

# Qigong for Spinal Health by Dr. Meridel I. Gatterman

Qigong is an ancient Chinese system of health care developed specifically as a means by which individuals may take responsibility for protecting their health, promoting vitality and prolonging life. Qi refers to breath, and by extension energy or vitality, while gong is a general term meaning work. Breathing is an important component of qigong, imparting control over the flow and speed of movement.

Soft, slow movement of the body prevents the stiffness and stagnation that lead to degeneration. These principles are emphasized in the classical Chinese philosophy of Lao Tse and Confucius, on which both qigong and tai chi are based. As such, qigong is important for promoting a healthy spine through a series of exercises adapted from a qigong set known as Eight Pieces of Brocade.

Controlled breathing is the first principle underlying qigong. Inhalation is smooth and slow through the nostrils, drawing the air down to the bottom of the lungs and expanding the abdomen outward. Exhalation releases the breath in a long, slow, even stream as the diaphragm rises and the abdominal wall contracts inward toward the spine. Between each cycle, the diaphragm and abdominal wall relax. Exhalation occurs as the arms move away from the body, and inhalation begins as the arms move toward the body.

Movement is initiated around the lower dan tien (center of gravity), with the torso and limbs extensions of this point. Moving from the dan tien maximizes the power of any physical activity with less likelihood of injury. More muscles relax when movement is from the dan tien, requiring less effort. Qigong movement is slow and rhythmical, with the joints and tendons loose. To be completely relaxed in physical terms is to be soft in practice. Slow, rhythmical movements are one way to keep a relaxed state.

Alignment of the spine is most important, as if the head and neck are pulled upward by a string. The spine is the central pillar of balance for the entire torso and head. Stairway to Heaven is the qigong metaphor for the spine. For best results, the buttocks are slightly tucked to reduce the curvature of the lower spine. To keep the spine flexible and responsive to synchronized movement with the rest of the body, the muscles along the spine are relaxed. The feet remain firmly planted to the ground, while the torso, arms and head move.

## Proper Preparation: Warm-Ups

The first stage of preparation for Eight Pieces of Brocade is to balance the body by stretching muscles and tendons, as well as loosening the joints, including the intervertebral articulations. Here are some of the specific movements:

**Spinal Twist:** The spinal twist begins with the feet shoulder-width apart, shoulders completely relaxed and arms hanging loosely at the sides (known as the anatomical position). The knees are unlocked and the legs are slightly bent. Turning slowly from the dan tien with the elbows loose, the arms flail freely out to the sides on each turn. The hands slap against the upper chest as each turn is completed. The spine and neck are kept erect and the head turned on each turn to look over the back of each shoulder. The extent of each twist is extended until the limits of flexibility are reached. The exercise is continued for two to three minutes.

**Wuji Swimming Dragon:** This warm-up calms the mind and promotes healing. The basic principle of psychoneuroimmunology is that a calm and quiet mind sets in motion the body's natural self-healing mechanisms. An overstimulated mind is the mental roost of the ego and the perpetrator of all worry and mental machinations that keep the nervous system perpetually

locked into the restless "fight or flight" mode. Wuji is the upright standing position with the palms facing forward.

To begin, the hands are placed over the dan tien with the fingers pointing to the midline. Moving from the dan tien, one outstretched arm is then rotated out to the side with the palm facing upward at waist level. When the trunk is rotated maximally the outstretched arm is carried to the opposite side with the little finger leading and palm up. Following maximum trunk rotation to the opposite side, the hand is drawn across the dan tien with the palm facing the abdomen.

After several repetitions, the opposite arm reaches out to the side with the palm up and moves as the first while the first hand is drawn across the abdomen. The movement of the trunk from the dan tien then produces an alternating rotation of the arms. The movements are performed slowly and rhythmically for two to three minutes. The arms simulate the tail of a swimming dragon.

Shoulder Rolls: The shoulders are first rolled forward, then down, back and around four times, and then up and back, around and down four times. This opens the chest in preparation for deep breathing while loosening the shoulders and releasing tension in the upper back.

#### Promoting a Healthy Spine

Just as Eight Pieces of Brocade is designed to stimulate and balance the flow of energy throughout the entire system while simultaneously toning muscles, stretching tendons and loosening joints, it is just as effective in promoting spinal health. In keeping with traditional Chinese medicine, this set of exercises was developed to balance vital functions, tonify internal organs, and build immunity and resistance, in addition to strengthening the legs, back, shoulders and neck. It is one of the most practiced qigong styles in the world.

The following approach is based on the kinesiology of the spine. As a complete exercise set, it promotes movement in all six degrees of freedom important for spinal health.

Bilateral Hand Raises (Double Hands Hold Up Heaven): From the anatomical position, the arms are slowly raised up the front of the body (palms up). At the level of the eyebrows, the hands are clasped and turned over while exhaling slowly. The palms are pressed upward overhead as the heels rise. While bringing the arms slowly down to the sides, inhalation is performed smoothly and evenly. The exercise is repeated eight times. This exercise gently stretches the spinal muscles bilaterally and allows the intervertebral joints to open. This stretch produces a slight distraction of the posterior joints in the sagittal plane and facilitates imbibition of water and nutrients into the discs.

Contracting and Strengthening the Rhomboid Muscles (Shooting a Bow to the Left and the Right): This exercise starts from a horse stance. The horse stance is a fundamental position of optimal stability. From the anatomical position, one foot is moved sideways so that the feet are parallel and shoulder-width apart. Women may prefer to have the feet splayed out at a 45-degree angle for more stability. In the coronal plane, the body weight is evenly distributed between both feet with the center of gravity on the balls of the feet. The knees are kept unlocked to facilitate free flow of energy and blood between the calves and the thighs.

The hips should be relaxed, allowing the weight of the upper body to be supported primarily by the thighs. In the sagittal plane, the alignment of the crown, solar plexus and abdomen should be with the center of the feet. The chest should not be tense or jutted out. The head should be kept straight as though suspended from a string.

From the horse stance, the hands are placed one in front of the other at the level of the sternum. Exhalation occurs as the arm of the outer hand is outstretched with the forefinger pointing and the other arm with elbow bent is pulling to the opposite side as though shooting a bow. Inhalation occurs as the hands return to the chest, reversing the outer hand. The stretch is performed to one side and then the other, repeating the sequence four times. This exercise contracts and strengthens the rhomboid muscles. Weak rhomboid muscles tend to round the shoulders and upper back. The relaxation that occurs with release of the contraction reduces tension in the upper back and is especially beneficial to those working for long periods of time at a computer.

Unilateral Spinal Stretch (Propping Up Heaven and Patting the Earth): From the anatomical position, both hands are brought in front of the chest as though carrying a large beach ball. On exhalation, the palm of one hand moves overhead with the palm facing upward while the other palm faces down, toward the floor at the side. Inhalation occurs as the hands return to the beach-ball position. Repeat the cycle, alternating for four repetitions with each hand.

The joints remain loose and unlocked throughout the stretch. This sequence promotes a pumping action that increases nutrition to the discs through alternating compression of the discs on one side of the spine while tractioning them on the other. Alternate stretching and contracting the muscles relaxes stiff and tense muscles. Coordination and conditioning are also promoted.

Turn and Glance Behind (Elimination of Five Ailments and Seven Dangers): This exercise should be performed with extreme caution, rotating the lower spine only as far as is comfortable. From the anatomical position, both hands are brought in front of the chest as though grasping a beach ball from above and below. While exhaling, the body is rotated from the dan tien in the direction of the upper hand. The low back is rotated only as far as the knee, continuing to turn the upper back and finishing with rotation of the neck, looking at the back of the shoulder. Inhalation occurs with rotation back to the starting position. The upper and lower hands are reversed and the body is rotated to the opposite side. Four repetitions are completed to each side. This exercise rotates the spinal motion segments in the horizontal plane, improving balance, coordination and structural alignment of the spine.

Bending Forward and Back (Iron Bridge): From the anatomical position with the knees slightly bent, exhalation begins as the body bends forward and downward. This allows the weight of the head to slowly traction the spine downward. Inhalation occurs as the body slowly rises up. When inhalation is complete, exhalation begins as the back of the hands are placed firmly over the kidneys while the chin juts forward and the body leans backward. Inhalation begins as the back straightens to the starting position.

This sequence is repeated four times. This exercise is not designed to stretch the hamstrings, and it is important to keep the knees bent on forward-bending as the weight of the head slowly tractions the spine, opening the posterior joints and distracting the discs.

Punching to Release Tension (Punching Out With Angry Eyes): Starting from the horse stance, the loose fists alternately punch outward, beginning with the palms facing upward and ending with the palms facing downward. The arms punch out with exhalation as the eyes are opened wide. Inhalation begins as the fists are drawn back to the sides, ending with the palms facing upward and the eyes squinting. The back is kept straight throughout. This exercise relaxes the spinal muscles as tense and angry feelings are dispersed.

Lateral Bending (Right- and Left-Side Stretch): With the feet shoulder-width apart, one hand stretches upward as the body bends sideward and the other hand slides down the ipsilateral thigh. The joints are kept loose and unlocked. Exhalation occurs as the body bends. Inhalation occurs as the body straightens to the starting position.

This exercise is repeated four times each side, alternating from side to side. This exercise laterally flexes the spine, stretching one side while compressing the other. Side bending is not commonly performed as part of the activities of daily living, so range of motion in this plane (coronal plane) is often restricted.

**Rising Up and Down on the Toes (Bouncing on the Heels):** With the weight on the toes, the arms and body are raised upward with inhalation. The weight is then forcefully returned to the heels on exhalation as the arms return to the sides. The teeth separate when the body raises upward and clack gently together as the weight bounces down. The exercise is repeated eight times. This exercise stimulates the bones of the vertebra in addition to the bones in the jaw that holds the teeth in place. This exercise can help prevent osteoporosis of the spine and periodontal disease.

#### Cool-Down Exercises

**Thigh Punches:** From the anatomical position, a loose fist is formed with one hand. Lifting the ipsilateral knee a gentle punch on the top of the thigh helps to relax the thigh muscle. This is repeated on the opposite side, alternating four times bilaterally.

**Tense and Relax:** From the anatomical position, the weight is raised on the toes as the fists are clenched while tensing as many muscles as possible. The tension is held for a second , then released as the body returns to the starting position. This is repeated four times. It is not necessary to rise up on to the toes if balance is problematic.

**Arm Circles:** From the anatomical position, the hands are moved in an arc up the sides until the palms are facing together overhead and then lowered back to the starting position with the hands at the sides. This is repeated four times.

Qigong spinal exercises are not a substitute for chiropractic care, but rather a system that promotes the connection between the mind and the body as it relates to spinal health. What counts in health care is its utility in practice, not its theoretical agreement with culturally conditioned concepts. Qigong encourages individuals to take responsibility for protecting their health by utilizing the above set of exercises to promote a healthy spine. The same set of exercises can be prescribed for patients for other areas of the body as well.

#### Resources

- Reid D. A Complete Guide to Chi-Kung. Boston: Shambhala Publications, 2000.
- Douglas B. The Complete Idiot's Guide to T'ai Chi and QiGong. New York: Alpha Books (Macmillan), 1999.
- Lam P. Tai Chi For Arthritis. Arthritis Foundation USA, 2006.