

Postural Alignment

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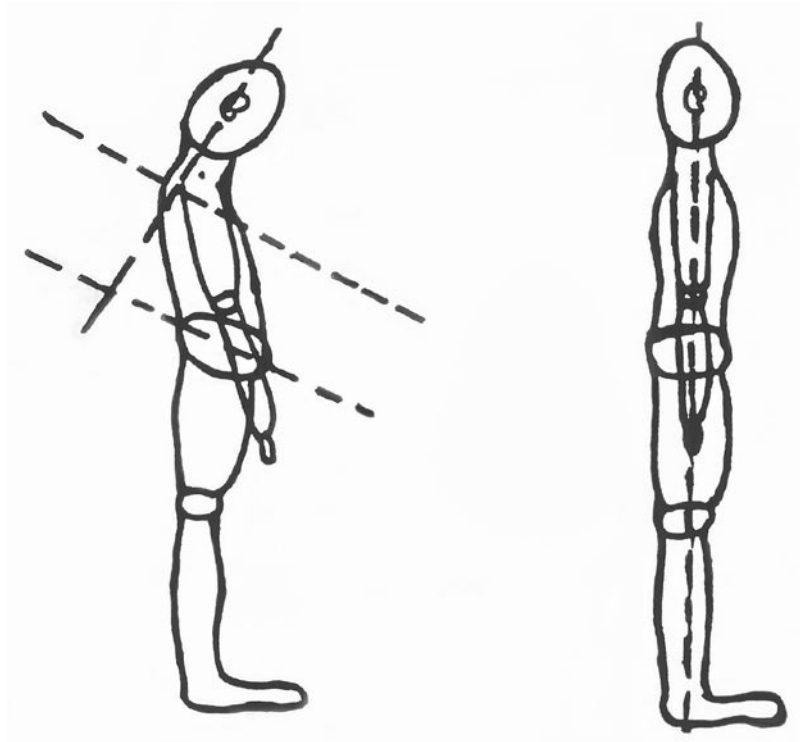
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In memory of Dr. Lucille Coughran and William Henry Burgess

The following series of movements were taught by Dr. Lucille Coughran. Despite having a congenital hunchback, she used them to straighten her own spine, a medical anomaly. My father, William Henry Burgess, under the guidance of Dr. Coughran, used them for over twenty years to improve his postural alignment. He recommended them to a close friend who wore corrective shoes for flat feet. Working with Dr. Coughran he developed arches, another medical anomaly. I learned the movements from Dr. Coughran as a teenager. After several muscular injuries in my forties, I began doing them regularly and experienced a remarkable improvement in my postural alignment. They are based on inner muscle balancing, a foundation they share with other approaches. While Dr. Coughran recognized these movements could not be learned from a book, the following illustrations and text are the result of my father's desire to share their benefits with friends and associates who suffered from temporary or chronic back pain, and are designed to accompany guidance from a professional practitioner.

# How To Check Your Alignment

Stand in front of a mirror in profile. Relax. Now draw an imaginary line through your ear, shoulder, elbow, hip, waist, knee and ankle. If they form a straight line, it is an indication of balanced alignment. Any deviation from a straight line is an indication of imbalanced alignment.



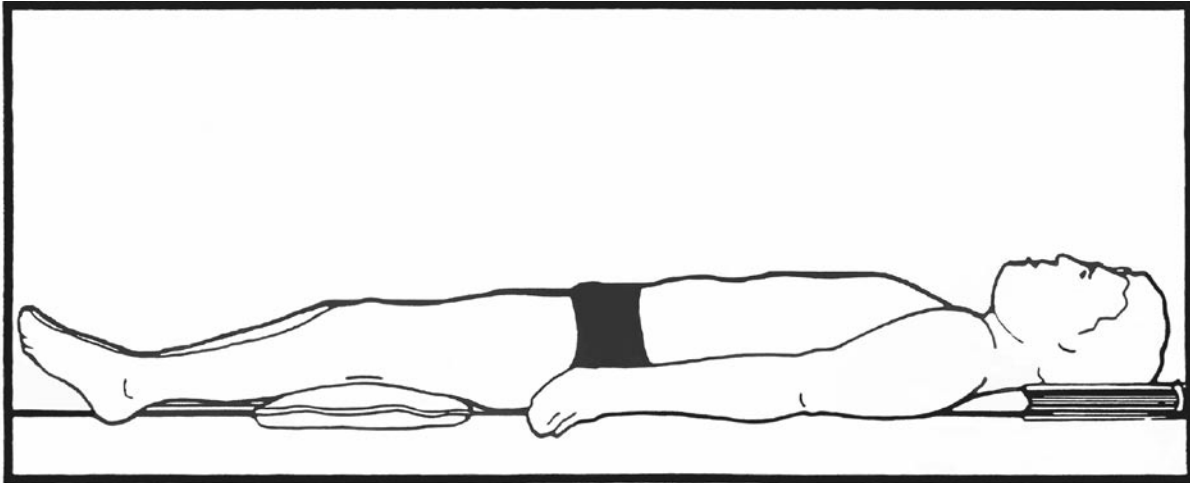
If your body looks like the figure on the right you probably do not have back problems. Balance is essential to most athletics, and many top professional performers and athletes have perfect body balance.

# Prevent Back Discomfort

Gravity is a constant force acting on the body. In space at zero gravity, some of the astronauts have grown as much as two inches. The force of gravity pulling on a skeleton that is not properly aligned can cause imbalances. The head weighs about twelve pounds and imbalances can occur from carrying the head improperly. When the muscles on the front of the spine weaken and the muscles get tired over the years, the head slumps forward, and the vertebrae can eventually calcify as the bone unsuccessfully tries to serve the function of the muscles, resulting in a Dowager's hump.

There is a physiological connection between all of the muscles in the body from the top of the head to the tips of the toes. You can change the skeletal structure of your body by gradually bringing the different pairs of muscles into balance. As each pair is strengthened, and as the prevertebral muscles on the inside of the spine become stronger, the body assumes a more correct alignment.

Knocked knees, bowed legs, even flat feet, can be corrected by changing muscle balance, along with many others misalignments such as having one leg shorter than the other. The movements that follow take advantage of the force of gravity. They are done with the body in a supine instead of vertical position, which can dramatically reduce back discomfort. Doing these movements can eliminate many of the aches and pains that result from a body that is not correctly aligned, and muscles that are not balanced. They provide an opportunity to relax and develop greater body awareness.



## Accomplish Something Lying Down

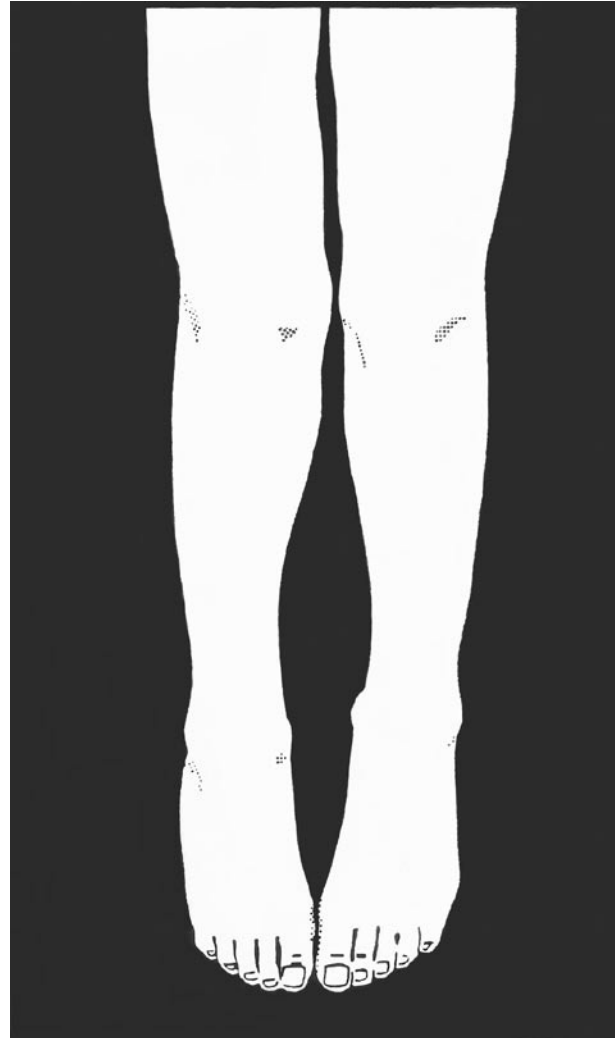
The supine position is the starting position for these movements. Begin by lying on your back on the floor with your arms at your sides, palms down. Lie on a firm surface. A deep pile rug or a bed are too soft.

If the space between your neck and the floor is more than an inch or so, place a book under your head. The head should be a natural extension of your spine, with your chin no higher than your forehead. If the back of your knees are more than an inch or two off the floor, place a small pillow under your knees.

Let yourself completely relax. Sink into the floor relaxing all of your muscles, from your feet, calves, knees, thighs, pelvis, stomach, rib cage, arms, shoulders, to your neck. Relax even your internal organs. Imagine a feeling of weightlessness.

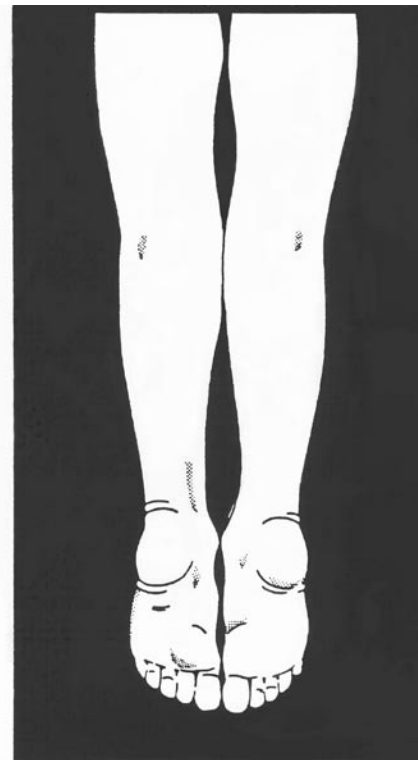
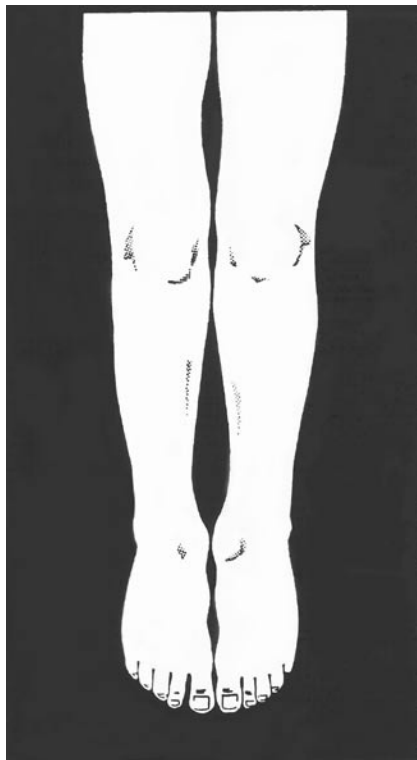
# The Alignment Process

If your ankles are separated before you start the leg rotations, like the illustration, it is an indication of the alignment process that lies ahead. Eventually the movements will bring your knees, ankles, and toes together. Do not expect your postural alignment to correct itself overnight. Small gradual changes will take place each time you do the movements. Just as it took weeks, months, and years for your muscles to develop their present position, it will take time for them to rebalance and align. After you have completed the foot rotations, you may find that your ankles and calves are much closer together. Your prevertebral muscles have been brought into play and your muscles are becoming more balanced.



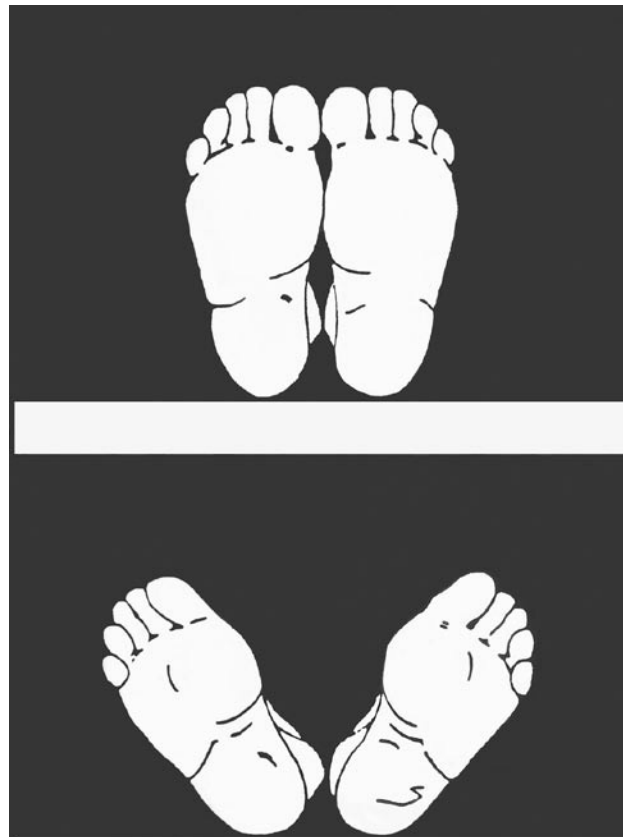
# Balanced Alignment

If your feet and legs are in the positions shown here when you have relaxed all of your muscles, your muscles are balanced and aligned. If your legs have fallen apart, your prevertebral muscles on the abdominal side of the spine need strengthening. With balanced alignment, the feet will be parallel when standing as well as when lying down.



# The Key To Body Balance

Body balance is accomplished through several rotation movements that strengthen the prevertebral muscles. Very slowly and deliberately rotate the legs and feet outward, then inward, three times, as shown in the illustration below. Keep the heels two inches apart with the joint of the big toes touching when starting and ending each rotation.



# The Positions For The Leg Rotations

## FIRST ROTATION

Next extend and point your toes down-ward with your big toe joints touching. Slowly rotate your legs apart one to four inches. Move them slowly and gradually, without letting the legs fall apart. Imagine using the muscles in the knee and ankle joints as you relax the longer muscles in the thighs and calves.



## SECOND ROTATION

Leave the feet extended and starting with the little toe, curl each toe back and up one-by-one, until all your toes are pointing toward the ceiling. Again rotate the legs outward and inward three times. Imagine that the muscles on the inside of your spine that extend down through your abdomen to your toes are controlling the rotation.



### THIRD ROTATION

Keeping your toes pulled back, use the muscles on the outside edge of your insteps (A) to bring your feet into an upright position while extending your heels. Again rotate your legs outward and inward as you try to let the joints of the big toe, ankles, and calves all touch simultaneously.



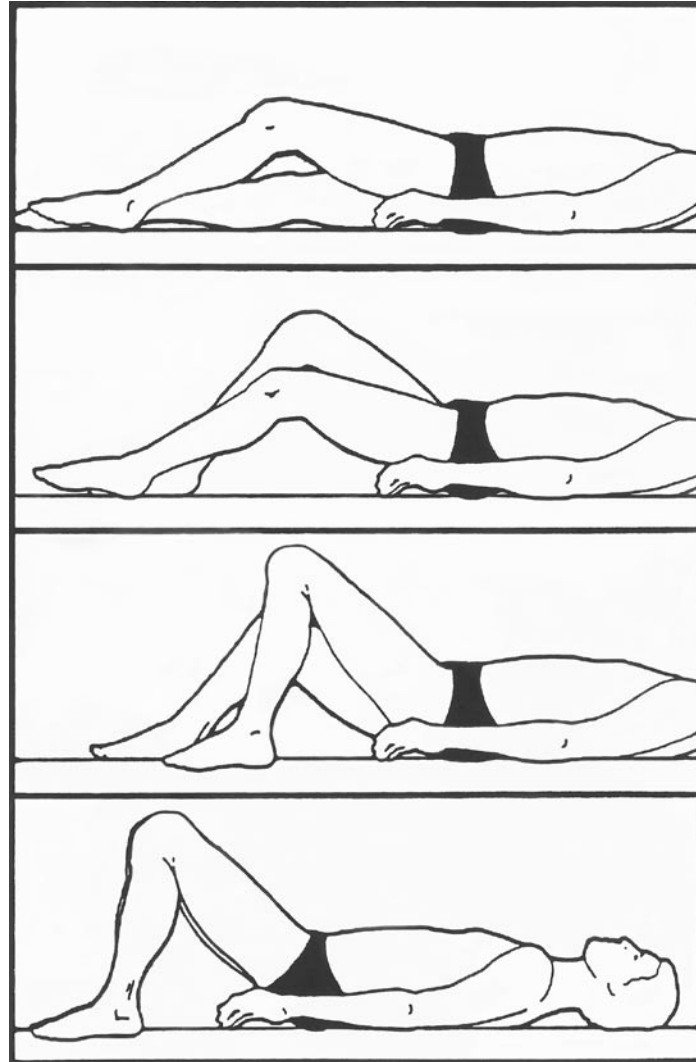
### FOURTH ROTATION

Keeping your toes pulled back, lead with the big toe joint, and return to the Second Rotation position keeping the heels apart and big toe joints and ankles pressed together. Rotate your legs outward and inward as you again try to let the joints of the big toe, ankles, and calves all touch simultaneously.



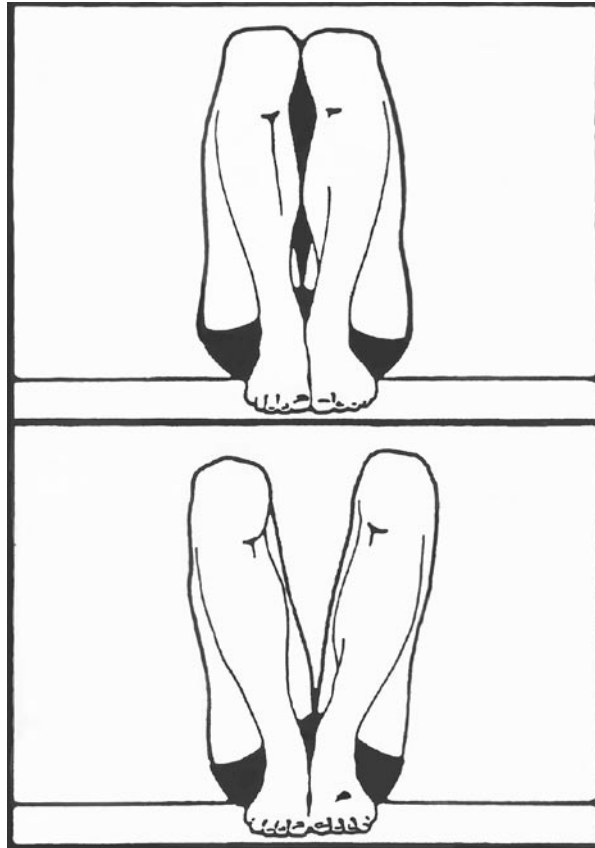
## Prepare For A Knee Spread

After the leg rotations, slowly bend one knee and then the other, alternately sliding one foot and then the other along the floor three to four inches. Imagine your knees are floating toward the ceiling as you move each heel toward you. When both feet are flat on the floor your the heels should be approximately two inches apart, and your ankle bones and big toe joints should be touching. This is the ready position for the pelvic tilt.



# Knee Spread

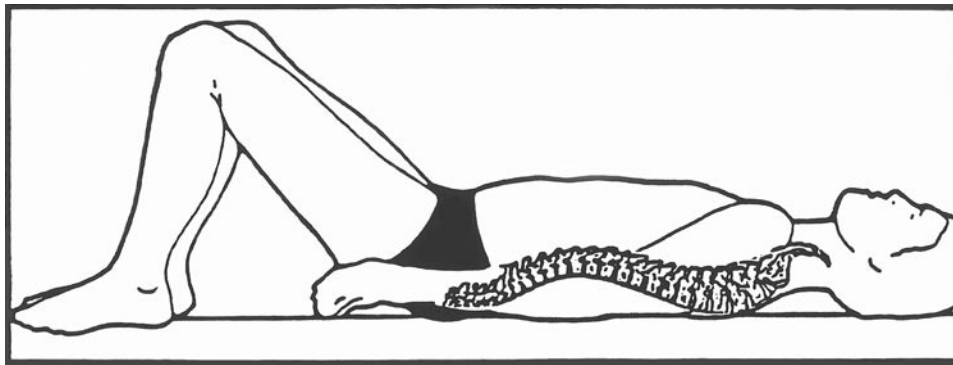
Starting with your knees together, gradually allow the knees to separate, as shown in the illustration, moving the knees apart rather than letting them fall apart. As the knees separate notice how the lower spine relaxes closer to the floor. As you bring the knees back together again, think of using the muscles in the knees and the inside of the thighs. As you bring the knees together, the movement as well as the force of gravity will allow the lower back to move even closer to the floor. Notice how the knee spread minimizes the curve of your lower back. When all of your muscles are finally balanced, the knees will stay together when you relax all of the muscles in your body.



# Pelvic Tilt

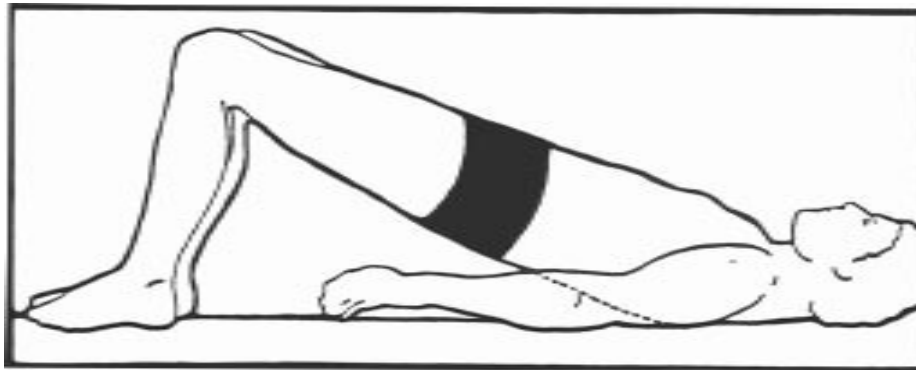
The pelvic tilt is what relieves and prevents back discomfort. In a very slow rolling movement starting with the vertebrae at the base of the spine, lift each vertebrae off the floor one at a time. Imagine that only the prevertebral muscles on the inside of the spine are being used.

As you let the hips very slowly float upward, imagine your pelvis gradually moving toward the ceiling as if it were attached to a string connected to a rising balloon. As you do the pelvic tilt, relax all of the muscles in your feet, calves, thighs, abdomen, chest, shoulders, and neck. In the middle of the pelvic tilt relax your shoulder muscles again in case you are using them to lift your hips. When you start if it is difficult to raise your hips off the floor do not raise them more than half an inch.

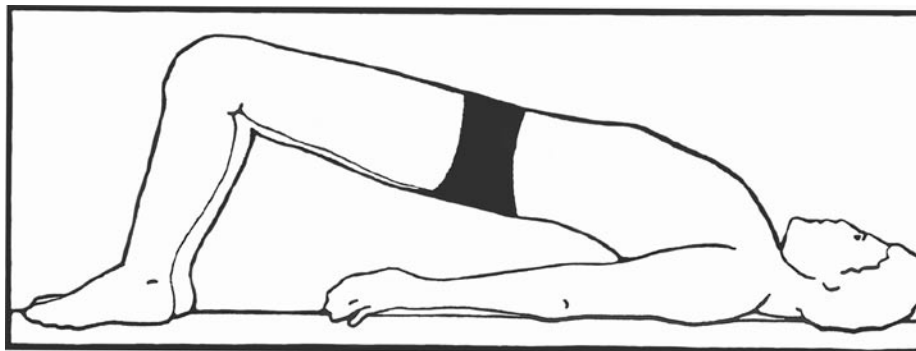


## Relax and Let It Happen

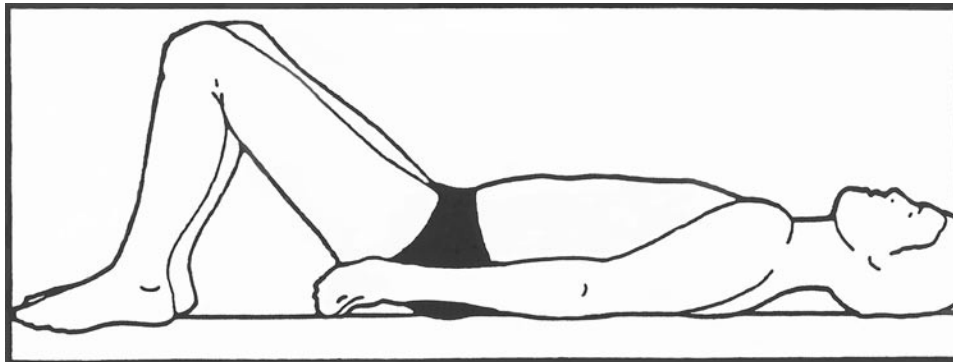
The correct height to which the hips are raised is the point where you get the maximum extension of the spine without forcing it. While it is normal to have a curve in the spine when in the starting position, the curve in the spine begins to minimize as the pelvis is tilted.



Avoid arching the back. In the illustration below the pelvic tilt is too high.



Now begin to lower the hips to the floor, relaxing the shoulder and abdominal muscles. As you exhale, allow each vertebrae to slowly return to the floor one at a time, like pearls on the string. Relax your neck muscles, allowing your neck to relax into the floor, without forcing the movement. Allow your head to move away from your shoulders. As the spine is extended, the space between the neck and floor is minimized.



# The Chin Lift

After completing the pelvic lift, you can gain a greater extension of the spine with a chin lift. Take a slow deep breath. While you are inhaling raise your chin very slowly, tipping your head back slightly. Rather than pulling your head upwards and using muscles that you can control, just let it happen. During the chin lift, your ears should stay in the same position. Imagine the head rotating around an imaginary rod that goes from ear to ear. Envision the upper part of your chest moving upward while your shoulders roll back. This movement helps raise the rib cage in the front of the body so that the ribs are more correctly positioned.

Exhale as you very slowly lower your chin to its normal position. As you lower your chin, let the back of your neck extend upward, keeping the neck muscles soft. Let the chin be drawn down slowly so that the chest remains in its improved alignment.

## Completion

After completing the chin lift relax completely for a moment. Rather than standing up by bending forward, which activates the abdominal muscles, slowly roll to one side and use the muscles in the back of the neck and the lower back to raise your body to a standing position.

# Improve Your Alignment Sitting, Standing, And Moving

The same subtle movements that you used when lying down can be used when you are sitting or standing. If you use muscles you can control to try to improve your sitting or standing alignment, the improvement will only last as long as you consciously control the muscles. If you relax into an improved alignment with a slight pelvic tilt and chin lift, the changes will last.

## SITTING

Place the feet parallel with the heels two inches apart. Use a straight chair when there is a choice. It is almost impossible to have correct posture in a soft chair, a chair where you have to slump, or a sofa. Sit with the lower part of your back relaxed toward the back of the chair. Keep your feet parallel. Crossing your legs tips the pelvis, and a tilted pelvis aggravates the curve of the spine. Roll the hips back slightly to minimize the curve in the lower back, raise the chin slowly to raise the sternum, then lower the chin slowly, letting the chest stay in its raised position.

## STANDING

Stand with your feet parallel, with your knees slightly apart and slightly bent, so your knees do not lock. Keep the weight on the inside rather than on the outside of your feet. Roll the hips back slightly to minimize the curve in the lower back, then raise the chin slowly to raise the sternum, finally lower the chin slowly, letting the chest stay in its raised position. Feel your head balanced above your shoulders. Feel your shoulders relax, as if they were draped over a coat hanger. Let your shoulders relax back without pulling them back.

## MOVING

When you move, concentrate on moving over the arch of your foot rather than walking on the outside of your feet. You can check for correct alignment: your heels should wear in the center rather than on one side or the other of the soles of your shoes.

# Conclusion

One set of muscles is used to lower and bend your body and another to regain an upright posture. If your body is properly aligned, the skeleton will support your body weight. Muscles used properly move the body, rather than carry its weight. With improved alignment, if you have an occasion to stand or sit in one position for a period of time, you will not tire. Nor will you tire as much when engaged in activities that require movement. The body acquires a sense of lightness when it changes from an imbalanced to a balanced state.

# Practicing The Movements

You can practice these movements once or twice a day. They can be done in the morning after you get out of bed, and in the evening before going to bed. Since the movements are ones of relaxation rather than exercise, you can also practice them as often as you like, as long as you leave an hour or more between sessions. If you only have a few minutes, slowly do fewer movements rather than speeding up and doing more movements, which will only defeat their purpose by turning the movements into exercise and using muscles that need to relax.

## ONE MINUTE

For immediate relief and to alleviate back discomfort do one pelvic lift, taking thirty seconds to go up, and thirty seconds to go down.

## THREE MINUTES

For lengthening the spine temporarily do one pelvic lift and one chin lift, taking thirty seconds to go up, and thirty seconds to go down, for both.

## SIX MINUTES

To affect your inner muscles do leg rotations in each of the first four positions, one pelvic tilt, and one chin lift. Take thirty seconds to go out and thirty seconds to go in for the leg rotations.

#### FIFTEEN MINUTES

To retrain the muscles that hold your body in the position it assumes when you are not thinking about alignment do the leg rotations twice, one knee spread, three pelvic tilts, and one chin lift. Take thirty seconds to go out and thirty seconds to go in for the leg rotations.

#### THIRTY MINUTES

If you have the time take one minute to do each movement.

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