



Uploaded to VFC Website

▶▶▶ March 2013 ◀◀◀

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

Veterans-For-Change

*Veterans-For-Change is a 501(c)(3) Non-Profit Corporation
Tax ID #27-3820181*

If Veteran's don't help Veteran's, who will?

We appreciate all donations to continue to provide information and services to Veterans and their families.

https://www.paypal.com/cgi-bin/webscr?cmd=_s-xclick&hosted_button_id=WGT2M5UTB9A78

Note:

VFC is not liable for source information in this document, it is merely provided as a courtesy to our members.

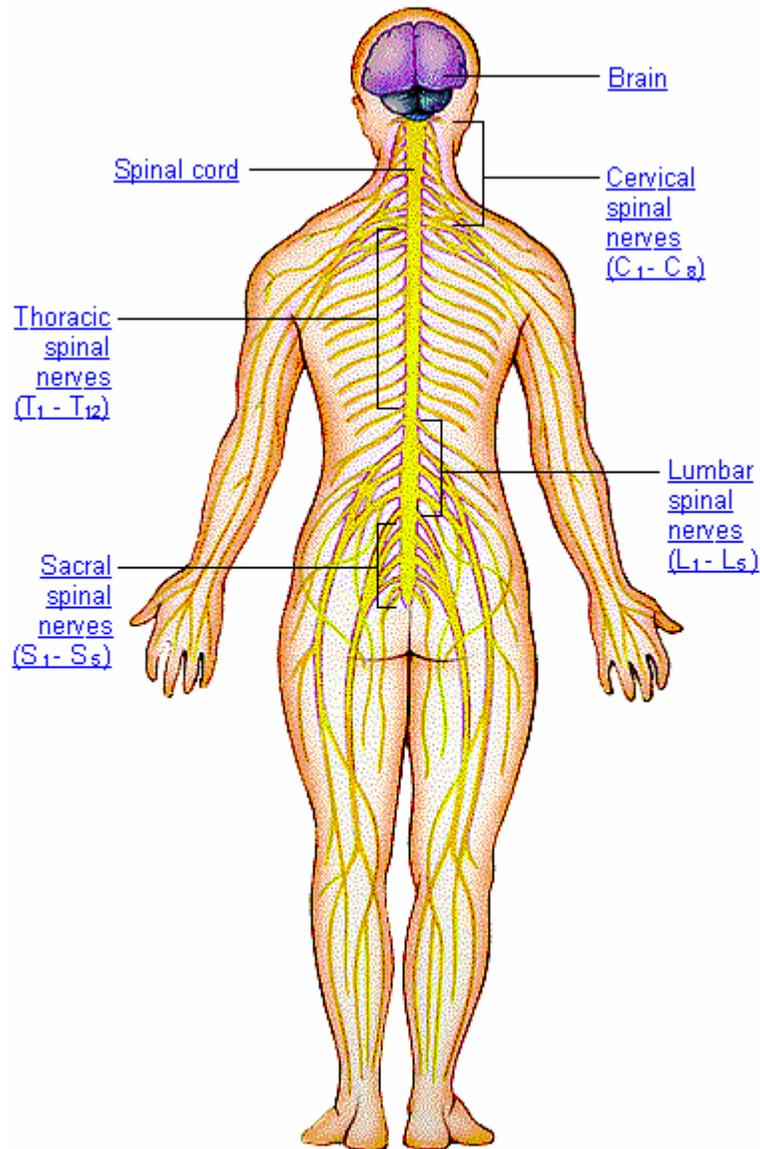


Structural Yoga Therapy Research Paper

Yogaville Program
November 2005

Peripheral Neuropathy

Lynda Nirmala Hoffarth, RYT500, RMT, SYTherapist/Teacher™
Midlothian, Virginia
804-240-0079
husong@verizon.net



1a Initial Intake

Case Study 1:

Jim is a 77 year old man who had been in the Korean War for two years and later went to work in the Packaging Division of Reynolds Metals. He is about 5' 10" tall and weighs 195 lbs. He had a back operation about 10-12 years ago to realign several discs due to cervical spondylosis. Sometime after that his feet started to get numb. The company doctor told him he was just getting "old". In 1987 the numbness started to travel up his legs to his gluteals after the back operation. His balance was then compromised. He has been seeing a Chiropractic Neurologist for the past 6 months and he says he now has a modest amount of feeling in his legs. This doctor seems to think his neuropathy comes from the cervical spondylosis. Despite the fact that he is unsteady on his feet, he still continues to square dance on Friday and sometimes Saturday nights. He says he has to hold onto his date real tight so that he doesn't fall!

Ever since his second wife died, he has been staying up until 3 - 4:00 a.m. He eats late and usually has rice with a mixture of "whatever" he can find, plus cheese, steak or seafood. He doesn't like a lot of spicy food and mostly drinks water, tea and sometimes coffee.

His nutritional program includes vitamins C and E and 200mg. of Celebrex which he is trying to wean himself off.

1b Physical assessment of Case Study 1

Body Reading-

Jim has a higher left shoulder -

Tight muscles - upper trapezius, levator scapula

Weak Muscles - lower trapezius, latisimus, pectorals sternal

Rounded shoulders

Tight - pectorals, serratus anterior

Weak - mid and lower trapezius, latisimus dorsi 15

Jim's right shoulder is lower than the left. His hips both seem to be moving properly as seen from the sacroiliac test, but my assessment came directly after a chiropractic adjustment. His shoulders are slightly rounded and he carries most of his weight in his abdomen. The first and second koshas show me a man who is uncomfortable with his physical limitations in movement and the disruption of the circulation in his legs.

Case Study 1 Physical Assessment

Joint/Action	Aug ROM Right/Left	Oct ROM Right/Left	Aug MT Right/Left	Oct MT - Right/Left
<i>Supine</i>				
Ankle				
Dorsiflexion 20	19/8	19/8	4.5/4.5	5/5
Plantar flexion 50	56/42	48/31	4/4	4/4.5
Inversion 45	10/22	10/22	3/3	3/3
Knee				
Flexion 150	59/62	120/98	2/2	4.5/5
Extension 90	75/78	80/82	2/2	4/4.5
Hip				
Flexion Bent 150	94/112	103/112	4/3	4/4
Internal Rotation 35	12/16	12/18	3/3	4/4
External Rotation 45	40/50	45/54	3.5/4	4/4.5
Shoulder				
Flexion 180	78/159	171/171	1.5/4	3/5
Hip <i>Prone</i>				
Internal Rotation 35	19/20	25/19	3/3	4.5/4
External Rotation 45	40/45	54/54	3/3	4/4
Extension 15	20/18	29/31	0/0	0/0
Knee Flexion 135 - 150	103/89	101/92	4/4	5/5
Neck				
Flexion 45	35	45	1	2
Extension 55	30	40	1	2
Rotation 70	35/45	55/30	1	2
Lateral Flexion 45	16/12	20/20	1	2
<i>Side Lying</i> Abduction 45	38/30	35/30	4/2	4/4
Adduction 30	12/12	18/18	2/2	3/3.5
Isolation Tests				
Psoas			2/3	4/3
Sartorius			2/2	3/3
Gluteus Maximus			0/0	0/0

1c Summary of Findings

Tight Muscles	Weak Muscles
Upper trapezius	Lower Trapezius
Posterior tibialis	Lattissimus Dorsi
Hamstrings	Pectoral Sternal
Iliopsoas	Adductors
Gluteus Medius	Gluteus Medius
Tensor Fascia Lata	Psoas
Pectorals	Gluteus Maximus
Right quadriceps	Sartorius
	Right quadriceps

1d Recommendations

I had Jim start with the (JFS) joint freeing series.¹⁵ Most poses were given for standing as Jim has a slow and difficult time getting up and down. He could do the JFS on a chair, floor or standing, depending on how he felt that day. He was asked to stand next to a wall or in a corner to keep himself stable. Each pose was done dynamically three or four times to awaken his proprioception,¹⁵ using the breath to inhale into it and exhaling out of it. Then he was instructed to hold the pose as long as it was comfortable with his breath being full, his spine lengthened. The poses he held standing or on his knees using hip flexion and extension to strengthen his quads, gluteus maximus and hamstrings.

The **rolling bridge** was to be done in bed and given to strengthen hamstrings and stretch the quads, (specifically the rectus femoris on the right leg) the hip flexors and the pectorals.

Balancing Tree - to strengthen the sartorius, external rotators

Standing hip flexion - to strengthen the iliopsoas, quadriceps

Lifting and lowering the right arm into **shoulder flexion** using a soup can to strengthen the pectorals, deltoids, biceps, latissimus dorsi.

Laying on the floor or his bed with his arms in **external shoulder rotation**, he lifts his head and strengthens his sternocleidomastoid and upper trapezius as he turns his head right and left. Standing with his back against the wall, arms extended **shoulders internally rotated** pressing into the wall to isometrically strengthen his latissimus, teres major, pectorals and anterior deltoid. **Shoulders externally rotated** pressing also into the wall to strengthen his teres minor and posterior deltoid. He then faces the wall about two feet away, hands at shoulder height and bends his arms as he leans into the wall with his back and hips in a straight line to strengthen his biceps, triceps and deltoids, as in a standing push-up.

I asked him to drink more water, to do a bowel cleanse and to take some time during the day to visualize cooling elements like a lake, a brook, the moon and stars. His affirmations are to be forgiving and surrendering anger seeking happiness and peace to all humans and creatures.⁷ Some of this feels a little strange for him but he is willing to try it.

1e Results of the Recommendations

Although Jim still has some cramping in his hamstrings when he does rolling bridge, he doesn't experience cramping as much in other positions. He feels stronger in most areas and the range of motion of his right shoulder flexion is now equal to his left. His right foot cracks when muscle tested in plantar flexion, which he said happens a lot. In hip flexion he cramps in his hamstrings and also recruits other muscles during the muscle test. The ROM has improved in neck flexion although he feels a tightness in one spot in the upper trapezius.

There is a strong correlation between the glands and the chakras and that they may have separate energetic frequencies. I am most focused on the throat chakra or Vishuddha due to the imbalance in the cervical area. This gland is associated with the ether element, sense of speech, self expression, energy and endurance. ⁶ Not only are our glands stimulated by our physical movements but also by our thoughts.¹³ Having increased the ROM (range of motion) in his neck, I notice Jim is becoming more vocal in his expression of himself and appears happy with his progress. Moving out of

the physical (1st) kosha with the pain, muscle weakness, lack of awareness of body parts, and limited ROM, he finds new spaciousness in his body (2nd kosha), and excited by his sense of himself (3rd kosha) and this new found energy (4th kosha). He wants to continue with the work to see just how much more he can improve. (5th kosha)

In summary, now that he has increased the oxygen (prana) in his body, samana prana has given him more energy, vyana prana circulates it to other parts of his body, apana prana is releasing the wastes from the bowel cleansing and udana prana is giving him the positive energy that has been created by the process. 7 His visualizations and affirmations have helped him create more space in his heart for more positive feelings that took the place where the need to forgive was formerly. He says he feels lighter and has an easier time breathing. Being more conscious of drinking water has replaced his need to snack. Often he confused his feelings of thirst with a desire to eat.

1a Initial Intake **Case Study 2:**

Barry is a 58 year old man that has had his own trucking business for 40 years. He served in the U.S. Army in Vietnam from June 1967- June 1968 as a platoon Sergeant. This was a title given to him after a battle that within 15 minutes left his Squad leader injured and unable to lead his troops. This helped him later in life as he became stronger within and unintimidated as an individual. It was in Vietnam that he became exposed to Agent Orange, walking through the jungles and seeing it drip from the dying vegetation, all the while wondering what it could be doing to him as well.

In 1968 he married and had children in 1971 and 1974. His long workdays were mostly due to the fact that he felt his wife was emotionally unavailable for him so there was no point in getting home early.

High readings of glucose and cholesterol showed up in exams in 1989 and in 1996 he had his first heart attack. Angioplasty surgery was performed and 11 months later he survived his second heart attack. It was at this time that "spirit" told him he wasn't going to die, even though he was ready, and that now was the time that his real journey was to begin and the reason he came into this life in the first place. Barry's gift as a clairaudient was to help others heal. His mother was a clairvoyant and had helped the police solve numerous crimes. This was done secretly to protect her family. She taught him much but he continued to suppress it and often would hold a blank screen in his mind when his mother was around so she couldn't "read" him.

Diabetes followed in 1997 which the doctors feel is another by-product of the Agent Orange.¹ After his kids left there didn't seem to be any reason to stay married and it was some time after his health declined once again that he divorced. As a volunteer for the American Heart Association, he met his present wife, 22 years his junior, who also volunteered and they married in April of 2003. At 36 years old she wants to have children.

Peripheral Neuropathy began 1½ years ago along side of his feet, the balls of his feet and toes and at the left heel. The sensation was felt as a numbing and "a heightened awareness in the areas." After four months it went away for awhile. The type of medication he is on, plus the side effects of diabetes can be a probable cause of erectile dysfunction and as Viagra is out of the question for heart patients, he resorted to very painful surgery in March of 2005.

Barry's diet due to his high cholesterol, heart condition and diabetes has him eating three servings of fish per week. He stays away from red meat, pasta, white bread, most sugar and potatoes. He drinks a good amount of water but consumes a pot of coffee each morning with "pretend" cream and some raw sugar. He splurges once in a while on a chocolate *Snickers* Bar.

He had been doing step aerobics until his recent surgery but has continued his "mall" walking routine.

Barry takes a number of medications. They are:

Gemfibrozil 600 mg - 1 in the am and 1 pm (cholesterol)

*Side effects noticed:leg cramping, pain in body as a whole

Fosinopril 40mg - 1am and 1 pm (high blood pressure)

*Impaired liver function, decrease in sexual desire and ability

Metformin 1000 mg - 1 am and 1 pm (diabetes)

*Contraindications noticed: hypoglycemia

Omeprazole - 20mg - 1am before a meal (reduces stomach acid)

* Leg pain, joint pain, muscle weakness and cramps

Hydrochlorothiazide - 25 mg - ½ tablet in am (diuretic)

Glipizide - 10 mg - 2 in am (diabetes)

*Leg cramps

Aspirin - 325 mg - 1 in pm (for heart - blood thinning)

***symptoms and side effects noted may be related to medication
information of adverse side effects from package inserts**

1b Physical Assessment

Body Reading

Barry has a high left shoulder-

Tight - see statement below

Weak - see statement below

Left leg bows -

Tight - tensor fascia lata, gluteus medius

Weak - adductors, gluteus medius 15

Barry's body scan shows a high left shoulder which comes in part from the heart surgery which pulled his deltoids and pectorals up and back so to get access to the heart area. Scar tissue from the surgery will cause the pectoral muscles to shorten, pulling his body forward and may have caused the upper thoracic area to weaken. His right hip is stationary at the sacroiliac joint, his left leg is longer and it also bows. Consultation of these findings led me to probe into any accidents that he might have had as a child. At the age of seven he was in a full leg cast for the entire summer, due to an accident that broke all the bones in the right leg. The ankle was also dislocated. It was this accident that I believe may have stunted the growth of his right leg. He was not able to walk at all during this time while the cast was on, being carried from place to place. At this growth stage in his young life, his left leg was thought to have bowed as it grew to equal the length of the right leg while standing. More of the weight was carried by the left leg even after the cast was removed as the body subtly tried to protect it.

Many of Barry's symptoms (high blood pressure, high cholesterol, and diabetes) are also problematic of hypothyroidism.¹⁴ I asked him to start taking his temperature under his arm before getting out of bed in the morning, using a basal thermometer. After a

week of scores 96 degrees and below, he was then referred to a laboratory for TSH testing.¹⁴ Chiropractic nutritional assessment discovered he is allergic to eggs, sugar, and yeast. He was desensitized and put on a 3 week program staying away from all foods containing those elements, given omega 3 and 6 supplements, a chelator to rid the body of toxic chemicals and black currant (used as a deep tissue detoxifier). The doctor found his liver function was abnormal and is now following a cleansing program using Medclear tm. (nutritional supplement for cleansing, detoxifying and ridding the body of inflammation)

Barry is legally blind in his right eye. He says It is because of this that he rotates his head to the right to increase his modified peripheral vision with the left eye. From this the right side of his neck appears shorter.

Case Study 2 Physical Assessment

Joint/Action	Sept ROM Right/Left	Jan ROM Right/Left	Sept MT Right/Left	Jan MT - Right/Left
<i>Supine</i>				
Ankle				
Plantar flexion 50	30/32	53/56	3/4	3/4
Eversion 45	20/20	29/27	3/3	4/5
Knee				
Flexion - Bent 150	125/119	132/135	2/2	3/4
Hip				
Flexion St Leg 90	71/61	61/58	4/4	5/5
Internal Rotation 35	24/20	33/31	4/4	5/5
External Rotation 45	36/44	53/59	4/4	3/5
Side Lying Adduction 30	15/18	34/32		
<i>Prone</i>				
Knee Flexion 135-150	114/115	114/118	3/4	4/5
Hip Internal Rotation 35	20/30	32/43	3/4	4/5
Shoulder Extension 50	36/42	52/56	3.5/3	2/2.5
Elbow Carrying Angle	15/11			
Neck				
Rotation 70	51/51	70/68	5/5	5/5
Lateral Flexion 45	28/28	45/36	5/5	5/5
Isolation Tests				
Sartorius			3/4	3.5/5
Gluteus maximus			2/2	3.5/4
Psoas			2/2	3/4
Abdominals			0/0	1/1

1c Summary of Findings – Case Study 2

Muscles to stretch	Muscles to Strengthen
Rectus femoris	Rectus Abdominus
Gastrocnemius	Sartorius
Tibialis Anterior	Hamstrings
Peroneals	Latissimus
Left upper Trapezius	Teres Major/Minor
Pectoralis major	
Right sternocleidomastoid	

1d Recommendations

- **Balancing Tree** – for the strength of the sartorius muscle - lifting and lowering the leg while balancing several times, then holding the pose as long as comfortable (12 breaths).
- **Warrior 1 and Side of hip stretch** – for strengthening sartorius.
- **Hero** – to stretch quads, tibialis anterior, peroneals with toes pointed out.
- **Sit-ups/ Boat Pose** – for abdominals, erector spinae, rectus femoris
- **Downward Dog** using a chair to place hands on seat with head looking up- to stretch gastrocs, and strengthen tibialis anterior (head looks up due to high blood pressure).
- **Left arm over head with arm gently pulling head to left-** Stretch to the right sternocleidomastoid
- **Arms behind back**, hands interlaced, squeezing scapula into adduction and then lifting arms up. To stretch pectorals, upper trapezius, teres major/minor.
- **Camel**, to stretch rectus femoris (quads) and strengthen the latissimus
- **Spinal twist** – to strengthen latissimus, abdominus obliques, pectorals.15

1e Results of Recommendations

Range of motion has increased substantially in almost all cases. Muscle testing improved in only some, abdominals still weak. Nutritional supplements and detox program have improved elimination. Barry feels more sensation in his feet due to increase in toning of legs & toe exercising. I have asked him to continue to strengthen abdominals, psoas (by being on all fours with hip & knee flexion while holding as long as his breath is steady) and contracting gluteals by laying on stomach & lifting feet.

2a Peripheral Neuropathy

Peripheral neuropathy is the degeneration or injury of the axon and myelin sheaths of the peripheral nerves. These nerves provide impulses to move the muscles closest to the extremities. Axons may degenerate in neuropathies from a mechanical compression of the nerve, after application of a toxic substance or the death of a cell body. Small fibers can be affected or large, fast conducting fibers can result in the body's inability to move quickly below the normal range. This correlates to the slowing of the nerve conduction and the size of the compound muscle or sensory action potential. These nerves are the communicators between the brain and the organs, blood vessels, muscles and skin. The motor nerves get their commands from the brain, and the sensory nerves receive

information and deliver it back to the brain. The peripheral nervous system is connected to the central nervous system at the brain stem and at many points along the spinal cord reaching remote parts of the body. This network of nerves is used for all movements

(motor nerves) and sensations (sensory nerves). The damage to the peripheral nerves do not affect the brain and spinal cord. When damage occurs to a peripheral nerve, the communication between the area it serves and the brain is impaired. Painful sensations from the involved nerve can impair the ability to move a muscle or feel a normal sensation.

Pressure on a nerve through compression, entrapment or inflammation can cause damage to it. This could be from tumors, abnormal bone growth, a cast, or the improper use of crutches, prolonged periods in cramped postures, rheumatoid arthritis, excessive vibration from power tools, bleeding into a nerve, herniated discs, exposure to cold or radiation and forms of cancer. This temporary lack of oxygen to a damaged nerve causes the nerves to shrink like a rubber band. The gap that is then created between cells make it harder for the nerve signal to get through. When that happens, pain and burning results due to signals that are interrupted, i.e. not able to jump over the damaged area. The signals then accumulate and finally fire all at once.

Peripheral nerves usually effect both motor and sensory axons because they run in the same nerves.⁸ Proprioceptors in muscles and the angles of joints provide critical information to the motor system, as well as to vision and auditory areas.

There are many causes of peripheral neuropathy. The causes can be metabolic, toxic, vascular, from infections, inflammatory, neoplastic, hereditary and idiopathic factors. The most common causes are diabetes mellitus, vitamin deficiency, and alcoholism associated with poor nutrition. Microorganisms can contribute to peripheral neuropathy by attacking the nerves directly. Industrial toxic substances, including heavy metals (lead, mercury, arsenic, "Agent Orange," carbon monoxide and solvents can also be a cause. Although diabetes is the most common cause of peripheral neuropathy, other causes can come from surgery or repeated trauma to the lower back, back, leg or knee injuries, chemotherapy, a reaction to high blood pressure medication, cervical spondylosis, polyarteritis nodosa, acute and intermittent porphyria, high blood pressure medication (reducing the amount of blood getting to the extremities), poorly administered injections into the sciatic nerve area, cholesterol type drugs (Lipitor), artificial sweeteners (Aspartame), air borne black mold, sleep apnea, most nutritional deficiencies, hypothyroidism and AIDS meds, as well as a long list of other pharmaceutical drugs.

Diagnosing this disease may be obtained from the temporal, anatomical and functional aspect of a clinical study. A temporal profile may show acute, subacute, chronic or relapsing pain. Mononeuropathies have abnormalities of a single peripheral nerve. Multiple mononeuropathies involve multiple individual nerves and a diffuse polyneuropathy, have a distal and symmetrical pattern of involvement. Functional impairment can be from sensory, motor and autonomic modalities or have a predominate involvement from a particular functional modality such as the following:

Carpal Tunnel

Median nerve entrapment at the wrist, remote trauma to the wrist, rheumatoid arthritis and extensive use of fingers and hands can all contribute to this condition's development. Complaints range from pain in the hand and forearm and numbness or tingling that can be persistent or intermittent. Carpal Tunnel can often be confused with a median neuropathy at the wrist and a C-6 radiculopathy. This is differentiated by a

sensory loss to the dorsal surface of the hand, weakness in the biceps brachii, and other C-6 innervated muscles, as well as a reduction or loss of the biceps reflex and pain with the movement of the neck.

Ulnar Neuropathy - at elbow

This condition is affected by lesions of the 8th cervical nerve root or of the lower portion of the brachial plexus. Muscular weakness is more widespread especially with abduction and adduction of the fingers. Avoiding prolonged flexion or compression at the elbow is helpful. Elastic athletic knee pads worn around the elbow will help protect the nerve.

Radial Neuropathy - at the midhumerus

Motor weakness of this type are of the extensor muscles to the wrist, fingers and thumb. The brachioradialis and the forearm extensor area are weak. However, if the injury occurred from an improper use of a cane or crutch, the tricep muscles are probably involved. If the upper arm has been traumatized, an x-ray should exclude fracture of the humerus with entrapment of the nerve. Lead poisoning can sometimes show up as wrist drop due to radial neuropathy from reasons that are unclear.

Lateral Femoral Cutaneous Neuropathy

This pure sensory nerve is vulnerable to damage as it passes laterally under the inguinal ligament of the femur. Symptoms include burning pain, numbness, tingling and increased sensitivity since this nerve innervates the skin over the anterolateral and lateral aspects of the thigh. Obesity with a large abdominal fat pad, pregnancy, chronic low back pain with wide spread muscle spasm and polyneuropathy are subject to this type of mononeuropathy also called meralgia paresthetica.

Palpation medially to the superior iliac crest where the nerve exits underneath the inguinal ligament, may cause local pain and/or tingling distally. Weight reduction is beneficial.

Peroneal Neuropathy - at knee

This condition comes from the sciatic nerve which is vulnerable to injury at the knee. Leg crossing can lead to peroneal nerve damage. The peroneal branch is the nerve that is usually involved in severe ankle sprains from a sudden inversion of the ankle. The L-5 nerve root is tested for strength with the inversion of the foot. Compression of the nerve at the fibular head contributes to this pain. The use of a foot brace to prevent a sprained ankle or further damage of one is recommended. 2, 19

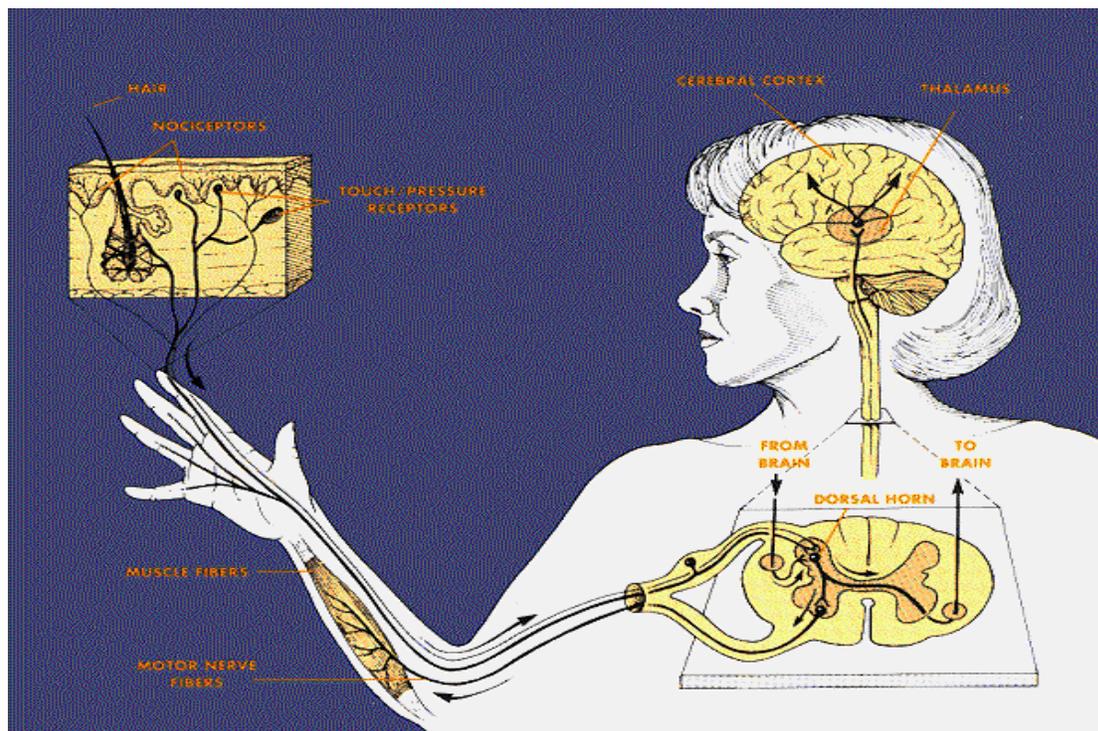
The National Institute for the Occupational Safety and Health estimates that chronic pain costs \$100 billion annually in lost workdays, medical expenses, and other benefit costs. Living with chronic pain affects day-to-day life and becomes a societal burden. Those with it feel isolated because of the loss of functioning and become caught up in feelings of depression, and anxiety which can lead to suicidal tendencies. Neuropathic pain can be misdiagnosed as musculoskeletal pain and when overlooked, may lead to months or years of chronic persistent pain and decreased function. Pain is not well understood by the general public and only a small percentage of people recognize the symptoms that separate neuropathic pain versus other chronic pain, especially when there is tissue damage. 1

People with neurologic pain require a number of treatment strategies as the pain may be caused by multiple sources. Understanding the function of any medication and its dosages and side effects is important. While there are certainly a number of drugs that can help reduce pain, many of these medicines can cause side effects. Some drugs used for high blood pressure, high cholesterol and diabetes can cause peripheral neuropathy. Some of the more heavy-duty painkillers – narcotic medications can help knock out even the most severe forms of pain, but they can also cause someone to feel extremely "drugged" or "out of it," to the point that they can't function normally. Narcotic drugs can also be a problem for HIV-infected people with a history of drug addiction who are currently in recovery. 1

Nociceptors and Pain

Nociceptors are small, thin nerve fibers located in the skin, muscle and other body tissues. When they are stimulated, they transmit messages to the brain that can lead to pain. Normally, they respond to only strong stimuli, although if they are injured or inflamed, they release chemicals called prostaglandins and leukotrienes to make them more sensitive. They also become increasingly sensitive when the stimulation is repeated or continued.

It is believed that the ancient Greeks viewed pain as an emotion. Pain was noticed to occur separate from other sensations and it was later realized that it was also a sensation. Scientists studied sense organs due to sensations of smell and sight that have their own. They then linked pain to strong stimuli that were harmful or noxious and difficult to find. That was why they began to call them nociceptors (noci which is a derivative of the word noxious). They can become more sensitive after injury and can lead to different kinds of chronic pain.



Case Study 1 - Cervical Spondylosis Myelopathy (CSM)

A boney overgrowth of the vertebrae that then degenerates the intervertebral disc results in cervical spondylosis. A spondylotic bar protrudes and impinges posteriorly on C-5 and C-6 roots. C-7 is rarely affected as well as other cervical or thoracic roots. The pain is triggered with neck movement. Postural maneuvers do not always alleviate the pain. Cervical spondylosis may also resemble amyotrophic lateral sclerosis (ALS), which is associated with lead intoxication, chronic mercurialism and proximal motor neuropathy.

Case Study 2 – Agent Orange

OVERVIEW AND INTRODUCTION

From the Agent Orange Web Site : www.lewispublishing.com/orange.htm

Agent Orange was the code name for the orange band that was used to mark the drums for a herbicide developed for the military, primarily for use in tropical climates. The product was tested in Vietnam in the early 1960's, and brought into ever widening use during the height of the war (1967-68), though it's use was diminished and eventually discontinued in 1971.

The purpose of the product was to deny an enemy cover and concealment in dense terrain by defoliating trees and shrubbery where the enemy could hide. The product "Agent Orange" was principally effective against broad-leaf foliage, such as the dense jungle-like terrain found in Southeast Asia.

Agent Orange was a 50-50 mix of two chemicals. The combined product was then mixed with kerosene or diesel fuel and dispersed by aircraft, vehicle, and hand spraying. An estimated 19 million gallons of Agent Orange were used in South Vietnam during the war.

The TCDD, or dioxin, found in Agent Orange is thought to be harmful to man. In laboratory tests on animals, TCDD has caused a wide variety of diseases, many of them fatal. TCDD is not found in nature, but rather is a man-made and always unwanted byproduct of the chemical manufacturing process. The Agent Orange used in Vietnam was later found to be extremely contaminated with TCDD.

Many diseases, including cancer, have extremely long latency periods. It is possible, therefore, for a person to be exposed to a toxin, and not have the effect of that exposure manifested for twenty years or more.

“The strongest evidence to date linking diabetes and neuropathy to Agent Orange, has been acknowledged by the U.S. Department of Defense (DOD). The finding was included in the third and final report of a 20-year study on long-term health issues related to the herbicide use.” 4

Common Symptoms

Symptoms of weaknesses in the muscles of the upper extremities and spasticity of the lower extremities also simulate the disease (ALS). In the early stages, patients may have a stiff neck. Stabbing pain may be present in the arms. “Numb clumsy hands” show up in C-3-C-5 myelopathy that is compressive. Loss of manual dexterity with abnormal sensations occur. Patients with lower cervical myelopathy often show proprioceptive loss in the legs as well as weakness and stiffness. Most commonly the iliopsoas and the quadriceps femoris are classically weak. A stiff or spastic gait is often noticed. Problems with the legs may also be observed with weakness in the hands. Symptoms are

commonly asymmetric in the legs. Loss of sphincter control and urinary incontinence are rare, but some have urinary frequency or hesitancy.

Muscle testing has more specificity than sensory or reflex findings. Palpating all muscles may allow for earlier detection of wasting than visualization. A sensory and reflex examination is necessary for any patient that has a history suggestive to cervical spondylosis. Tenderness lateral to the neck in the supraclavicular fossa may be evident. Compression in the upper cervical spine (C-2- C-4) is present if hyperactivity occurs when the pectoralis tendon in the deltopectoral groove is tapped. This is called the pectoralis muscle reflex. Adduction and internal rotation of the shoulder suggests compression in the upper cervical spine, if hyperactivity is present. CSM may also be seen in a patient, who after making a fist and releasing it 20 times in 10 seconds, shows clumsiness or impairment. The “finger escape sign” is shown with the patient holding their fingers extended and adducted. If the ulnar digits drift into abduction and flexion within 30-60 seconds, CSM may be present.

Related Challenges – lifestyle, diet, limitations on activities

The patient with a loss of awareness of where the extremities are in space, will have problems identifying if their body is safe for walking, using stairs and other motor dysfunctions, including hyperactive deep tendon reflexes. A lack of sensation in the fingers or hands can cause the person to be unaware of touching something too hot or becoming too cold, as in frostbite conditions. Picking up an object and not knowing how much pressure it takes to hold it also becomes problematic. These physical challenges of simple everyday motions can cause emotional limitations as well.

Recommendations

The person finds themselves angry, frustrated and upset that their quality of life is impaired. Increasing fluid intake, eating whole foods and avoiding caffeine, refined sugars, cigarettes and carbonated beverages may also need to be adjusted as exercise becomes limited.

Looking at the exchange of food as it relates to the three seasons of spring, summer and winter, is how nature designed us to live. Nature did not ever intend us to be nourished on the same foods for the entire year. There are the three growing seasons and harvests whose concept has come from the oldest medicinal traditions on the planet. Not being restricted to eating only locally grown produce, foods can be eaten from around the world, just as long as it is in season. 3

3 Ayurvedic Assessment and Ayurvedic Based Yoga Recommendations

It is important to identify your body type in terms of seasons as well as constitution. Once you have determined your type, general guidelines for what is best, good, what to reduce and what to eat less as well as when and how to eat will keep your body running smoothly like a fine-tuned machine.

Determination was made from the Ayurvedic Constitution Questionnaire for each case study. 17;11; 7: 5

The most powerful universal force is *faith* to rebalance the doshas. The only cure is faith in your healer, whomever it may be, or self healing, using your own powers. Your healing will never occur until you are ready to change your ways. Forgiving yourself for falling ill will help the body cooperate to heal.¹⁷

*“Remove the cause
Purify, to eliminate excess doshas
Balance the doshas and rekindle the digestive fire
Rejuvenate, to rebuild the organism”
~Chaitanyananda 17*

Case study 1

“Who is my patient? What is their constitution?” 3

Jim is a predominant Pitta dosha. He should avoid sour, salty and pungent, the “hot tastes” and concentrate on sweet, bitter, astringent, and the “cold” tastes. Pittas should avoid meat, eggs, alcohol and salt. These substances increase Pitta’s aggressive and compulsive tendencies. The majority of the diet should be grains, fruit, and vegetables to cool the Pitta heat. Pitta’s should make a conscious effort to become vegetarian. Barley is the foremost grain for Pitta due to it being cooling and drying and will help reduce stomach acid. Rice is good also followed by oats and wheat. Unyeasted bread is best as yeast produces sourness during fermentation. All vegetables are great with the exception of tomatoes of any kind and radishes due to their pungency. Cooked onions lose their hot and pungent nature and become sweet. Other vegetables good for Pitta’s are: *asparagus, broccoli, brussel sprouts, cabbage, cilantro, cucumber, cauliflower, celery, cress, green beans, leafy greens, lettuce, mushrooms, okra, peas, parsley, potatoes, spinach, sprouts, squashes, water chestnuts, and zucchini.*

Fruits best for Pitta’s are: *apples, apricots, avocados, cherries, coconut, dried fruits, figs, grapes, lemons (sparingly), mangoes, melons, nectarines, oranges, peaches, pears, persimmons, pineapples, plums, pomegranates and the Indian gooseberry (Amalaki).* Bananas have a sour post-digestive effect and any fruit listed that is sour should also be avoided.

Pitta’s should avoid seafood as it is “hot” and causes allergies. Egg whites are cooling but the yolks are hot. Chicken, turkey, rabbit, and venison are permissible but generally should be avoided as they pollute the blood and encourage aggression and irritability.

As beans are too acid, only black lentils, chickpeas, mung beans and tofu are acceptable. Small quantities are best.

Nuts and seeds are too hot and oily with the exception of freshly squeezed coconut milk to settle an aggravated Pitta. Sunflower and pumpkin seeds are also permissible.

Dairy, unsalted butter and ghee are good but the use of yogurt can be consumed with a sweetener added. Soft, unsalted cheeses can be eaten but hard cheeses should be limited.

Molasses and honey are both considered hot so should be avoided or limited. Most sweet food, including sugar reduces heat and Pitta is relieved by sweets.

Spices increase aggressive impatience in Pittas. Cumin should be used with coriander for balance, Mustard and salt eliminated. The best used regularly are cardamon, cinnamon, coriander, fennel and tumeric.

Oils such as olive, sunflower and coconut are best for Pittas. Flax and almond should be used in small amounts.

Tobacco and alcohol are too hot for the Pitta system. An occasional beer is O.K. Black Tea can be used occasionally as it is an astringent. Coffee is pungent and irritates the liver, so habitual use is forbidden. Prolonged use also weakens the digestive fire and overheats the blood. Emaciation, headaches, palpitations and breathing difficulties are caused by coffee useage. Milk, ghee and butter antidote the effects. 11

Every mineral has its own Taste-Personality. Silver is a good remedy for Pitta because it is cold and sour at the same time. Gold can be used by all doshas. It is considered an antidote to all poisons, including ama. These are the internal toxins that are produced by improper metabolic functioning. Ayurvedic metals and minerals are prepared by thoroughly purifying them first to remove their poisonous pollutants, then medicinal herbs made into pastes are applied and then incinerated. These incinerated metals, called Bhasmas, become more potent with age and are used to rejuvenate. The dose is the size of a small grain of rice.17

Case Study 2

Barry has a balanced Pitta Kapha dosha. This type of person achieves an all-round success in life, combining the Kapha stability with the Pitta adaptability. Good physical health from a powerful Kapha physique is balanced by an active Pitta metabolism. An angry Pitta can be quieted by kapha's encouragement for mental balance. The Pitta Kapha person needs the spiritual discipline and unpredictable changes in today's world to prevent an overconfident nature. Bitter and astringent are their best tastes and reflect their willingness to accept change and lack of security.

Roasted or dry-cooked grains like buckwheat and millet are best. Breads should be avoided or at least toasted. All vegetables, (with the exception of potatoes, tomatoes and water chestnuts and those that are jucey or sweet) are good. Roasted, broiled or baked meat or cooked dry is best for flesh meats. Heavy legumes should be avoided. The best are black, mung, pinto and red lentils. Nuts are too oily and should be avoided as well. Almond, olive and safflower or sunflower oils not in excess may be used. Goat's milk is best but only in small amounts because it is "hotter". Raw honey is the only sweetener to use unless the person is too hot from the aggravated Pitta part of the combination dosha. No salt should be used and careful usage of garlic and ginger should be monitored.

Overindulgence in smoking increases Kapha and alcohol (wine and diluted hard liquor) is fine in small dosages rarely. The combination Pitta Kapha follows a Pitta diet from late spring to early fall and a Kapha diet from late fall through early spring. Sour and salty increase both Pitta and Kapha. 17

The doshas are considered "waste products" that occur during the subtle metabolism of the higher forces of prana (tejas or agni, and ojas the glue that connects the body, mind and spirit). Little waste is produced when an organism is healthy. Those with good health accumulate more of it and those that are ill, will continue to get sicker until they change their ways. Whatever you ingest physically, energetically, mentally, emotionally

and spiritually will increase or decrease the qualities in your system. Vata expresses itself as dryness in the system, pitta communicates heat and kapha's message is heaviness throughout the being.¹⁶

4 Common Body Reading

Those with Peripheral Neuropathy show weaknesses in their hands and arms while also having coordination problems and a stiff and spastic gait. Neuropathic pain reveals itself as burning, tingling, electric shock-like, shooting, radiating, stabbing and pins and needles symptoms. These are, therefore, on a more subtle body level. The pranas involved are especially vyana prana.

5 Contraindicated Yoga Practices

Case Study 1

Jim's unsteadiness on his feet, his age and balancing issues have cautioned me to have most of his poses done standing close to a wall and preferably in a corner to stabilize him on 2 sides. The fear of falling and possibly injuring himself is more important to keep him safe than trying to get him to learn balancing poses. He attempts to balance only when he is next to something he can hold onto. Any inversions and abnormal use of the neck is prohibited.

Case Study 2

Barry should not do any inversions due to his high blood pressure and heart condition. Downward dog can be done with hands on a chair and head looking out or with hands on wall. Head should never be lower than the heart. Spinal twists to the left should be practiced with caution due to the scar tissue from the heart surgery.

6 General Recommendations for the Condition

a therapeutic/free of pain

The condition of CSM should include exercises that are designed for cervical pain and having a combination of neck school (small group therapy for those interested in greater recovery), isometric neck and back strengthening, shoulder stretching and flexibility exercises. Massage, heat and cold therapy, acupuncture, trigger point injection, physical therapy and transcutaneous electric nerve stimulation are all designed to alleviate cervical pain.

Switching to another product may be necessary and if drug induced, it's always best to use the mildest drugs with less pain and the least number of additional side effects. It is

important to know that symptoms can worsen before they get better when stopping any medications. 8

Massaging hands and feet will bring more circulation and oxygen to the area. Keeping the body active will keep the muscles from atrophying and perpetuate positive thoughts and well-being.

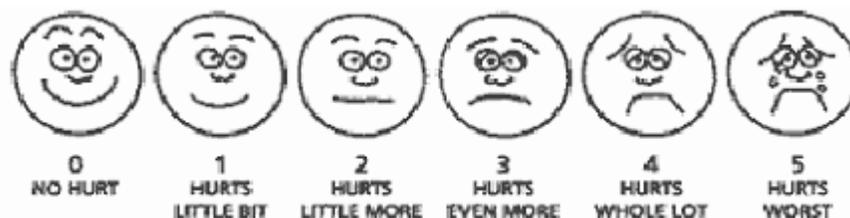
b Stabilize Situation and Lifestyle Change Recommendations

Psychological treatments (coping strategies), physical therapy, relaxation, stress management, biofeedback and exercise are important. Setting reasonable goals for the relief of pain is necessary. Knowing that all the pain may not be completely cured is likely. Being proactive about your health and knowledgeable about your condition gives you control.¹

The questions that need to be addressed are: What is the frequency of pain? Is the pain constant? Does the pain come and go? Does it follow certain activities, such as walking, running, or climbing stairs? Is it more prevalent when under stress? If it is not known when the pain kicks in, a seven-day pain diary, can be helpful, making a list of all the times the pain is felt, including the activities that were being done when the pain began, along with activities immediately before the pain started.

Severity of pain. Rating the pain on a scale between 0 and 5, with 0 being no pain and 5 being severe pain. The following visual guide, developed by a team of pain specialists in 1998, has helped a number of children and adults best explain their pain.

([www.aidsmeds.com/lessons/Neuropathy 6](http://www.aidsmeds.com/lessons/Neuropathy6))



c Maintenance and Long Term Considerations

The Eight-Fold Path to attain your maximum potential stated by Patanjali, the Father of Yoga, consists of moral restraints, personal behavioral observances, postures (asanas), regulation of the breath, drawing the senses inward, concentration and meditation. Results from a disciplined, mindful practice of Yoga includes: *increased strength, balance, stamina, flexibility, and relaxation.*

Stress can be exacerbating the condition of the neurologic disorder. Stress-related illnesses are reportedly rising in their role in the illness process.¹⁸ From a yogic perspective, the sympathetic response that is produced from stress is considered to be an imbalance within or between the *koshas*. These koshas, (or encasements of the soul) each have a cosmic fire known as *agni* responsible for its development. The agni of the first kosha comes from the elimination and digestion process. Working with the Ayurvedic dosha of the student (client), will be an important factor in these metabolic processes which will put less stress on the body. The second kosha is the agni of prana

(*Pranagni*). This is the most powerful agni as it works with the heart and lungs, connecting it with the solar plexus (physical pranic center). Pranagni oxygenates with the blood through its connection and gives it its red color. Through the digesting of air or prana, energy is increased. By using the mind, we can direct this prana to any area of the body we focus on. It purifies the subtle body bringing inner experiences to our awareness. Pranayama, deep breathing with retention of the breath will increase the pranagni. As this leads to heat the body, the nadis (channel systems or meridians) become purified. The third kosha in peripheral neuropathy is depicted by the tingling, numbness, or burning pain and other sensory perceptions of the outer mind. This mental agni is neutral morally and turns our impressions into our imagination. A simple technique would be to visualize the nerve fibers being reconnected to the synapses so that the feeling is restored. The agni of the fourth kosha is one of discernment. This fire of intelligence digests information further to find the underlying meaning of the condition. From this our insight and understanding is developed. The agni of bliss is the fifth kosha called the sheath of love. The flame of our deepest wishes, motivations and aspirations comes from the fire of desire in the underdeveloped person. By spending time in devotion to the divine, we experience bliss that allows wisdom and joy to flourish. The sixth kosha is the real inner fire, or consciousness, that comes from our connection with our higher self. Its entire universe is its body and the seer of all. Developing our agni in the higher levels of intelligence and bliss can be achieved through meditation and samadhi yoga. This leads to inner purification and transformation. The inner power is only fueled by rekindling the divine fire, preparing it with our mind and body. The rules and disciplines of the yogic system (yamas and niyamas) are useful in putting our outer life in order for this to happen. 7, 18

Other Alternative Maintenance Treatments:

Nutritional Therapies:

Thiamine (B1) 100 mg,(**See web site on Benfotiamine**) 2-3 times a day, Folic acid(500 mcg. 2 times a day), Niacin (B3) Vitamin B complex, Vit B12 with intramuscular injections for acute conditions are best, Vit C and bioflavinoids, Vit B6, Pantothenic acid, Brewer's yeast, Calcium, magnesium, lecithin, Sometimes proteolytic enzymes on empty stomach away from meals is helpful especially in neuritis, taken at the same time as Vit C and bioflavinoids.

Self Care :

Biofeedback Training, Fasting, Relaxation, and Yoga

Aromatherapy: Chamomile, eucalyptus, cedarwood, juniper, lavender.

Herbs: Combine equal parts of the tinctures of St. John's Wort, skullcap, oat and Siberian ginseng. Take one teaspoonful of this mixture 3 times a day. This may be made stronger if there is much pain in the addition of valerian or Jamaican dogwood.

Externally peppermint oil can be applied as a mild local anesthetic.

Homeopathy : Belladonna, Aconite, Mag. Phos., Phytolacca., Chelidonium, Lycopodium, Arsen alb. 12

Hydrotherapy: Contrast application : apply daily.

Juice Therapy: Parsley, celery, carrot blend.

Topical treatment: Epsom salts packs

Infrared Saunas: safe even for the elderly, as the temperature is not as hot as a regular sauna, it rids the body of toxic chemicals through the skin. Heavenly Heat Saunas, phone: 845-679-2490

Rejuvenator System™ : uses neuro-muscular stimulation to reduce the gap between the nerve endings, reducing the pain and tingling, and eliminating the numb sensations in the feet and legs. This leads to improved balance, mobility and the reduced pain

provides relaxation. It provides leg muscle contraction to facilitate increased blood flow up and down the legs, and across the lower spine, and hips. This increases oxygen to the muscles, nerves, and tissues of the feet, ankles, legs, and lower back. The additional blood flow, and oxygen will not only flush toxins from the tissues, over a period of time, it will nourish and heal damaged tissues that may exist. The electrical stimulation will also improve the body's nerve signal transmission from the axons to the dendrites, which are in the various synaptic junctions between the ankles and the lower back. The electrical stimulation that The Rejuvenator System™ generates is approximately 10 – 12 times greater than the body's natural nerve pulse. The electrical stimulation then jumps the increased gap providing renewed signals, that over time decreases that large gap allowing the body's normal strength pulses to jump the gap.

www.peacefultechologies.com/howitworks.asp

Professional Care:

The case studies in this paper used Chiropractic, Naturopathic, Nutritional and Neuro Therapy.

Other therapies may include: Acupuncture, Cell Therapy, Craniosacral Therapy, Environmental Medicine, Light Therapy, Magnetic Field Therapy, Osteopathy, Traditional Chinese Medicine, Detoxification Therapy, Energy Medicine: Electro-Acuscope Oxygen Therapy: Hyperberic oxygen therapy may be useful for acute conditions of neuralgia. Hydrogen peroxide therapy may also be useful for neuritis.¹²

www.geriaticsandaging.com/PDF/PDFMarch2002/0502NonPharmacologicalPain.pdf

Prospects For Future Pain Relievers

Opioid chemicals are extremely effective to block pain transmission but use of them is limited due to their addictiveness and depressive qualities. Capsaicin, a chemical found in hot peppers, reduces pain by stimulating nerves so that they exhaust their supply of substance P, (also a chemical boosting transmission of pain signals). Research is progressing that brings together substance P with another chemical that is toxic to the cells. The plan is to inject the two substances into the cerebrospinal fluid so that it will connect to the substance P receptors in the spinal cord and be taken into the cells. Once inside, the toxic portion will kill the cells and interrupt the pathways that contribute to the chronic pain, leaving the “good pain” pathways untouched.¹

There are a number of resources for managing pain:

www.theacpa.org **The American Chronic Pain Association** – group support by geographic location is offered.

www.medsch.wisc.edu/painpolicy – the **University of Wisconsin** raises awareness about pain and ensures adequate availability of pain medications for patient care.

www.pharmacy.duq.edu/divPharmPrac.html – **Duquesne University Mylan School of Pharmacy** has a chronic pain team to help improve the quality of life for those with pain and their families. Their effort focuses on healing the mind, body and spirit.

www.ampainsoc.org – **The American Pain Society** is involved with basic and clinical treatment, research, advocacy and public policy.

www.ittakesnerve.org – a consumer web site for those that cope with pain and their families who also suffer. Information includes how to enjoy life and improve it's quality despite nerve pain.¹

7 Questions and Answers from www.yogaforums.com

PostPosted: Wed Apr 24, 2002 4:28 pm

Q:

I give private instruction to a 70-year-old woman who has diabetic neuropathy. Are there postures that can be helpful? Are there postures that should be avoided? Would Viparita Karani (legs up the wall) be beneficial or harmful?

A:

First of all ask what she likes. A senior knows best though might need guidance for clarification. For diabetes it is important that the student be given two approaches to address the underlying kapha imbalance. First and foremost are purification practices to detoxify system. This should include a more natural foods diet when possible. From yogic perspective, this would include Kapalabhati pranayama; inversions are good to her capacity, as they will induce peristalsis. Viparita Karani both unsupported and with bolsters is a good idea. Second perspective is to promote strength. Poses just need to be done directing her attention to the specific region or muscles you want her to tone. For neuropathy, I would particularly focus on strengthening her external hip rotators and hip extensors. This would include sunbird (see my book, Structural Yoga Therapy, pg. 139-142), locust, Warrior II. I would recommend avoid standing forward bends and sitting bends longer than just a few seconds. With neuropathy a good approach is to into and out of poses with breath rather than holding them.

From Trisha Lamb, Associate Director, International Association of Yoga Therapists 12/16/04

“Twenty Type 2 diabetic subjects between the age of 30-60 years were studied to see the effect of 40 days of Yoga asanas on the nerve conduction velocity. The duration of diabetes ranged from 0-10 years. Subjects suffering from cardiac, renal and proliferative retinal complications were excluded from the study. Yoga asanas included Suryanamaskar, Tadasana, Konasana, Padmasana, Pranayama, Paschimotanasana, Ardhamatsyendrasana, Shavasana, Paramukthasana, and Sarpasana. Subjects were called to the cardio-respiratory laboratory in the morning time and were given training by the Yoga expert. The Yoga exercises were performed for 30-40 minutes every day for 40 days in the above sequence. The subjects were prescribed certain medicines and diet. The basal blood glucose and nerve conduction velocity of the median nerve was measured and repeated after 40 days of the Yogic regimen. Another control group of 20 Type 2 diabetes subjects of comparable age and severity were kept on prescribed medication and light physical exercises like walking. Their basal and post 40 days parameters were recorded for comparison. Right hand and left hand median nerve conduction velocity increased from 52.81 +/- 1.1 m/sec to 53.87 +/- 1.1 m/sec and 52.46 +/- 1.0 to 54.75 +/-1.1 m/sec respectively. Control group nerve function parameters deteriorated over the period of study, indicating that diabetes is a slowly progressive disease involving the nerves. Yoga asanas have a beneficial effect on glycemic control and improve nerve function in mild to moderate Type 2 diabetes with sub-clinical neuropathy.”¹⁰

8 References

1. Berdine, Hildegard J.; BS, PharmD, BCPS; Pharmacy Times, September 2005, Neuropathic Pain: Diagnosis, Treatment, and the Pharmacist's Role in Patient Care, p. 97-108
2. Berkow, M.D., Robert, and Fletcher, M.B., B. Chir., Andrew; The Merck Manual of Diagnosis and Therapy Section : Neurologic Disorders, Chapter 131, Disorders of the Peripheral Nervous System, p.1518-1522
3. Compiled by the Burton Goldberg Group; Alternative Medicine, The Definitive Guide, 1995, Future Medicine Publishing, Inc., p. 163
4. Dept. of Urban Affairs; Agent Orange Review, Vol 21, No.2, April 2005; with permission
5. Douillard, Dr. John; The Three Season Diet, 2000, Three Rivers Press, p.109-127
6. Farhi, Donna; Yoga, Mind, Body and Spirit, A Return to Wholeness, 2000, Henry Holt and Co, LLC, p. 72-74
7. Frawley, David; Yoga and Ayurveda, Self Healing and Self Realization, 1990 Lotus Press, p .303,128,44-45
8. Kandel, Schwartz, Jessell; Principles of Neural Science, Third Edition; 1991 Elsevier Science Publishing Co.,Inc., p.250
9. Kimura, Jun; Electrodiagnosis in Diseases of Nerve and Muscle Principles and Practice, Edition 2; 1981 F.A. Davis Co., Chapters 4, 5, 22
10. Malhotra, V., Singh,S.,Tandon,O.P., Madhu,S.V., Prasad, A.,and Sharma,S.B., Indian Journal of Physiology and Pharmacology, July 2002, 46(3):298306PMID: 12613392, Effect of Yoga Asanas on Nerve Conduction in Type 2 Diabetes
11. Morningstar, Almada; Desai, Urmila; The Ayurvedic Cookbook,1990, Lotus Press, p. 290-301, 15-16, 201
12. Rector-Page, N.D. PhD., Linda G.; Healthy Healing, An Alternative Healing Reference, Ninth Edition, Numbness and Nerve Paralysis Chart, 1992, Griffin Printing, p. 287
13. Satchidananda, Swami; Integral Yoga Hatha ,1970, Holt, Neihart and Winston, p.xx
14. Starr, Dr.Mark; Hypothyroidism Type 2, 2005, Mark Starr Trust, p.18, 9-12
15. Stiles, Mukunda; Structural Yoga Therapy, 2000, Red Wheel/ Weiser, L.L.C., p.103, 132, 133,20, 254, 255
16. Svoboda, Dr. Robert E.; Ayurveda For Women, 1999, Healing Arts Press, p.16
17. Svoboda, Dr. Robert E.; Prakriti Your Ayurvedic Constitution, 2nd Edition, 1998, Lotus Press, p. 22-24,119, 170, 64
18. Taylor, M.J.; Yoga Therapeutics in Neurologic Physical Therapy: An Ancient Practice in a 21st Century Setting, Neurology Report, APTA, Neurology Section, June '01,p.6,7

19. Wiederholt, M.D. Wigbert C.; Neurology for Non-Neurologists, 1982
Academic Press, Inc., p.279, 266, 267

Web sites:

[www.aidsmeds.com/lessons/Neuropathy_1,2,3,4,6,7 and 8.htm](http://www.aidsmeds.com/lessons/Neuropathy_1,2,3,4,6,7_and_8.htm)
Neuropathies in AIDS medicines

[ama_brain_overview_lev20_groupsofnerve_01](#) – Illustration on cover

www.benfotiamine.net/FAQ.htm_or
<http://www.realfoodnutrients.com/neu/>
Nutritional supplements in reducing pain

<http://brain.hastypastry.net/forums/archive/index.php/t-3591.html>
See 7 Questions and Answers - using yoga to help PN

www.ecomall.com/biz/heaven.htm – Infrared Saunas and their use in eliminating the body of heavy metals and toxins.

[www.geriaticsandaging.com](http://www.geriaticsandaging.com/PDF/PDFMarch2002/0502NonPharmacologicalPain.pdf)
[/PDF/PDFMarch2002/0502NonPharmacologicalPain.pdf](#)
Assessing pain management and its impact on life as well as other pain treatments.

www.lewispublishing.com/orange.htm - Agent Orange Web Site,
with permission

www.medhelp.org/forums/neuro/messages/31766.html
The Cleveland Clinic, (consistently ranked one of the best hospitals in America).
[Peripheral Neuropathy induced by toxic chemo](#)
Forum: The Neurology and Neurosurgery Forum
Topic: Peripheral Neuropathy
Subject: Peripheral Neuropathy induced by toxic chemo **See Appendix 9**

www.neuropathyinfo.org, What is the of Peripheral Neuropathy? Causes of Peripheral Neuropathy, Description of Peripheral Neuropathy, Neuropathy Cures, Neuropathy Pain Relief, Symptoms of Peripheral Neuropathy, Diagnosis of Peripheral Neuropathy, Treatment for Peripheral Neuropathy, What Questions to Ask Your Dr. About Peripheral Neuropathy?

www.ninds.nih.gov/disorders/peripheralneuropathy/peripheralneuropathy_pr.htm ;
[NINDS \(National Institute of Neurologic Disorders and Strokes \) NINDS](#)
[Peripheral Neuropathy Information Page](#)

orthoinfo.aaos.org/fact/thr_report.cfm?Thread_ID=304andtopcategory=Neck ,
American Academy of Orthopaedic Surgeons on Cervical Spondylosis

www.peacefultechologies.com/howitworks.asp – Rejuvenator TM
Electrical stimulation to increase nerve signals. See: Other Alternative Maintenance Treatments- Self Care

9 Appendix

The Cleveland Clinic (consistently ranked one of the best hospitals in America)

Peripheral Neuropathy induced by toxic chemo

Forum: The Neurology and Neurosurgery Forum

Topic: Peripheral Neuropathy

Subject: Peripheral Neuropathy induced by toxic chemo

From To Post Davey102 05/03/2002

I have suffered PN for the last 8 years due to toxic chemo (vincristine). It caused permanent nerve cell damage, resulting in excruciating pain. I have seen numerous doctors (Mayo Clinic) and specialists; trying numerous drugs. I am allergic to most narcotics except codeine contin; 50 mg-2-3 times daily. EMLA cream has been a godsend. The numbing agent allows me to drive short distances and to socialize. I have spent \$30,000 on alternatives with little success. Any new ideas? THANKS!

CCF-Neuro-M.D.-JT

05/05/2002

Davey102 Sorry to hear about your symptoms. Unfortunately, Vincristine is well known to cause pretty severe PNs. Don't know what you've tried but I can give you a list of things that we used here. First, capsaicin cream (over the counter) burns when you initially apply it, but is supposed to "burn out" the pain fibers giving you some relief. Lidocaine patches and combo ketoprofen/ketamine patches have also been helpful to some patients. Seizure meds: tegretol, neurontin, gabatril, topamax, dilantin, depakote, trileptal have been successful in some people. Elavil and prednisone (lots of side effects) are other possibilities. Biofeedback.

Now this may sound a little crazy, but it's cheap, has no side effects, and one of our patients with post herpetic neuralgia (a very painful condition associated with shingles) is actually pain free with this. I think he was either a carpenter or engineer who accidentally discovered that putting a small sandpaper disk (just a circular disk that he cut from an optimum grade of sandpaper) against the area somehow ?? stimulated the pain fibers or anesthetized them. Not sure, but he swears by it.

<http://brain.hastypastry.net/forums/archive/index.php/t-3591.html>

[PDA BrainTalk Communities > Specific Neurological Conditions](#)

[Peripheral Neuropathy > Using yoga to help PN](#)

Wings4203-21-2004, 10:49 AM Almost 5 years ago, I hobbled into a yoga studio, walking in great burning pain. My PN was restricted to my forefeet, but the burning, stabbing pain and extreme throbbing pain in my metatarsal heads was so bad, I got little sleep at nights. Ironically, the skin around both forefeet was totally numb (I could stick a pin into my little toes without feeling it), but hypersensitive where not numb. I had difficulty getting from where I parked my car to work each day. I had a Handicapped Parking Permit application at home, ready to fill out.

The first month of yoga, I could not do any of the standing poses without difficulty because of the pain.

Within six months of dedicated practice (an hour most days) I could carefully walk one or two miles, the burning mostly was gone, and I could sleep through most nights.

I used to have arthritis in my hands, shoulders, right hip, ankles, and back. I have been arthritis free now for almost 4 years. The burning is completely gone and I rarely get the stabbing "electric" pains. The metatarsal pain is now mild to moderate unless I walk too much. The numbness is still there but covers a smaller area and isn't total anywhere. Most weeks I take several 3 mile brisk walks and one 5 mile hike. I'm usually in pain after the hike but OK the next morning.

Hatha yoga is specifically designed to foster health and healing. I recommend Iyengar yoga, especially for people with health issues. Much yoga in America is exercise and stretch oriented. In contrast, Iyengar yoga stresses precise alignment, balance, health, building strength, and a positive orientation toward yoga practice and the world. Iyengar yoga includes the use of props such as bolsters, blocks, cushions, ropes, and straps to help beginners and those in a therapeutic program achieve the benefits of poses while they develop enough flexibility, balance, and strength to do the poses without props.

Our immune system is in large part regulated by our hormones, and hormone levels drop off dramatically as we age. This drop off in hormones contributes to PN. How many 22 year olds have neuropathy? Yoga specifically addresses our glands. Inverted poses and back bends stimulate the pituitary. Back bends stimulate the thyroid. Twists and forward bends stimulate the liver, pancreas, ovaries, and adrenal glands. Thigh stretches stimulate the testes. Unlike taking DHEA to compensate for aging, yoga stimulates us to increase our own levels of DHEA and other hormones, but just the right amounts. Yoga practiced daily will improve liver function dramatically. My liver used to be hard and sore. Now it is soft and just a little sore. I think that a healthy liver is a major key to healing from PN.

Oxygen, blood flow and lymph flow are healing. Yoga opens the chest and aligns the spine. Iyengar yoga teaches us to increase our lung capacity to youthful levels.

Inverted poses and twists move the internal organs around and slide them past each other. This breaks adhesions, moves stagnant blood pools, and allows free flow of blood and lymph to the organs and glands. Side stretches open and stimulate the axial lymph glands, helping to prevent breast cancer.

Proper joint alignment fosters improved blood circulation and nervous system function throughout the body. Yoga stretches the tissue fascia to allow free blood flow and nerve function.

Yoga is fun. With a good teacher and class, there is a lot of concentrated effort, and also warmth, laughing, and joking. Many fellow students in my studio are primarily there for stress relief. With a good teacher, yoga will not be another obligation. Instead, it will be something you look forward to and will help you handle the rest of your life.

One source for a yoga teacher near you is <http://www.iyengaryoga.us/search/> . You can look up yoga in the yellow pages and call those who are Iyengar certified. Call your local YMCA.

Certified Iyengar yoga teachers go through a rigorous multiyear and ongoing training program. Iyengar or not, I'd insist on a certified teacher with a therapeutic orientation. Talk with teachers and explain your situation. A good teacher will listen, want to work with you, and will adapt to your needs within a class. You'll have a good feeling with them and want to get to know them better. Visit classes and try them until you know you have the right teacher (I knew 2 minutes into my first class). Walk-in fees are around \$12.00.

Most studios have more than one teacher so you might try several if one doesn't work out. Your yoga teacher will become your teacher, healer, support system, port in a storm, and dear friend so pick carefully.

<http://brain.hastypastry.net/forums/archive/index.php/t-3591.html> (Continued)

NYCSilk200403-21-2004, 08:16 PMAfter reading Wings42's posts about yoga for a long time, I decided last summer to finally take the plunge. I've had my axonal pn since at least 1996, and while I was already better than I'd been at its worst from myofascial release, I was nowhere nearly improved enough to be comfortable. Last summer I took a vacation at home, with the plan of trying a different form of yoga each day. There are plenty of yoga schools in NYC. Because of Wings' enthusiasm about Iyengar, it was the first I tried. I was hooked immediately.

The poses were astonishingly simple, yet complex at the same time. For instance, we worked much of the class on Tadasana, which is nothing more than standing straight with arms stretched up. However, the teacher built it up architecturally, asking us to feel our toes, extend them, anchor our bunion joint, moving weight to the pinky side, and finally the heel. He had us stand on our feet as if these were the corner of a tripod, anchoring us. He said it would help balance. He had us lift our arches.

I could barely feel anything in my feet, but kept working at these minute movements. By the end of class my feet had more elasticity, and my toes maybe had a bit, a bit, of movement. I went back daily. By the end of the week, there was clearly some movement. I could kind of make myself feel where I needed to move and concentrate and get something to happen.

I've not been going to class as regularly as I would like, aiming for three times a week, and usually doing only once, but on my own I feel myself working on the feet throughout the day, often re-positioning myself a bit as I feel discomfort.

It's really been an extraordinary experience to make gains, as I have, through focussing so architecturally on feeling and moving small or longer muscles, but there is no doubt that my feet are more flexible, can grab the floor better, and support me better. I'm better able to deal with low back pain, knowing more how to correct my posture and work to relieve the pain, when it comes.

I'd gone to yoga classes a few times in the past at gyms, and no teacher before this focussed so carefully on everything we were all doing.

Most important is the role of the teacher. I don't think there is any way one could make the possible improvements doing this from videotapes or books. The teachers can look at what we are doing and correct us, can break down our balance and movement problems, and add something that can take us well beyond where we could go using tapes.

I feel very grateful for this board, and everyone here, but especially for Wings, and his advice on yoga.

Love and light,
Liza Jane

<http://brain.hastypastry.net/forums/archive/index.php/t-3591.html> (Continued)

VeraL 20205-07-2004, 09:07 AM

Hi, David,

I pulled up this old thread about yoga first to thank you a lot for all the info about it and also to ask a question.

I started yoga after reading your posts, and it seems like a good idea.

I had to drop the Gym membership a while ago because my parasthesias got inevitably worse with any exercise.

Swimming was my choice for the last year, but now it seems like a warm indoor pool makes things worse.

I went to Dahn Yoga, which is Korean variant, not because I chose it, but because it is across the street, and any commute becomes a problem for me.

Do you know much about this type of yoga?

They seem very nice and personable there, but they do not know anything about PN, or MS, or any neurologic problems. They told me that it did not matter for the holistic approach they use, probably it is true.

They have small groups, but everybody does the same thing, including the beginners and surely, there was only one man, in his 90s, who was worse than me.

How hard do you think one should push to follow their instructions?

Many poses and stretches are very hard for me, and the pains flare up after.

Still the next day it feels better.

How well did the meditation part work for you?

Still a confusing part for me.

<http://brain.hastypastry.net/forums/archive/index.php/t-3591.html> (Continued)

Wings4205-08-2004, 01:46 AM

Vera,

You are responsible for your own welfare at all times in class. The teacher doesn't know how much you are hurting. Do what you can, but pull out of a pose if it becomes too much. In Iyengar yoga, we use props to help us if we aren't flexible enough to do some poses, or if our balance is weak, or if we don't have the strength.

I don't know anything about Dahn yoga, but it looks great on the web sites. I studied Korean Tai Quan Do for several years way back when. It was great exercise and a beautiful martial arts discipline. Part of what we did was "forms". They were specified chains of defensive and offensive moves, almost like an intense dance. Forms were part of every class, but another thing we did with the forms was to slow them down almost to immobility. They then became much like yoga or Tai Chi, developing poise, strength, balance, sensory awareness, and conscious flow of chi energy. Dahn yoga, from the web site descriptions sound a bit like that. I think anybody with PN would benefit from that type of activity.

Be sure to let the teacher know about your health issues so they don't push you too hard. Part of a yoga teacher's role is to motivate the students to go beyond what they had thought possible. For example, this last Wednesday my teacher wanted me to straighten out my posture by three more inches. I told her I was as far as I could go, but she insisted, "You can move your back three more inches." I trust her judgement, and I

did it! But had I not, she would not have urged me again. She knows that it can all fall apart with me, and I can hurt with far more than normal pain or feel a rush of sudden and irresistible muscle fatigue or have a limb fall asleep unless I come out of the pose.

The first principle of Indian hatha yoga is non-violence. That starts with how you deal with yourself. Do what you can, but in a self loving, gentle, and fun way that give you satisfaction and health, not feelings of inadequacy and physical breakdown.

Meditation is an essential part of yoga, and is part of how yoga helps you deal with life. In Iyengar yoga, it's called mindfulness; being here, and now, and totally focusing on the pose, on breathing, or whatever you are doing. Every pose is a meditation. We learn to do the same thing outside of the studio in other situations. This is a challenge for me because I'm sort of scatterbrained, always thinking too much, and tend to crack jokes in class, like announcing that "Yoga is very relaxing" while we've all been in downward facing dog pose for five eternal minutes!

Every pose feels wrong at first. That's because we are out of alignment, out of balance, unevenly inflexible, and have poor kinesthetic feedback and body awareness. If it feels very very wrong, that's the thing you need to work most on.

Hang in there. Yoga mastery only takes a lifetime, but the rewards of the practice happen much sooner. I salute and respect the spirit you are showing and your efforts. You can be proud of yourself. :)

Biography

While in college, Lynda began studying Yoga through reading Yoga, Youth and Reincarnation by Jess Stern. She found her body got stronger and unexpectedly, her breath helped keep her mind from becoming agitated when faced with life's everyday crisis. It was this realization that led her back to the path when building & designing interiors became a shallow enterprise for her life's focus. Lynda's Basic and Intermediate Training in Yoga have been from the Integral Yoga Institute, Yogaville, VA. Other trainings were with Esther Myers, Gary Kraftsow-Citkitsu, the Therapeutic Approach, Mukunda Stiles in his 2 year certification Structural Yoga Therapy and Advanced Teachers Programs™, Kam Thye Chow's Intensive 1- Thai Yoga Massage, and as a Reiki Master Teacher. Her memberships include, IYTA (Integral Yoga Teachers Association), Yoga Alliance, and IAYT (International Association of Yoga Therapists). She currently lives outside of Richmond, VA. with her pharmacist husband (who has been helpful in assisting her with this paper), and their 15 year old daughter. She teaches to private individuals, in studios, corporations and universities.