

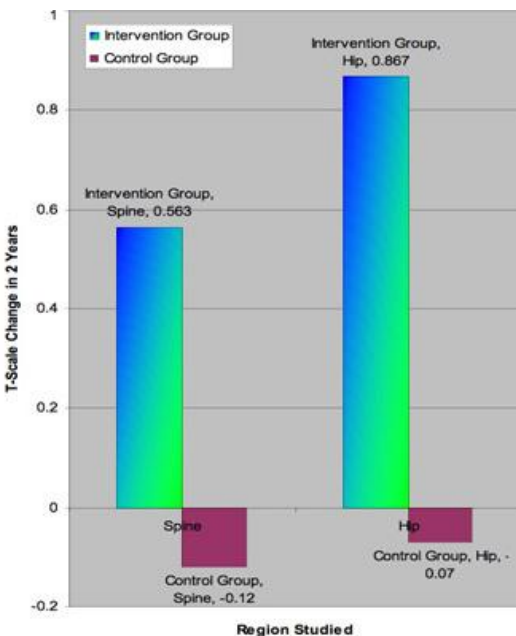
## A Dozen Poses vs. Osteoporosis

This series of yoga poses is intended to prevent and treat osteoporosis and osteopenia. If you already have either condition, these poses may well reduce your abnormality. If you wish to avoid them, these poses will help. We have proven the value of these poses in studies and clinical trials with yoga for osteoporosis for more than three years, with only very minor injuries ever reported.

Of course we do not know exactly how brittle any individual's bones may be, nor how flexible or strong, and we can take no responsibility for injuries that might occur: being sure that these are safe for you is up to you. Therefore we present these with the very strong recommendation that you consult your physician or a yoga therapist or instructor before attempting them.

Once approved, do the exercises slowly and cautiously. If you follow this program, please fill out the induction forms listed just below these poses on the website, or let us know at [Loren@sciatica.org](mailto:Loren@sciatica.org). We will ask you a few questions every 3-6 months and keep you posted on how your fellow participants are doing through a newsletter. A timed video of the poses, which enables you to do them more safely, and stimulate your bones properly, and finish in 10-12 minutes, is available for those in the study. You will also be admitted to a bulletin board for Q and A.

So far we have found that these and similar yoga poses, have improved bone strength and mineral density significantly. A pilot study people did DEXA scans on volunteers and then divided them into two groups. One group did the yoga, the other did not. After two years the DEXA scans were repeated. They showed a dramatic rise in the bone mineral density of those that practiced yoga. The people that did not do any yoga had the expected modest fall in their bone mineral density.



If you're interested in this kind of bone strengthening, without any of the known or unknown side-effects of the medicines, then this is the place for you. Yoga has side-effects too. Since it has been practiced for thousands of years, most of its influences are well-known by now: lower anxiety, increased poise, balance and confidence, normalized blood pressure and controlled asthma among them.

To safely meet more people's needs and abilities, we show each of the twelve poses in several forms. First we show the easiest and least challenging version of each pose, for people with osteoporosis, and those with other conditions that limit their initial flexibility, balance or strength. Then we present an intermediate version for those with weaker-than-normal bones – osteopenia – but not as weak as osteoporotic bones, and lesser limitations. Finally, we present the classical pose. This arrangement promotes several competing goals:

1. Optimize pressure on the bones – that's what strengthens them – Too much pressure will break them, but too little will not get them very strong. You have to use your muscles, but not too much! Therefore we have graded the poses: modest pressure for people with osteoporosis, somewhat more in osteopenia, and the classical pose with considerable strain for people seeking to prevent their bones from weakening.
2. Encourage advancement in yoga – therefore we start with the easiest versions of a pose and have a little picture in the upper right hand corner of the classical pose.
3. People have other medical and orthopedic conditions – even the strongest bones do not prevent glaucoma or knee joint problems, for example. People might opt for the less challenging poses for a large number of other reasons.

Regardless of how much yoga you have already done, please start with the easy poses for osteoporosis for one week. Then move to the moderately challenging ones that put more pressure on the bones, the poses for people with osteopenia. Only on week three should some people move on to the classic postures. Naturally, it may take months or even years to move up at all from the osteoporosis versions.

If it's prevention you're after, the classic poses or asana are going to be best for you, but start with the osteoporosis poses anyway. Everyone can learn by going back to basics.

Set a simple timer for 30 seconds on each side of each pose. At that rate you'll spend 12 minutes on the entire series, though it may take 30-45 minutes the first few times. But let the timer do the counting: feel the pose, live in it, enjoy it. If you join our Yoga for Osteoporosis study and follow the video we'll provide you, that timing will be automatic.

Those people already in our program will recognize these poses, they are the same ones they have been doing. They've just been put in an order with the easiest first that we think might be safer for new beginners.

There are twelve Roman numerated poses in all, each with three variations. Take a look at each full set before getting down to doing the first one, and err on the side of caution. Do one pose

from each set. All the poses in a given set will work the same way to counter osteoporosis, the later ones just do so more vigorously. More complete directions are given with the classical pose, but you can apply them to each simpler variation. For full directions on each variation, see *Yoga for Osteoporosis* Fishman, LM and Saltonstall, E. W.W. Norton and Company. 2009. If you are not sure whether to progress or not, ask a competent yoga therapist or email us. An appropriate yoga therapist may be found at the International Association of Yoga (IAYT) website.

Although the first few times you do the poses may go slowly, once they are familiar, they will take about 12-15 minutes. We recommend that you do not rush through the poses. Your time will be well spent if you are thorough.

We can now offer a free DVD of these yoga poses that can be used to perform them for 30 seconds on each side, so that you can complete them in 12 minutes. Please see the Warranty just below this entry on the Home page or by clicking [here](#).

## I. The Tree (Vrksasana) - Osteoporosis Version



Vrksasana is an excellent transition from inactivity to yoga. It stresses and thereby stimulates the bones of the hip, pelvis, spine and shoulders. It also improves balance, and thereby reduces the likelihood of falls.

### **For osteoporosis**

This first variation is perhaps the easiest possible version of Vrksasana, reducing the balancing and hip stimulating aspects, giving only slight stimulation to the bones of the hip. However this variation does succeed in stretching and stimulating the bones of the neck and the shoulders.



Sit firmly and symmetrically.

Look directly ahead. Straighten your thoracic spine and draw your shoulder blades back as you raise your arms.

Press your palms together as you stretch your arms and elbows up as much as possible. Do not let the weight of your arms cause you to slump forward.

The following pose gives up some of the pose's virtues, but may be a good place for some people to start. In cases of amputation, rotator cuff syndrome, frozen shoulder, stroke and multiple sclerosis, for example, it may be useful to initiate Vrksasana this way:



Stand firmly against a wall and/or object, toes separated weight evenly distributed throughout the foot.

Straighten so your ears, shoulders, hips and ankles are in the same plane.

Raise your arms slowly, symmetrically.

Be sure to reestablish your balance and your calm after your leg is elevated.

Breathe evenly.

There are other intermediate versions. Some balance is always required at the start, but the capacity to balance grows quickly. Use the support of a wall, a friend or a piece of furniture at first if necessary



### **The classic pose – Vrksasana – for prevention:**

1. Stand firmly and motionless for a few breaths. Bend your right knee; place your right foot as far up as possible on your left inner thigh. Hold the leg firm to stabilize your balance. Regain your stillness. Inhale as you symmetrically raise your arms, joining your palms overhead. Remain in his position for 20-30 seconds , stretching upward each time you inhale. Slowly lower your arms. Lower your right leg, rest a bit and repeat with the left leg.

## II. Triangle Pose (Trikonasana)

### Osteoporosis version:

1. Standing back to a wall, with a chair or similar object on your right and left, separate your feet 3-3 ½ feet apart.



2. Walk your left foot an inch or two out toward the left edge of your mat – think of standing on two railroad tracks instead of on a balance beam. This will help you if you have difficulty feeling stable and balanced in these poses.

3. Stretch your arms out horizontally as you turn your right foot out 90 degrees – parallel with the wall, and turn your left foot in 30 degrees.

4. Using the buttock muscles to move the left thigh back toward the wall, and the torso straight, bend at the right hip toward the chair.

5. Retain the arms outstretched and breathe comfortably for 20-30 seconds.

6. Come up, shift the feet, and do the same on the other side.

**Classic pose –Trikonasana – for prevention** Stand near a wall if maintaining balance is a challenge. Be cautious if you have serious arthritis in either knee: Pressures on the joints will be uneven when you begin. To protect the knees, lift your thigh muscles actively, which will help to prevent excess downward pressure into the joint. This pose is good for sacroiliac joint pain, and puts strong, stimulating pressures on the bones of the hip, lower lumbar spine and pelvis.

1. Stand with your feet approximately 3-3.5 feet apart. Stretch your arms out horizontally, palms down.

2. Turn the right foot out so it is in the plane of your body. Turn the left foot in about 30 degrees. Align your right ankle and the arch of your left foot.



3. Inhale and stretch your arms far apart. Expand the torso and lift the chest as you inhale, then soften but remain long, tall and widespread as you exhale.
4. Exhale and incline your torso to the right without bending or turning it. Keep your arms in a straight line, moving with your chest.
5. Reach your right arm out to help the spine to stay long and straight. The bend is at the hips, not at the waist.
6. Shift your hips without pulling the left one forward. Revolve the left hip back as much as possible.
7. Press your right hand against the front of your ankle, or on the floor just behind it, or on a support such as a block or small box.
8. Lift your navel upward and to the left while restraining the left hip back. Keeping the left foot in place, revolve the left knee counterclockwise. The right groin widens while the left groin gets longer.
9. Elongate your spine, placing as much of the weight as possible equally on the right and left legs.
10. Remain in the pose 20-30 seconds.
11. Rise back to vertical, arms staying collinear.
12. Now turn the left foot out and the right foot in 30 degrees and repeat the pose going down to the left side.

### III. Warrior Pose II (Virabhadrasana II)



**For Osteoporosis:** A chair is extremely valuable for individuals with balance issues or leg weakness. In the above picture, less than extreme imbalance or arm weakness would allow the practitioner to stretch the arms out horizontally. Then bring the arms back in and hold the sides of the chair back while positioning the legs. Flex the left knee to 90 degrees. Stretch out the right leg as straight as possible. Open the left groin as far as practicable by turning the pelvis to the right. Place the right foot flat on the floor and facing forward. Raise the arms out again if balance permits.

## For Osteopenia:



For an intermediate version, use a wall and begin with the legs somewhat closer together. When the knee is bent, it still should be positioned over the ankle, but the knee and hip both are in a lesser degree of flexion. This pose strengthens muscles of the legs, trunk and shoulders, and places strong but safe stress on the femur, lumbar and thoracic vertebrae, pelvis, knees hips and ankles. Let your feet be far enough apart so they will come under your hands in the pose. Start out cautiously.

1. Stand with your back to a wall. This will help you to align the pose. Jump or step to 4-4.5 feet apart; raise straight arms to horizontal, palms down, stretching to widen their span.
2. Turn the right foot and knee out 90 degrees but don't turn or incline the torso. Rather, keep the spine facing forward and vertical.
3. Your legs and torso and head should be in the same plane.
4. Looking forward, elongate your spine as you inhale.
5. Exhale, bend your right knee until your shin is vertical and your thigh is horizontal. The right knee should point toward the second toe.
6. This is the pose: your arms stretch horizontally, your spine reaches upward, your legs hold firmly, one in flexion, one in extension.
7. Retain the pose for 20-30 seconds, then come back up to standing and perform it on the other side.

## Advanced version without the wall



## IV. Parsvakonasana (Side-angle pose)

**For osteoporosis:**



Sit comfortably to the right corner of a chair, feet firmly planted. Spread your feet apart, knees pointing the same direction as your toes. Stretch your left leg straight out. Turn your left foot slightly to the right, keeping full contact with the floor. Incline your straight back from the hips, supporting the weight of your shoulders on your right forearm just below the elbow. Press backward with your right elbow to revolve your trunk and left hip upward.

**For osteopenia:** Take the next step – grasp the back of the chair and revolve further, opening the right groin somewhat by increasing the right elbow's backward pressure. *A slightly more advanced pose, for osteopenia turns the chair around:* First straddle the chair, then proceed as above: The left side of the body is a straight diagonal line. The left hand curves around to the right thigh. In another less advanced version, both hands grasp the chair back and give support to the shoulders while carefully controlling the twist. (not shown)



### Side Angle Pose – Parsvakonasana – For Prevention

1. Begin as in the pose Warrior II, Virabhadrasana II, as pictured and described just above.



2. Bend your right elbow and incline your entire torso approximately 45 degrees to the right. 3. Place your right elbow and forearm just above the right knee. Hold your waist lightly with your left hand. Over time you will come to sense how much of an angle is right to continue the diagonal line of your left leg with your torso. This may be as much of the pose as you are able to complete. If so, press your right elbow against the right thigh to revolve your right ribs forward



and your left ribs back. Your right arm may also rest on the seat of an appropriately placed chair. If balance is an issue, enter this pose with your back against a wall. 4. To continue toward the full pose, place your right palm or fingertips on the floor, or on a block that is on the floor. 5. Raise your left arm alongside your left ear and over your head, palm down. 6. Press your right biceps forward and your right knee back, the two limbs meeting vigorously – challenge and counterchallenge. 7. Use this force to revolve your right pelvis and ribs forward, your left hip, pelvis and ribs back. 8. Stretch strongly over your head with your left arm and hand; continue the diagonal from the little toe to the little fingernail tip. 9. Remain in the pose for 20-30 seconds, though it might require a few weeks of build up to get there. 10. Come up to vertical and repeat on the other side.

## V. The Revolved Triangle (Parivrtta Trikonasana)

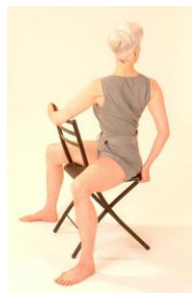
### For Osteoporosis



Stand facing a chair. Have a wall at your left if balance is an issue. Place your right foot squarely on the chair. Rest your left hand on your right thigh; rest your right hand on your right hip.

Use your left hand and trunk muscles to twist your torso, not just your shoulders, to the right. Position your right hand on the back of the right hip.

### For Osteopenia:



1. Straddle a chair, feet flat on the floor. 2. Look straight ahead and straighten your spine. Be tall, but use muscular strength to stabilize your pelvis. 3. Grasp the forward edge of the chair back with your left hand, and the back corner of the chair seat with your right. 4. With spine gently extended, turn your torso, then your head to the right. 5. The back gets longer; the feet never leave the floor.

### Prevention Parvrtta Trikonasana: Twisted Triangle **(this is pretty advanced; I would work with a teacher who understands alignment and safety prior to attempting this pose)**



1. Stand facing a wall and about a foot from it, your feet 3-3.5 feet apart, arms horizontal. Turn your left foot parallel with the wall, and turn your right foot inward 60 degrees. 2. As you inhale, stretch up through the spine. 3. As you exhale, twist your right hip forward and your left back as you incline your torso to the left. Position your pelvis perpendicular to the wall. Swing your right arm

above you to clear the wall. 4. Place your right hand on the floor to the outside of your left foot. If this is too difficult, place the hand inside the foot and on a block. 5. Stretch both sides of your chest away from your pelvis. Move your right chest (not just the shoulder) toward the plane of your legs, and draw your left chest back toward the wall, close to the same plane. 6. Revolve to the left around your midline, the central axis of your spine. 7. Twist your thighs even further, the left hip coming back and toward the wall, the right advancing forward and sliding along the wall, but not so far as to upset your balance. Move the hips back, and elongate the spine as much as possible. 7. You may turn your head to the left to face upward, but generate only mild to moderate torsion on your neck. Attempt to twist each part of the spine; the more the lower and middle spine twists, the easier it will be to turn the neck and head. 8. Stay in the pose for 20-30 seconds, then come up to standing vertically. 9. Follow all steps listed above, reversing left and right designations.

## VI. The Camel (Ustrasana)



**For Osteoporosis:** Slide forward so you're sitting on the bolster, shins and knees on the floor. Press your hands on the seats of the chairs and lift up and press gently forward just below your navel, shoulders well back from the fronts of the chairs.



calves and feet



**For Osteopenia:** This pose is the same as the classical pose, done with a chair, for safety. When you are comfortable with the arching, balance, and distribution of weight on your knees, the chair becomes unnecessary. That's the classic pose – Ustrasana – the camel. 1. Kneel on the blanket with your back to a chair, legs hip width apart, feet under the seat of the chair. 2. Stretch your straight back and parallel. Spread your toes. 3.

Lean forward slightly as you push your upper thighs back and apart. 4. Push your sacrum down as you rise upright again. 5. Extend your spine and the backs of all your ribs upward and forward toward your collarbones. 6. Bring your shoulder blades back, down and together. 7. Place your forearms and/or hands on the sides of the chair's seat. 8. Inhale as you arch backward, lifting your collarbones and sternum as much as you can. Grasp the corners of the chair's seat and straighten your elbows. 9. Do this smoothly and carefully. Let all the vertebrae contribute as equally as possible to the arch. 10. Arch your head and neck by going back first from the base of your head, then your ears, then the top of your head. Do not overdo the cervical arch. Mild to moderate arching is adequate. 11. Your hips, sacrum and pubic bone come forward. Equalize the pressure on your knees and shins. 12. To come out of the pose, raise your shoulders, neck and head as you fold your hips down to sit on your heels. If knee stiffness makes this difficult or painful, be sure to put pillows on your heels when you begin the pose. **For Prevention:**

**Ustrasana – The Camel**

The same pose is done without the chair. See

## VII. More Mild Back-Bends:

You may choose one of these poses, or vary them from day to day. These poses are all safe. Weight is shifted off the delicate and fragile front parts of the vertebral bodies, onto three different supports: the posterior vertebral bodies and the two facet joints. In these poses, there is no need to adapt the posture for different conditions, it's all a matter of degree. People with osteoporosis should not try too hard, beginning perhaps with a 10 effort and gradually progressing to a 25% effort. Those with osteopenia can go from 25% to 75%, depending upon how severely weakened their bones are, and their strength. The classical, preventive pose should be accepted as a challenge. But at any and every level, start without stress; the intense effort must be mental: to be sure it's safe.



"The Sphinx," uses the forearms. It is less taxing on the shoulders and triceps. There are two other back-bending poses suitable for beginners which can be substituted for the Cobra.

**Setu Bandhasana** Setu Bandhasana, as pictured here, may be favored by people with colostomy bags, extreme weakness, gastrointestinal sensitivity or reflux, at least at the start.



1. Lie on your back with the tops of your shoulders on the top edge of a folded blanket, your head on the mat.
2. Bend your knees, place your feet hip width apart, parallel, and about 6-8" from your hips.
3. Place your arms alongside your body, palms facing up. Take a few breaths, inflate your inner body and soften any shoulder tension.
4. Inhale, curl your sitting bones down and apart to ensure that the pelvis stays wide.
5. Exhale and firm your abdominal muscles.
6. Lift your hips and chest as you inhale,. At this point you might place the block under your pelvis.

(not pictured) You can choose the setting of the block: flatter, a bit higher, or highest, according to your ability to extend. Bend your elbows 90 degrees. Point your fingers up. 7. Point your knees straight forward, lift and extend your tailbone toward your knees. 8. Point your knees straight forward, lift and extend your tailbone toward your knees. 9. As you inhale, lift your hips up, off the block if you are using one, taking care to engage the buttocks muscles without squeezing them together too tightly. Lengthen the buttocks toward your knees. 10. Press your shoulders toward the floor by contracting the muscles between your shoulder blades. 11. Hold these two actions: shoulders pressing down, pelvis pressing up, as long as you can. Breathe smoothly. 12. This pose stimulates the lungs as well as strengthening the back muscles. 13. To come out of the pose, remove the block and lie flat on the floor.

**Pictured below is a preparatory pose for Setu Bandhasana**, probably the simplest of the back bends. The more pillows you use, the more of a stretch it is, so start with one, even though the picture below has two. Be especially careful not to hump your back forward getting into this pose. Use a helper or put more pillows behind you the first few times.

1. Sit on a pillow, a little more than half-way toward the direction you are facing. 2. Place your palms on the floor behind you. 3. Stretch your legs downward, ankles together, for a moment, then bend your knees. 4. Gradually let yourself down on your elbows, and then all the way. 5. Stretch your legs and heels out first, and then point your toes. 6. Make space throughout your back, lengthening yourself from the back of your head to the soles of your toes. 7. Your arms



might stretch out on the mat, or, for a more conservative beginning, place them under your head. 8. Breathe easily for 20-30 seconds, then prop yourself up on your right elbow and roll over toward it to leave the pose.

### C. The Locust (Salabhasana)



**The Locust quickly builds strength in the spine and is suitable for those with wrist weakness.** 1. Lie prone with your arms secured at the wrists by a belt. 2. Elongate the body from head to toes before initiating the back-bending actions. This will help to spread the work of the pose over a larger area of the body, and prevent lower back compression. 3. Slowly, carefully raise first your shoulders (pictured here) then your trunk and head and

neck off the mat. 4. Let your back muscles do the work, not only your neck. 5. The strap around the wrists gives you an opposing force to stretch out against, often improving the strength of the pose and the stretch of the front shoulders. Once you have practiced it for a while with the strap, try it without this extra prop. In this case the arms will be further from the side of your body as you lift them.

**VIII. Downward Facing Dog (Adho Mukha Svanasana)** This pose is a valuable transition from back bends to forward bends, but also stimulates the posterior vertebral bodies as well as the bony elements of the many facet joints in the spine, while putting major stresses front-to-back on the hips, pelvis, shoulders and arms.

**For Osteoporosis:** Two variations are pictured below, using the support of a wall or a table. Note that the legs can be placed further apart, which will make it easier to tip the pelvis properly.



1. Stand facing a wall, and about eighteen inches from it. 2. Taking care to retain a slightly arched or neutral spine, move your torso forward, bending at the hips, not the waist. 3. Like a suspension bridge, your shoulder blades, although behind you, are what hold you up. 4. Step forward to come out of this pose.



**For Osteopenia:** Carry things one step further by bending your knees and folding further forward. Once control of the hips (versus the spine) is established, the table is useful in dog pose for osteopenia. Slide your hands forward while the torso angles itself forward from the hips, like the hinges of a door.

### **Classic Dog Pose – Adho Mukha Svanasana – For Prevention:**

1. Go on all fours, (hands and knees) near a wall, then stand on your feet, as shown below: slightly on your toes, with your thumbs and index fingers against the wall. 2. Breathe quietly for 20 seconds. 3. Press forward against the wall with the thumbs and index fingers of both hands. 4. Partially straighten the elbows, and knees. 5. Stretch your hips back and up. Your chest will follow. 6. Be careful not to over-extend the neck. 7. Keep the toes parallel and straighten the backs of the legs. 8. The toes should now point in the same direction as the fingers.



**This picture is the absolute maximum.** To complete the pose: 9. Press the heels down to the



floor, extend your knees and thoracic spine and raise your arms from the shoulders. But if you cannot flex at the hips with your legs straight, as shown above, then bend your knees, as shown below. This is preferable to flexing the spine, i.e., curving the back forward. Forward curving of the back, or kyphosis is fastidiously avoided throughout these poses. It is a well-known and proven cause of vertebral fractures! Do

not attempt to place your head on the floor, as in the above picture, if that attempt causes your spine to curve or hump forward. 10. Breathe deeply and slowly for 20-30 seconds. 11. Then carefully lift your head and chest, and return to your hands and knees.

**IX. Supta Padangusthasana (Reclining leg stretch)** This is one of the few forward bends that does not even tempt you to curve your back forward in a dangerous way. It is nearly ideal for osteoporosis for another reason: it engages just about every muscle and stresses almost every bone below the neck. There are not three versions of Supta Padangusthasana, one pose fits all: it's just a question of how much you stretch. The only adaptation is really for hip range of motion: when you first do the pose, bend one knee and put the foot on the floor.

1. Lie on your back. 2. Stretch the back of your body, from the heels to the occiput of your skull.



Retain the natural arch behind your waistline, but firm your abdominal muscles. The blanket (as pictured) will help you to maintain the lumbar arch. 3. At first with both knees bent, raise the right thigh to vertical. 4. Loop a belt around the arch of the right foot. 5. Straighten the right leg, even if it means giving up some of its elevation. 6. Walk up the belt with your fingers until your elbows are straight. 7. Then use your shoulders for additional tension on your foot by bringing them together behind you, toward your spine. 8. Be careful not to tense the muscles in the perineum, or the throat. Even though

they do not move the arms or legs, they sap focus and simplicity from the posture, and from your concentration. 9. Remain in the pose, breathing smoothly, for 20-30 seconds, then slowly bend the knee, let the thigh down until the right foot is on the mat, rest a few seconds, and begin the posture by raising the bent left leg's thigh to vertical.

**A more challenging version of this safe and stimulating pose has one leg flat, and the other lifted.** But always bend the knee when raising the thigh to vertical.



## X. Marichyasana III or Ardha Matsyendrasana



You should choose one of these twisting poses. But which ever one you choose, start with the less extreme version: early attempts at the full pose may injure your back. A. Marichyasana III **For Osteoporosis:** At first just repeat what we did with Parvrtta Trikonasana, the twisted triangle:

1. Begin this posture by standing and facing a flat-seated chair, hands on your hips.
2. Raise your right leg, placing the foot squarely on the chair seat, toes facing forward. Reach your left hand over to the outside of your right knee.
3. Gently pull your entire left side forward and to the right. Place your right hand on your right hip to stabilize it, and revolve the torso to the right around the axis of your spine, with the pelvis remaining steady and facing the chair.
4. Revolve your entire torso, remaining vertical and retaining both shoulders level.
5. With head level and turned about as much as the torso, breathe quietly for 20-30 seconds.
6. Slowly release the left hand and the right thumb, bring the right foot down and repeat these steps with the left leg raised.

**For Osteoporosis:** Begin sitting on a blanket, flexing the left leg to put the heel close to the buttock. Raise your right leg close to vertical, placing the foot over the left thigh and on the floor. Hold your right thigh with your left hand, and walk your right hand around clockwise behind you. Take care not to slouch. Hold your head and chest erect. Retain a straight back and level shoulders, sitting as tall and straight as you can. Open your upper chest forward as you gently twist clockwise (to the right). **For Osteopenia:** Continue with the pose beyond the osteoporosis version by sliding your left elbow over the thigh just above the knee. Raise your open hand, revolving your left shoulder backward as you do. Now walk your right hand further around you, gently advancing your left chest to the right, while your right shoulder goes around to the left and behind you.



You may not get as far as the picture below. Rather, you may be holding your left knee with your right hand. In either case, draw your shoulder blades back and together and down toward your pelvis, but at the same time lengthen your spine, raising your head and neck vertically above your shoulders. Retain level shoulders as you elevate your spine. Take a deep and symmetrical breath, inflating the right and left chests equally.

## **Classical Marichyasana III – For Prevention:**

A more advanced version of Marichyasana III work with a teacher who is educated in advanced alignment skills.

## **XI. Jathara Parivartanasana**

People with limited hip range of motion have trouble with twists, but they are all-important for retaining strength in the transverse vertebral processes and contiguous vertebral bodies. This twist is easier on the hips than some others, but strengthens the trunk muscles well.

### **For Osteoporosis:**

1. Lie supine. 2. Abduct the arms 90 degrees, keeping palms up. The palms may face downward if shoulder arthritis so requires. 3. Flex the feet, bend your knees retaining contact between your ankles, and raise both thighs together to vertical. This pose must be done with the legs bent at first, until sufficient strength and control allow for straight legs. 4. Now twist your hips no more than 10 or 15 degrees to the right, using pressure on the floor with the back of your right arm and hand to keep your torso in line. If your left shoulder comes off the floor, and pressure on the floor with your right arm doesn't help, you know you've gone too far. Place a pillow or block or other object off to the side at first to stop yourself from going beyond your limits, until you're sure you can control things yourself.

### **For Osteopenia:**

5. Continue from above for osteopenia: increase the angle at which you twist your hips, keeping the knees bent and relatively in line with each other. You can use blocks or pillows on either side to keep the knees' descent within safe limits.

The full osteopenia pose looks like this:



7. If you choose to begin practicing the pose this way, you have an infinitely variable "rheostat," in your bent knees: gradually straighten them as your strength, flexibility, balance and control permit. 8. Gradually straighten the knees over weeks or months or years of practice, as you get more comfortable.

## **Classical Jathara Parivarthasana – For Prevention:**



You probably will be able to gradually straighten your legs in the weeks and months that you are doing the pose. Still do not straighten your legs if you have osteoporosis. After you've done the poses for a few years, your DEXA scan will probably put you in the osteopenia or "healthy" category. Then you'll be safe in extending your knees completely in this pose. Eventually it will look like this:



1. Take a calm breath
2. Swing the buttocks slightly to the right, and then lower both legs to the left as you exhale. Keep the legs in contact both with each other and the floor, feet parallel to the right arm, or even closer.
3. Press downward with the right hand. This will maintain contact between the left shoulder and the floor.
4. Keep as much contact as possible between the thoracic and upper lumbar spine and the floor.
5. Breathe calmly for 20-30 seconds.
6. Raise your legs back to vertical.
7. Tilt your buttocks slightly to the left.
8. Slowly incline your legs to the right, repeating the steps above in reverse.
9. Hold this position as well for 20-30 seconds.
10. Then return your legs to vertical.
11. Bend your knees, keeping thighs vertical.
12. Slowly lower your thighs until your feet are on the mat.

## **XII. Savasana – The Corpse Pose**

Rest in Savasana: 1. Lie symmetrically on your back, legs naturally turned out, palms facing up. 2. Stretch your heels away from your knees; stretch the back of your neck away from your shoulders, stretch your buttocks away from your waist. 3. Draw your shoulder blades close together but relax the tops of the shoulders. 4. Close your eyes; soften your soft palate. 5. Rest and breathe naturally for at least three to five minutes. There are different adaptations that make this pose truly restful for different people. Here are a few.



Many of these poses are excerpted from our books, *Yoga for Arthritis*, WW Norton 2008, and *Yoga for Osteoporosis* W.W. Norton, scheduled for winter-spring 2009. Many of the poses and adaptations here reflect the work of B.K.S. Iyengar and John Friend. They would not be here but for the generous and creative work of co-author Ellen Saltonstall, and the yogi-models Sally Hess, Nikki Marshall, and Eric Small.

I thank Ellen Saltonstall, RYT a certified Anusara Yoga instructor, for her consultation on this project, and her permission to use selected photos and instructions from our co-authored books, *Yoga for Arthritis* and *Yoga for Osteoporosis*. Ellen has been teaching yoga for over 20 years, with a specialty in therapeutics. She teaches and trains other teachers in New York City as well as nationally and internationally.

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