

Stretching for Pain Relief

Qi Gong exercises train the energy to move properly through the body as well as flush out blockages. When energy has been stuck or stagnant in a muscle for a long period of time, that area of the muscle can develop a physical contraction there. This could result in a knot in the muscle or a “trigger point” according to Dr. Janet Travell. Qi Gong exercises can assist in flushing out these trigger points but may not be the quickest method when used alone. Stretches developed by Travell have been very successful in returning the functionality to these muscles in a very timely fashion. Changing the energy changes the tissues, and changing the tissues changes the energy.

The following stretches on my DVD, “Stretching for Pain Relief”, were taught to me by Tracy Taurmina, LMT and Certified Trigger Point Therapist and my longtime friend and colleague. The information about each muscle group and the pain patterns shown here are a consolidation of the information in Dr. Travell’s books Myofascial Pain and Dysfunction: The Trigger Point Manual, Vol. I and II. The pain patterns given here are composite patterns combining the patterns for the common trigger points possible within that muscle group. For more information on Trigger Point Therapy, please contact Tracy Taurmina at 585-230-0932.

These stretches on this DVD should be done for 3-5 seconds only, repeated on both sides of the body for a few repetitions each, and repeated several times throughout the day. It is best to end with a stretch on the dysfunctional side of the body.

All stretches should be done to your comfort level. If any of the movements seem irritating to your body, try doing the stretches more gently and do fewer repetitions. You’ll find that you’ll make much better progress this way.

You will get the most relief from aches and pains if you increase the frequency of the stretches per day as opposed to increasing the intensity of the stretches. **Remember, only hold stretches for 3- 5 seconds each.**

If you are looking for a specific stretch to help with a specific pain problem, use the list below to choose the stretches that are best for you. Some stretches have alternate versions where the practitioner could choose to do the stretch standing or sitting. You don’t need to do both.

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Suggested Stretching Routines

The purpose of this DVD is to teach you a variety of stretches to help relieve pain and improve mobility. If you are having trouble with pain, you should check with your doctor first to make sure there isn't an underlying problem that you need to take care of.

The following routines are useful combinations of stretches for more complex pain patterns where multiple muscles might be involved. Sometimes, all the stretches for that type of pain might be necessary, other times only one or two can significantly improve it. The stretches are listed by name and number as they appear on the DVD.

1. Head Pain: SCM (19), Upper Trapezius (25)
2. Neck Pain: SCM (19), Levator (20), Scalene (21), Triceps (24), Upper Trapezius (25)
3. Upper-Back Pain: Trapezius (12), Paraspinals (4, 13), Levator (20), Scalene (21), Upper Trapezius (25)
4. Shoulder Pain: Biceps (16), Pectoralis (17), Lattismus Dorsi (18), Scalene (21), Infraspinatus (22, 23), Triceps (24), Upper Trapezius (25)
5. Shoulder Blade Pain: Trapezius (12), Paraspinals (4, 13), Latissimus Dorsi (18), Levator (20), Scalene (21), Infraspinatus (22, 23), Triceps (24), Upper Trapezius (25)
6. Arm Pain: Biceps (16), Pectoralis (17), Latissimus Dorsi (18), Scalene (21), Infraspinatus (22, 23), Triceps (24)
7. Hand Pain: Pectoralis (17), Latissimus Dorsi (18), Scalene (21), Infraspinatus (22, 23), Triceps (24)
8. Chest Pain: Paraspinals (4, 13), Pectoralis (17), Scalene (21)
9. Mid-Back Pain: Psoas (6), Paraspinals (4, 13), Trapezius (12), Upper Trapezius (25)
10. Pelvis Pain: Adductor Muscles of the Hip (1, 5), QL (3, 10), Piriformis with Gluteus Minimus (11), Paraspinals (4, 13)
11. Low-Back/Butt Pain: Glute Max (2, 9), QL (3,10), Psoas (6), Hamstring (8), Piriformis with Gluteus Minimus (11), Paraspinals (4, 13)
12. Sciatic Pain: QL (3, 10), Hamstring (8), Piriformis (11)
13. Hip Pain: Adductor (pg. 3, 5), Glute Max (pg. 3, 7), QL (pg. 4, 7), Psoas (pg. 5), Quadriceps Femoris (pg. 5), Hamstring (pg. 6), Piriformis with Gluteus Minimus (pg. 7), Latissimus Dorsi (pg. 11)

Suggested Stretching Routines Continued

14. Leg Pain: Adductor (1, 5), Psoas (6), Quadriceps Femoris (7), Hamstring (8), Piriformis with Gluteus Minimus (11), Gastrocnemius (14), Soleus (15)
15. Knee Pain: Adductor (1, 5), Quadriceps Femoris (7), Hamstring (8), Gastrocnemius (14), Soleus (15)
16. Foot/Heel Pain: Gastrocnemius (14), Soleus (15)

Muscles and Their Pain Patterns

Below, you will find a list of symptoms given that can often occur when there is dysfunction in the muscle that is mentioned. Please note that not every symptom may occur and others might be present that are not mentioned. The muscles and stretches are in the same order as on my DVD, "Stretching for Pain Relief".

Floor Stretches

1. Adductor (alternate standing version - #5):

The Adductor muscles of the hip include four different muscles. Three of these attach to the lower part of the pelvis/sit bones area and connect in a vertical line along the back of the femur all the way from the top of the femur to just above the knee. The fourth muscle starts in the same area and attaches just below the knee to the tibia.

Function: These muscles pull the thigh inward (adduction). They also assist in rotation of the thigh, stabilizing the body in an erect position while walking, and pulling the knee upward and pushing it downward (flexion and extension). The fourth muscle that attaches below the knee is also involved in bending the knee. These muscles are used when climbing up stairs (not down).

Problems with these muscles can be caused by sudden overload as when slipping on ice and resisting spreading the legs apart, osteoarthritis, strenuous horseback riding, skiing, getting in and out of a car, sitting in a fixed position for prolonged periods with the hips flexed and the legs crossed at the knee.

Symptoms: Pain and tenderness in the groin that can feel like it's very deep inside the pelvis (pubic bone, vagina, rectum, and the bladder), pain in the front inside of the thigh (pain may feel hot and stinging), pain just above and to the inside of the knee that can extend downward over the tibia (shin bone).

2. Gluteus Maximus (alternate sitting version - #9):

The Gluteus Maximus muscle attaches to the iliac crest (top of the pelvic bone) in the back, the outer edge of the sacrum and to the tail bone and connects to the femur and the iliotibial band (a tendinous band that extends down the outside of the leg to tibia).

Function: Powerful extension of the hip during strenuous activity, running, jumping, climbing stairs, getting up from a seated position, stabilizes the torso to keep it upright, assists in rotation outward at the hip.

Problems with this muscle can be from a direct trauma to this area as in a fall, from walking uphill, from sleeping in an incorrect position (sleeping on the side with the upper leg sharply jack-knifed and crossed over the lower leg or sleeping on the back with the legs flat specifically), or from sudden overload during a fall.

Symptoms: Pain and discomfort in the butt, sacroiliac area and tailbone. Pain on prolonged sitting (the person may end up squirming in a chair in an attempt to reduce the pain and pressure on the butt and tailbone), increased pain when walking uphill especially in a bent-forward posture, pain when swimming the crawl stroke.

3. Quadratus Lumborum “QL” (alternate sitting version - #10):

The Quadratus Lumborum “QL” muscle has three sets of attachments: 1. The crest of the ilium (top of pelvic bone above the hip) to the 12th rib in the back. 2. The iliac crest to the upper four lumbar vertebrae. 3. The second to fourth or fifth lumbar to the 12th rib.

Function: The function of this muscle is to stabilize the lumbar spine and act as a hip hiker and as a lateral flexor of the spine (bending sideways). When both sides act together they assist forced exhalation as when coughing.

Trouble with this muscle is often caused by simultaneously bending over and reaching to one side to pull or lift something or major body trauma as in a fall or car accident. Often the person’s hip will be hiked up while standing and it could be misinterpreted as the leg being shorter than the other.

Symptoms of problems with this muscle: low back pain, pain in the sacrum area, pain in the sacroiliac area, restriction in bending forward, difficulty climbing stairs, pain that wraps around the outside of the hip from the butt to the front of the hip, pain at the hip when lying on that side, person may be barely able to turn over in bed and unable to bear the pain of standing up-right or walking. Pain may extend to the groin, testis, and scrotum, or mimic sciatic pain. Some people have reported heaviness in the hips, cramping in the calves, burning sensation in the legs and feet, and decrease overall energy in the body. Coughing or sneezing can be excruciatingly painful. Sometimes the pain in the back from the QL is so terrible that the person can only crawl on hands and knees.

Caution: Sleeping on the side with the top leg crossed over and beyond the bottom leg can cause trouble with this muscle as well as sleeping on the side on a bed that has a bow in it causing the hip to be hiked up while sleeping.

4. “Paraspinals” (alternate sitting version - #13):

The Superficial Paraspinal muscles include 6 different muscles that run longitudinally (up and down) on both sides of the spine in layers that start and end at different places, leapfrogging over each other connecting to - 1. The base of the skull to the cervical vertebrae of the spine, 2. The cervical vertebrae to the ribs, 3. The ribs to the lumbar vertebrae, 4. The ribs to the sacrum.

Function: These muscles allow the spine to extend (stretch backward) and bend laterally to the same side to which they are attached. These muscles contract vigorously when coughing and when straining to have a bowel movement. They are involved during breathing as well.

Problems with these muscles can be caused by a sudden overload or chronic repetitive movements, bending and twisting the spine to the side, lower limb-lengths being unequal, curvature of the spine, whiplash, prolonged sitting without moving,

Symptoms: Back pain, pain in the butt and abdomen. This pain restricts spinal motion, difficulty rising from a chair, climbing stairs, steady ache deep in the spine, it often feels like the pain originates in the bony spine itself, not in the muscles.

Standing Stretches: Lower Body

5. Adductor: See #1 above for alternate floor version.

6. Iliopsoas “Psoas”:

The Iliopsoas “Psoas” muscle attaches to the side of the lumbar vertebrae and lumbar discs and connects to the inside surface of the femur (the side facing the pelvis) towards the front side of the body. A second part of this group attaches to the pelvis at the Iliac fossa (the crest of the top of the pelvic bone) and connects to the same place on the femur.

Function: Lifts up the thigh at the hip and helps maintain upright posture. It is also involved in pulling inward or pushing outward of the thigh and some rotation of the thigh as well.

Trouble with this muscle is often initiated by sitting with the knees up in a jack-knifed position commonly occurring while riding in a car. Placing a pillow under your butt when you sit so that the angle between the torso and thighs is increased can be very helpful.

Symptoms of problems with this muscle: low back pain vertical along either side of spine or if both sides are active, then it can feel like it is across the low back (more likely to be QL if across low back). Pain is worse when person stands upright but can be a slight nagging pain with lying down. Often additional pain in the front of the thigh. Difficulty getting up from a deep-seated chair, can't do sit-ups/ sit-ups aggravate symptoms. Sometimes mobility is reduced to crawling on the floor on hands and knees. Symptoms can mimic appendicitis. The most comfortable position is lying down on the side with the knees drawn up.

Caution: sleeping with the knees drawn up (fetal position) can often cause trouble with the psoas because it shortens the muscle so much.

7. Quadriceps Femoris “Quads”:

The Quadriceps Femoris “Quad” muscles are a group of four muscles that attach to the pelvis and the femur and their tendons unite and connect to the base of the patella (kneecap).

Function: Extends the leg at the knee (straightens the knee out) and assists in flexion of the thigh at the hip (bringing the knee upward). These muscles control bending backward, squatting, sitting down and standing up from a chair, and climbing stairs.

Problems with this muscle occur during a fall, misstep, or trauma to the muscle, tightness in the hamstrings which hinders full extension at the knee, sitting with the foot tucked under the butt for extended periods, and deep knee bends.

Symptoms: Pain and weakness in the thigh, trouble with straightening the knee, knees buckling, hip buckling, distortion of patellar balance, thigh pain on the outside of the thigh, kneecap locking when the leg is straight, knee pain and dysfunction that mimics inflammation of the knee joint, waking at night with pain in front of the knee cap and just above it on the inner side of the thigh while lying on the side, walk with a limp after rising from a chair, pain on the outside of the thigh and knee while walking.

8. Hamstring:

The Hamstring muscle has three parts which attach to the sit bone (the bone of the pelvis under the buttock that you sit on) and connect to the inner edge of the tibia just below the knee (2 of the 3) and to the outside surface of the fibula below the knee in the back (the third of the 3).

Function: the hamstring muscles bend the knee, extend the hip (increase the angle between the thigh and torso) and restrain the tendency toward hip flexion (keeping the body up-right and decelerating the leg at the completion of taking a step) during walking. They are used for running, jumping, dancing and bending forward (controlling the body from bending too far). They also assist with rotation of the leg at the knee.

Problems with these muscles can result from acute or repetitive overload or from chronic pressure to this area often caused by the high front edge of a chair pressing on the back of the thigh. Prolonged bed rest with the knees bent can aggravate these muscles. Trouble with these muscles will often cause trouble with the Quads in the front of the thigh.

Symptoms: Pain in the butt at the gluteal fold (bottom of butt cheek). Pain from the butt down the back of the thigh to behind the knee and sometimes to the inner side of the calf. Pain in this area while sitting. Pain can mimic sciatica. Pain getting up from a chair, especially after legs being crossed at the knees. Pain may cause a limp. Pain is increased by sitting and walking and often disturbs sleep.

Sitting Stretches

9. Gluteus Maximus: See #2 above for alternate standing version.

10. QL, Gluteus Medius and Minimus: See #3 above for QL information and alternate floor version.

Gluteus Medius Muscle attaches to the crest of the top of the pelvic bone (anterior iliac crest) and connects to the head of the femur.

Function: This muscle stabilizes the pelvis while standing on one leg and can lift up the leg out to the side of the body.

Trouble with this muscle is caused by sudden fall, sports injury, running, tennis, aerobic exercise, long walks on a soft surface (beach), weight bearing on only one limb for an extended period, unequal leg length, Morton's toe (longer second metatarsal bone).

Symptoms: Pain when walking, pain when lying on the back or the side, pain when sitting slouched down in a chair, sacroiliac pain, pain in the sacrum, pain in the butt.

Note: Sleeping on the side with a pillow between the knees is very helpful for this muscle.

The Gluteus Minimus muscle is the deepest of the three gluteal muscles and attaches from the pelvis along the outer surface of the ilium (the outer surface of the highest part of the pelvic bone) and connects to the uppermost part of the front surface of the head of the femur.

Function: This muscle works with the glute medius in stabilizing the pelvis and keeping it level during walking.

Trouble with this muscle can be caused by overloading the muscle in a fall, walking too far or too fast, especially on rough ground, and by overuse in running and sports. This muscle is aggravated while driving with the foot in a fixed position on the gas pedal or standing in one place for a long time, problems with sacroiliac joint dysfunction can cause trouble with this muscle.

Symptoms: Hip pain that may cause a limp, hurts to lie on that side while sleeping, difficulty rising from a chair after sitting for a while, pain can be constant and excruciating. Pain may extend down the leg to the ankle. Pain in the sacrum/sacroiliac area is not caused by this muscle.

Note: The piriformis muscle pain can be similar to the glute min. and you should note that the piriformis pain pattern may occasionally extend as far down as the knee whereas the glute min. usually includes the calf in addition to the thigh. Pain from the glute med. is less likely to involve the thigh. Glute Max. problems restrict flexion at the hip (pulling the knee up) and piriformis problems restrict turning the knee inward.

11. Piriformis and Gluteus Minimus: See #10 above for Glute Minimus.

The Piriformis muscle attaches from the inner (anterior) surface of the sacrum (inside the pelvis) to the head of the femur.

Function: The function of this muscle is in rotation of the thigh and some pulling in of the thigh.

Trouble can result from catching oneself from falling or when restraining vigorous or excessive

medial rotation (turning inward) of the weight-bearing limb as when running or when driving a car and the thigh is flexed and pulled inward for prolonged periods.

Symptoms: Pain in the low back, groin, hip, buttock, and back of the thigh and leg (posterior) and in the rectum when defecating. Pain usually made worse by sitting, standing and walking. Pain can mimic sciatica. Person may complain of swelling in the painful limb and of sexual dysfunction (pain during intercourse for women, impotence for men).

12. Trapezius:

The Trapezius “Trap” muscle attaches all the way from the base of the skull and all the vertebrae from the cervical down to the last thoracic (T12) and wraps around above to connect to the top of the collar bone near the shoulder for the upper Traps and connects to the shoulder blade for the rest of the Trap muscle.

Function: The Trap muscles assist extension of the cervical and thoracic spine (straightening up the spine from a curved position). They retract the scapula toward the spine. The upper Trap draws the collar bone and scapula backward, stabilizes the scapula for traction forces supporting the weight of the arms. It flexes the head and neck toward the same side and aids in rotation of the head.

Problems with this muscle can be caused by lower limb-length inequality, a small pelvis, curvature of the spine, short upper arms, stress from sustained elevation of the shoulder as when holding a telephone receiver without elbow support or working at a high keyboard with inadequate armrest, whiplash from the side, and chronic trauma (compression of the muscle by a tight bra strap, heavy coat, a purse, or a back pack as well as hunching the shoulders up), keeping the head turned to the side for prolonged periods (watching TV with the head turned, talking to a passenger in the car), and holding the arms out in front of you for a long time. Tight pectoral muscles can often cause trouble as well.

Symptoms: Pain, often severe, on the back side of the body between the neck and shoulder often accompanied by a headache at the temple on the same side and sometimes the pain extends down to the jaw. Stiff neck that limits rotation of the head to the same side. Burning pain between the shoulder blades. Spontaneous episodes of goose bumps on the arms and thighs.

13. Paraspinals: See #4 above for alternate floor version.

Doorway Assisted Stretches

14. Calf - Gastrocnemius:

The Gastrocnemius muscle spans two joint, the knee and ankle. It attaches to the lower end of the femur in the back of the leg and connects to the back of the heel.

Function: This muscle is used during walking (pushes the foot downward) and helps stabilize the knee.

Problems with this muscle can come from physical overload and bad positioning of the foot, climbing steep slopes, climbing up and down stairs, jumping, jogging uphill, riding a bike with the seat too low. Keeping the toes in a pointed position for prolonged periods can cause problems (sitting in a chair with the feet on tip-toes, sleeping with the toes pointed, up on tip-toe a lot, leaning forward with the weight on the toes as at a sink, wearing high heels). Problems with the ankle that restrict it's motion (wearing a brace or cast) can initiate trouble with this muscle.

Symptoms: Calf cramps, pain in the calf, pain in back of the knee, pain in the instep (arch) of the foot. Trouble seems to be worse when the muscle is cold.

Note: If there is warmth or swelling in the calf, the person should consider consulting a doctor about a possible tear in the muscle, poor circulation, or blood clot.

15. Calf - Soleus:

The Soleus Muscle attaches from two places: 1. the back surface of the head of the fibula and along the middle third of the back side of this bone and 2. the middle third of the inside border of the tibia and joins with the end of the Gastrocnemius and forms the Achilles Tendon. The soleus part of this tendon attaches to the inner side of the heel in the back.

Function: This muscle stabilizes the knee and ankle while walking, and restrains the forward rotation of the tibia over the fixed foot (stops forward motion). It also is responsible for helping to pump blood up from the leg back to the heart.

Problems with this muscle can come from walking in slippery shoes, walking on soft sand, or on a laterally slanted surface (like walking parallel to the shoreline where one leg is lower than the other). Jogging and running can cause trouble. Keeping the toes in a pointed position for prolonged periods can cause problems (sitting in a chair with the feet on tip-toes, sleeping with the toes pointed, up on tip-toe a lot, leaning forward with the weight on the toes as at a sink, wearing high heels). Restricted blood flow through this area can also cause trouble (standing still in one place for too long, wearing constrictive socks, calves propped up on a leg rest).

Symptoms: Pain in the heel (Jogger's heel) and instep, difficulty in putting weight on the heel because of the pain (can mimic the pain of a heel bone spur), pain in the upper part of the calf, pain in the sacroiliac joint, in rare cases can cause pain in the jaw, does not cause calf cramps (this is the Gastrocnemius), swelling of the foot and ankle (from restricted blood flow - note person should consult a doctor for swelling of the foot and ankle), restricted pointing of the toes up towards the shin - this can make it difficult to bend over to pick something up using good body posture resulting in bending improperly and inducing low back pain, difficulty walking uphill or up and down stairs.

Note: In children, trouble with this muscle can be misinterpreted as "growing pains" in the legs.

16. Biceps:

The Biceps muscle attaches to the front of the shoulder blade above the shoulder (on the front side of the body) and connects to the radius bone (lower arm bone that goes to the thumb side of the wrist) just below the elbow.

Function: This muscle crosses both the shoulder and elbow joints and flexes the forearm at the elbow when the forearm is supinated (rotated outward), assists in flexion of the arm at the shoulder, and may assist in abduction (moving away from the midline of the body) of the laterally rotated arm. It assists in supination of the forearm (rotating the lower arm outward) when the forearm is not fully extended at the elbow.

Problems with this muscle are caused by overexertion or repeated strain of the muscle (lifting heavy objects with the forearm supinated, lifting with the arm extended, using an electric hedge clipper, using a screwdriver, shoveling snow, catching from a fall) and also prolonged fixed position of the bent elbow (sleeping with the elbow tightly bent). Problems with the Infraspinatus muscle will cause problems with the Biceps as well.

Symptoms: Restricted motion, aching pain on the surface of the front of the shoulder (not deep in the joint), aching over the front of the upper arm, weakness and pain on raising the hand above the head, a snapping or grating sound in the shoulder on reaching forward, often a referred pain to the upper trapezius region. There is usually no trouble lying on the side affected or in reaching behind the waistline.

17. Pectoralis “Pecs”:

Pectoralis muscles include two groups of muscles - the Pec Major and the Pec Minor. The Pec Major (four muscles) attaches to the collar bone, breast bone, and costal cartilage of rib cage just below the breast bone, and to the abdominal muscle itself and all four connect to the upper arm bone. The Pec Minor is three different muscles that attach to the shoulder blade on the front side of the body at the shoulder joint and connect to the third, fourth, and fifth ribs near the costal cartilage (near the breast bone). The muscles overlap and fan out in playing-card like fashion.

Function: The Pec Maj. muscles adduct and rotate the upper arm inward or the torso toward the arm, depending on which area is fixed. They also pull the arm downward from an elevated position. The Pec Min. muscles pull the shoulder blade and shoulder region down and forward and assist in forced inhalation.

Trouble with these muscles are caused by round shouldered posture (reading, sitting, bad posture), heavy lifting especially when reaching out in front, sustained high levels of anxiety, exposure to cold, heart attack will cause lingering trouble with this muscle, whiplash, chest breathing, coughing, wearing a heavy backpack.

Symptoms: Pain in front of the shoulder and under the collar bone, difficulty drawing the arm inward toward the chest, pain in the chest and down the arm to the fingers, pain can mimic a heart attack, chest constriction mimics angina, breast pain and soreness, nipple may be hypersensitive (making it difficult to wear a bra), can squeeze the blood vessels and nerves going to arm (vascular thoracic outlet syndrome). Trouble with these muscles can result in overload and pain between the shoulder blades.

Standing Stretches: Upper Body

18. Latissimus Dorsi “Lats”:

The Latissimus Dorsi “Lat” muscle is fan shaped attaching to the lower 6 thoracic vertebrae, the lumbar vertebrae, the sacrum, and the top of the pelvic bone (crest of the ilium) as well as the last 3-4 ribs and connects to the upper arm.

Function: Influences neck posture, trunk and pelvic posture and movement, and the sacrum. The lats extend the arm at the shoulder, adducts (pulls in) and rotates the arm, pulls in the shoulder blade, draws the shoulder girdle downward and backward.

Problems with this muscle can be caused by reaching forward and upward while handling something bulky, pulling heavy weights downward while reaching overhead, throwing a baseball, hanging from a swing or rope, pressing down and twisting the arm, persistent compression by a tight brassier around the chest can cause trouble.

Symptoms: Persistent pain between the shoulder blades. Pain in the mid back at rest that is not relieved by stretching between the shoulder blades. Often the person is not sure what aggravates the pain. Pain in the back while sleeping on the side. Pain can extend from the mid back down the inside of the arm to the last two fingers. Pain in the front of the shoulder and above the pelvic bone one the same side.

19. Sternocleidomastoid “SCM”:

The SCM has two muscles that attach on the side of the skull at the bottom, just behind the ear, and connect to the collar bone near the sternum and to the sternum as well.

Function: Turns the face to the side and tilts it up to the ceiling. Both sides work together to flex the head and neck forward and aid in chest breathing, they stop the head from tilting back too far. When sniffing quickly, these muscles are active. These muscles contribute to spatial orientation, weight perception, and motor coordination.

Problems with these muscles are caused by forward head posture, sitting with the head turned to the side for prolonged periods (watching TV, talking to another person to the side, sleeping on the back with extra pillows forcing the head to flex forward), prolonged neck extension (looking up as when painting a ceiling, writing on a blackboard), whiplash, shoulder-girdle tilting (as

from curvature of the spine or leg inequality), tense or tight pec muscles, chronic cough can cause trouble, chest breathing (emphysema and asthma), sleeping with the head turned to the side.

Symptoms: Pain in the face and head, sinus pain, tension headache, pain over the sternum, dry cough, feeling like you need to cough, pain around and behind the eyes, pain in the forehead, sweating of the forehead, sore throat while swallowing, pain on the top of the head, pain in the cheek, pain in the molar teeth, pain on the base of the skull in the back of the head, pain in and behind the ear, tearing of the eye, red eyes, eye lids can't open normal amount, blurring vision, visual disturbances, dimming of perceived light intensity, sinus congestion, runny nose, ringing in the ears, fluttering sound in ears, hearing loss, postural dizziness (a disagreeable feeling inside the head) and vertigo (the room spinning) and imbalance (veering to one side when walking, falls when bending or stooping), nausea. These muscles do not generally cause neck pain or stiffness.

20. Levator:

The Levator muscle attaches to the first four cervical vertebrae and connects to the top inner angle of the shoulder blade.

Function: Rotates the shoulder blade toward the neck and spine and elevates the shoulder blade upward. When the shoulder blade is anchored, this muscle helps to rotate the head to the same side. When both sides work together, they help pull the head backward and restrain forward bending of the head. Used when shrugging the shoulders, supporting something carried on the shoulders, and lifting object with the arms, and bringing the shoulder blades towards each other in the back.

Problems with this muscle occur when holding the head in a turned position for prolonged periods (looking to the side), holding a phone between the ear and shoulder, carrying something on the shoulder (purse, bag, back pack), sleeping with the neck tilted to the side, hunching the shoulders up, tennis, swimming the crawl stroke, trouble with the serratus anterior can cause trouble with this muscle, whiplash.

Symptoms: Pain between the neck and the shoulder blade, pain along the edge of the shoulder blade that is closest to the spine, painful stiff neck, unable to turn the head fully to either side because of pain, difficult looking behind, can cause shortness of breath.

21. Scalene:

The Scalene muscles are a group of three muscles that attach to the cervical vertebrae and connect to the first and second ribs on the front side of the body.

Function: These muscles stabilize the cervical spine against sideways movement and elevate the first and second ribs during inhalation.

Problems with these muscles can be caused by pulling, lifting and tugging, lifting or carrying awkward objects with the arms extended, tilting the head downward (chin toward chest) for prolonged periods as when reading or sleeping with inadequate neck support, slouching in a chair, coughing, sneezing, tilted shoulder-girdle (leg inequality, curvature of the spine), chest breathing (emphysema and asthma), whiplash.

Symptoms: Pain in the shoulders and upper limbs, pain at upper inner boarder of the shoulder blade, pain in the chest when inhaling, pain in the chest that feels like it is in the breast, pinching of the nerves and vasculature of the arm (thoracic out let syndrome), pain on the radial (thumb) side of the hand, numbness and tingling of the hand, puffiness of the back of the hand, puffiness of the fingers especially upon waking, stiffness of the fingers, unexpected dropping of objects from the hand.

Note: Elevating the head of the bed by about 3 inches is very helpful. Extra pillows only makes the problem worse by misaligning the head. Foam pillows can worsen troubles by constantly jiggling the head while sleeping.

22. Infraspinatus:

The Infraspinatus muscle attaches to the shoulder blade and connects to the top of the upper arm.

Function: This muscle stabilizes the head of the upper arm bone while the arm is moving and rotates the arm outward at the shoulder joint.

Problems with this muscle occur while overloading it when reaching backward and upward. Sleeping on the side with the arm dangling in front of the chest causes trouble with this muscle.

Symptoms: Pain deep in the front of the shoulder, pain feels like it is deep in the shoulder joint, it feels like the pain is in the deltoid and biceps muscles, pain in the shoulder and projecting down the arm on the side that goes to the thumb (radius bone) as far as the fingers (radial side of the hand), pain at the edge of the shoulder blade (the side facing toward the spine), pain just below the base of the skull, pain can show up while sleeping on either side, inability to reach behind to a back pocket or to hook a bra in the back, inability to reach to comb the hair or brush the teeth, difficult getting arm into a coat. Mimics rotator cuff problems.

Note: Sleeping on the side with the arm propped on a pillow in front of you is best for this muscle to prevent over stretching.

23. Infraspinatus (using a towel): See #21 above for info.

24. Triceps:

The Triceps muscles are a group of three muscles that attach to the upper arm and shoulder blade and connect to the lower arm at the ulna bone (the lower arm bone that ends closest to the pinky finger).

Function: These muscles extend the forearm at the elbow (straighten out the arm at the elbow). The part of the Triceps that connects to the shoulder blade helps to pull the arm in towards the body.

Problems with these muscles are often caused by overloading the muscle such as playing tennis (back swing), golf, using crutches, using a cane that is too long, push-ups, holding the elbow out in front of the body for prolonged periods (typing, using a computer mouse, driving, knitting or needle point) without elbow support.

Symptoms: Pain on the backside of the shoulder and upper arm. Pain may extend to back of hand. Pain in last two fingers. The arm can be restricted in its ability to straighten out. Pain during forceful extension at the elbow such as tennis and golf. Mimics tennis elbow.

25. Upper Trapezius: See #12 above for info.