoga Sutras, chapter two, the thirty fourth sutra substantiates the impact of the possible negative emotions from a pitta/vata imbalance.

II, 34

Negative thoughts and emotions

are violent

in that they cause injury

to yourself and others

regardless of whether

they are performed

by you,

done by others,

or you permit them to be done.

they arise from greed,

anger, or delusion

and are indulged in

with either mild,

moderate, or excessive

emotional intensity.

they result in

endless misery and ignorance,

therefore by constantly cultivating

the opposite thoughts and emotions

the unwholesome tendencies

are gradually destroyed."

The suggestion is to cultivate positive thought. " Studies have shown that illness results from chronic perception of threat and the resultant overuse of the defense mechanisms of protection" (Stiles, p.42)

c. Related challenges

The classic cause of elbow tendonitis is recreational or occupational overuse. These tendons are susceptible to inflammation or micro tears from repetitive use, especially with quick heavy loads such as in tennis or golf or when stress on the tendon is sustained over and over again such as carrying a briefcase or pocketbook. There are hundreds of activities that can cause the degeneration of the extensor and/or flexor tendons including simple activities such as holding a telephone.
Limitations and efects on lifestyle depend on the severity of the inflammation. It can be a mild annoyance or could actually hinder daily activity. If the pain and inflammation were bad enough it would be very difficult to use the offended arm without exacerbating the condition. The pain often continues at rest. Medical options at this point include surgery or cortisone injections.

There are several conditions that could confuse and/or exacerbate the diagnosis. Those to consider are cervical and thoracic disc disease, bursitis, carpal tunnel, ulnar nerve entrapment and internal derangement of the shoulder.

Cervical and thoracic disc disease is the inflammation of the discs between the vertebrae in the cervical and thoracic spine. If this inflammation involves C5, C6 and /or T1 then the pain associated with this condition could radiate down the arm causing pain at the elbow.

Bursitis is the inflammation of the bursa. The bursa is a sac that contains fluid which provides a gliding mechanism over friction points around the joint (skin over bone, muscle over muscle or tendon over bone). It is usually caused by trauma. However, the pain and swelling is over the olecranon not the epicondyles.

Carpal tunnel is the narrowing of the carpal tunnel which can result in compression of the median nerve. Symptoms can be pain along its distribution including the elbow. However, along with pain, there is numbness and tingling in the fingers.

Ulnar nerve entrapment is the entrapment of the ulnar nerve usually due to scar tissue around the nerve. Symptoms can be pain along its distribution but can also include numbness/tingling and weakness in certain fingers.

Rotator Cuff Tendinitis is inflammation of the rotator cuff tendons (supraspinatus, infraspinatus, teres major and minor). This can cause radiation of pain to the outside of the elbow but not in the elbow. It is usually referred pain and is worse at night.

3. Ayurvedic assessment

From an aruvedic view point, elbow tendonitis, being an inflammatory condition suggests increased pitta and if there is pain this suggests displaced vata
“Frawley defines dosha as that which darkens, spoils, or causes something to decay. When out of balance the doshas cause disease, decay and death. This is there nature.” (Frawley, Aruvedic Healing). Stiles goes on to say “ ideally, each person needs to be able to receive and integrate the qualities of each dosha. By adjusting to the yoga program diet and lifestyle according to current changes in one’s life one can minimize the “decaying” quality inherent in the doshas. He also states balancing vata and returning the pranas to their home region and function will rectify all other doshas. It is from maintaining regular disciplined lifestyle and physical manipulations that the yogi creates more prana and the ability to sustain it within themselves. ” (Stiles, p. 35-36, 25)
It is through prana that we can regulate thought. I have suggested a pranayama practice beginning with the wave breath which helps balances the five pranas (Adhya, Samana, Udana, Apana, and Vyana Prana). This in turn affects the koshas with the ultimate goal to reach the Anandamaya Kosha level the bliss body, the true self. In order to move towards this goal I have recommended a discipline to nurture all of the koshas:
1. Annamaya Kosha; a satvic diet including fresh, seasonal vegetables and fruits avoiding food that increases heat (ie. spices). Heated food could exacerbate the inflammation

(pitta) associated with tendonitis. Consider a cleansing diet such as the Arthritis diet to decrease inflammation and digestion and increase elimination (vata). 2. Pranamaya Kosha; continue with the wave breath to balance vata and add Nadi Suddi to restore balance. 3. Manomaya Kosha; meditate daily to generate positive thinking and higher thought. This will help the underlying anger and depression from excess pitta and the anxiety and fear from displaced vata. Grace initially appeared depressed and anxious perhaps due to her unhappy relationship and financial concerns. However, as she stated " a lot doesn't bother me " suggestes that she was out of touch with her feeling. Meditation and Yoga Nidra will hopefully help her become more aware. 4. Vijnanamanya Kosha; since Grace was already providing service to others, I suggested that she read from the sutras with special attention to Yoga Sutra's 1, 30-31 and II 40.41 and 46. These Sutras were recommended by Mukunda Stiles for rajasic vata and pitta.

Regarding her diet and emotional status, I recommended that she receive an aryuvedic consult before embarking on a cleansing diet and further counseling if her emotional status began to worsen. This would allow her to more completely integrate Aryuvedic and Yogic disciplines. " by making Yoga and Aryuvedia into a lifestyle you will increase your capacity to ride the waves of life's current" (Stiles, p. 18, 2005) . The more easily one rides the waves the closer one gets to a blissful existence, the ultimate goal.

4. **Common Body Readings**

The common body readings to look for with elbow tendonitis are: the elbow is not fully extended and /or the forearm/hand is rotated.

However, if the neck is the source, one might observe a forward or tilted head. A forward head suggests a tight sternocleidomastoid (scm) and weak upper trapezius muscles. A tilted head suggests a tight scm and upper trapezius muscles with weakness on the opposing side.

If the shoulder is the source you might observe high shoulders suggesting a tight upper trapezius and levator scapula, and weak lower trapezius , latissimus dorsi and pectoralis sternal muscles.

5. **Contraindicated Yoga practices**

During the acute phase any weight bearing poses to the wrist/elbow should be avoided. Examples are as follows: Dandasana (stick pose), Ustasana (camel pose), Adho Mukha Svanasana (downward facing dog), Surya Namaskar (sun salutation), Bhujangasana (cobra) unless arms are off the floor, Salamba Sarvangasana (supported shoulder stand) Marjarasana (cat bow) and Chakravakasana (sunbird pose). Modification are allowed if they do not require weight bearing to elbow or wrist.

6. **General Recommendations**

a. Therapeutic/free of pain

Recommendations during the acute phase would be to rest the elbow and avoid any movements that exacerbate the pain such as flexion and extension of the elbow and wrist

that require any resistance. Ice the elbow, this will help reduce inflammation. Wear an elbow strap (placed just below the epicondyles) this helps reduce the movement of the offending tendons. Once the pain has dissipated I recommend the Joint Freeing Series standing with special attention to 9-21. These movements should be done gently with decreased range of motion keeping elbows slightly bent since they involve the use of all the supporting muscles. Begin with repetition of six, five days a week. When doing 9-11 be extremely aware not to strain wrist flexors and extensors since this is where the weakness is. Avoid any postures that require weight bearing on the wrists. Continue to increase repetitions with a goal of twelve. This will begin to increase range of motion and tone muscles.
Add breath and meditation for relaxation, and consider herbs to decrease inflammation. Begin massage to the forearm incorporating the muscle stripping and cross fiber friction techniques two to three times a week.

b. Stabilize situation and lifestyle change recommendations

This second phase should involve strengthening the primary muscles, the wrist flexors (flexor carpi radialis, flexor carpi ulnaris and palmarus longus) and the wrist extensors (extensor carpi ulnaris, extensor carpi radialis both brevis and longus). Begin strengthening the secondary or recruiting muscles. These muscles include the biceps brachii, brachioradialis, brachialis, triceps brachii, rotator cuff (supraspinatus, infraspinatus, teres minor and major), deltoids, pronator teres and supinator muscles. Start by adding muscle strengthening to the joint freeing series. Hold and isolate muscles, gradually increasing holding time from three to ten breaths.
For the wrist extensors and flexors apply resistance with the other hand during extension then clench fist for flexion and extension. Before wrist rotation create a strong grip and then release.
For biceps, brachioradialis and brachialis and triceps brachii hold and isolate during elbow flexion and extension but do not fully extend.
For deltoids, and rotator cuff (infraspinatus and teres major and minor) during shoulder abduction and adduction continue to isolate and hold. Externally rotate against a wall so that the entire shoulder, arms and hands lie flat against the wall and with internal rotation, the shoulder and elbow remain on the wall but the wrist does not touch. Use the wall for resistance. This will also strengthen the biceps and triceps respectively.
Begin with a few simple asanas slowly incorporating gentle pressure on wrists allowing rest between postures, eventually including more postures to strengthen. Once strength has been increased begin stretching postures and exercises.
Continue selected herbs and increase water intake for elimination (balancing both pitta and vata). Continue antiinflammatory diet and massage as needed. Include yoga nidra along with daily meditation and breath work.

c. Maintenance and long term considerations

When one is able to weight bear on wrists, elbows should not be fully extended and hands should be turned in. This will internally rotate the shoulders causing elbows to mildly

flex, alleviating strain. At this time a personalized daily yoga practice including the wave breath, meditation and yoga nidra would be of considerable benefit. Continue herbal intake to maintain balance and good hydration. Always monitor one practice so that one remains pain free. Since rajasic activity exacerbates this condition include any form of relaxation that is enjoyable.
If there is no improvement or persistent pain one should be referred to their physician.

8. Questions and Answers for Yogaforums.com

Question:
Will Structural Yoga Therapy relieve and/or heal a condition in the elbows? Also, I am assuming that all weight-bearing poses such as downward dog, plank and chaturanga poses, in the case of tendonitis, should be avoided. Is this correct? Your advise would be much appreciated.
Answer:
Such a delicate condition as this I find can be worsened by yoga, so we must clarify what to avoid. You have a good start on it but some can be modified and some must be eliminated, depending on your personal situation. Sometimes an Ayurvedic perspective helps in getting clearer on the deeper issues, for this is not limited to elbows.
Over all I find tendonitis and other tendon injuries respond best to bodywork and I can do that for you or recommend some techniques that could assist you.

Question:
About 5 months ago, I managed to injure my Achilles tendon. For awhile the pain was so bad whenever I ran or made a sudden move involving my feet. It has healed for the most part, and I can even run long distances. However when I do any large amounts of walking, I find it starting to throb. I’ve tried calf stretches and ankle rotations with little or no success. Can you suggest anything to help heal it for good? Thanks.
Answer:
Achilles Tendon takes a long time to heal, best advice is to let it rest and recover.
I am currently studying A&P as relates to massage and bodywork. Ligaments and tendons have few blood cells and are very slow to heal. The degree of injury, whether mild, moderate or severe, relates to how much of the connective tissue has been stretched (mild), damaged (moderate) or broken up/torn (severe). Professor states to expect 85% recovery strength 1 year post injury.

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This describes how to do muscle stripping and cross fiber techniques. For full description of these techniques got to website www.massagetherapy101.com

9. Appendix

a. Arthritis Diet from Mukunda Stiles

Indra Devi gave this diet to me during the Unity in Yoga Peace Conference in Jerusalem January 1995. Mataji Indra Devi is called the mother of Yoga; as she was the first woman teacher in the western hemisphere. She recently (April, 2002) passed away 3 weeks before her 103rd birthday while living in Buenos Aires, Argentina. She has over 2000 weekly students at her 6 major centers there. Mataji claimed that 90% of those people who followed this diet get relief from their symptoms within ten days.

For ten days eat a diet 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 you can.

Be prepared for your body's release of toxins that are the cause of the arthritis. This may take the form of headaches, body pains, constipation, moodiness, irritability, etc. Practice being present to yourself and do not medicate yourself to avoid your feelings with addictive substances; sugar, caffeine, food cravings; nor avoid your true feelings by watching excessive TV or seeking other sensory stimulation. Take plenty of water and herbal teas. You might consult an herbalist or take a Bach flower remedy (see me for a personal formula) to assist with the emotional or mental difficulties that may arise.

If there is pain from the arthritis symptoms, take a raw potato and slice it to the size of the painful area. Lay the flesh of the potato against the painful site and tie it there with gauze. Let it stay until the potato becomes hard then replace it with another. This can be done during the day though it is especially good for overnight use.

If there is inflammation, apply a milk compress (a small towel soaked in milk) at room temperature. For fever apply a vinegar and water compress on the shin and calf area down to the foot. Wrap your lower legs fully to retain the moisture then lay in a warm bed and within four hours the fever will be gone. If you become constipated take an enema or one tablespoon of castor oil just prior to bed.

Following this an Ayurvedic pitta balancing diet (to lessen heat and inflammation - specifics can be found in most Ayurvedic books) is recommended to become your regular routine. Eliminate all nightshades (potato, tomato, eggplant, bell pepper, and tobacco) and spicy foods. This heat balancing diet will help you to identify the most likely sources of inflammation and irritation. Details on personalizing this Yogic and Ayurveda approach to lifestyle can be found in Prakruti - Your Ayurvedic Constitution by Robert Svoboda or see The Three Season Diet by John Douillard.

b. Massage Techniques

Muscle Stripping

A technique that applies pressure along the muscle fibers from the origin of the muscle to the insertion.

Cross fiber friction
A technique that stimulates the myofacial tissue and breaks up adhesions and congestion of the tissue fiber.

10. **Biography**

Vivian Mastroianni has a bachelors of Science in Psychology, a Physician Assistant Certification, a homeopathic practicioners certification and is a reiki master. She has been practicing, teaching and training in yoga for the last seven years. Currently is a physician assistant practicing in both dermatology and rheumatology. Her medical practice integrates both conventional and alternative disciplines.