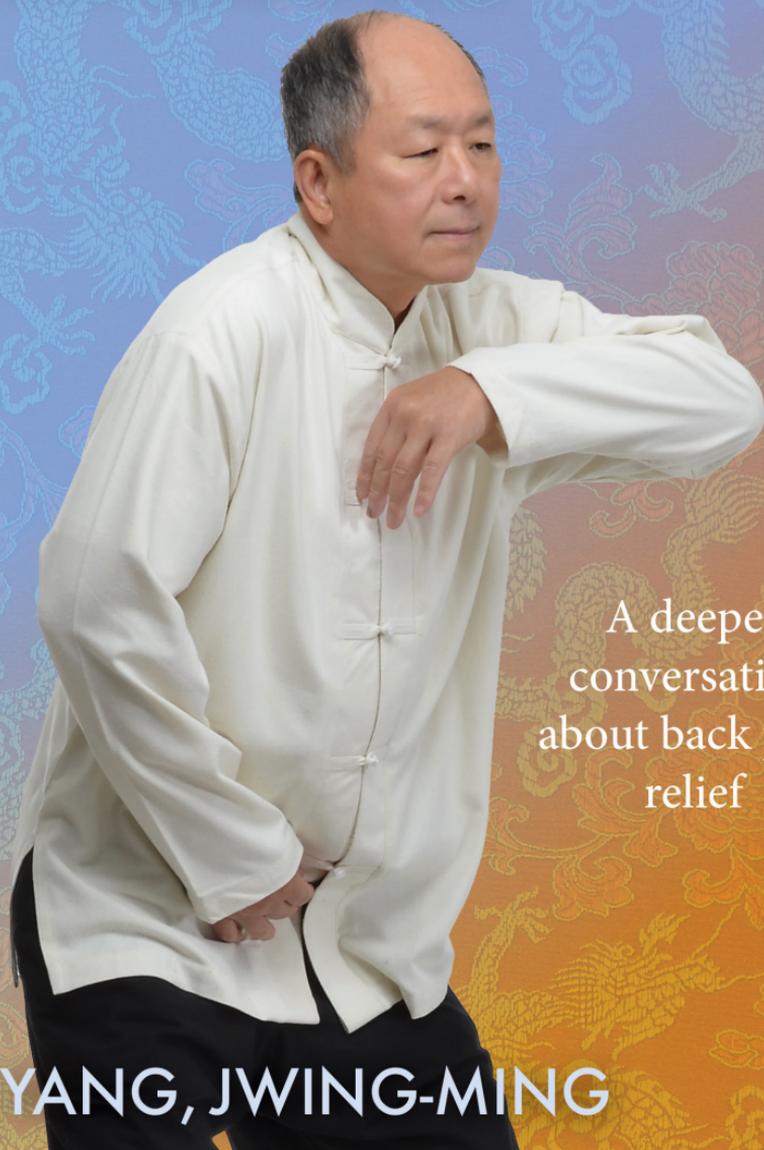


# MASTER YANG LIVE

QIGONG FOR HEALTH

## Spine and Back



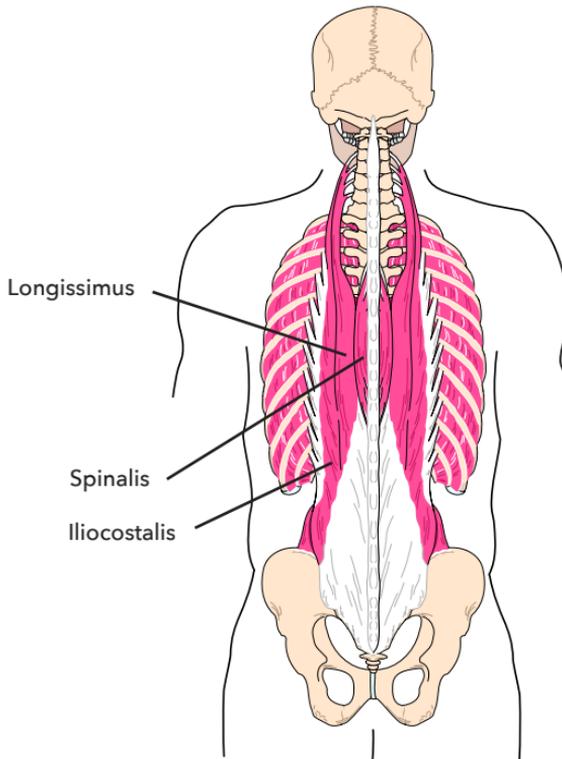
A deeper  
conversation  
about back pain  
relief

DR. YANG, JWING-MING

# SPINE & LOWER BACK QIGONG

## Structure of Erector Spinae Muscles

Consists of three muscles: the Iliocostalis, Longissimus, and Spinalis. Running parallel to the spine, the erectors span from the base of the skull to the pelvis. The function of the spinal erectors is to move the vertebral column and to hold us upright. Bilateral contraction of these muscles extends the spine, while unilateral contraction causes lateral flexion (ipsilateral). They also help to maintain posture by steadying the spine on the pelvis while walking.



# Spine (Vertebral Column)

- Protects the spinal cord, nerve roots and several of the body's internal organs.
- Provides structural support and balance to maintain an upright posture.
- Enable flexible motion.

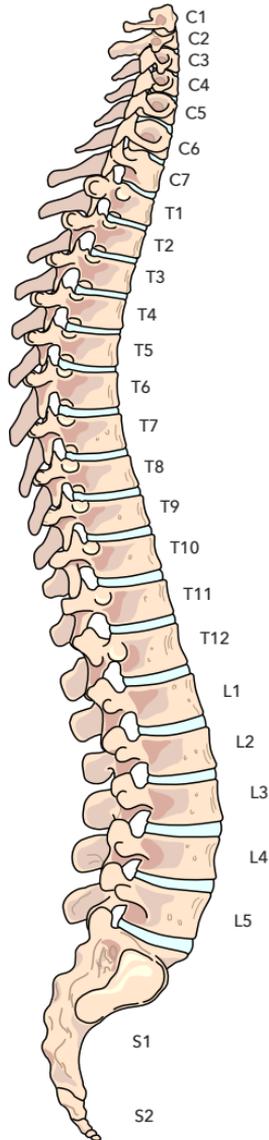
Cervical Spine  
(7 vertebrae)

Thoracic Spine  
(12 vertebrae)

Lumbar Spine  
(5 vertebrae)

Sacrum

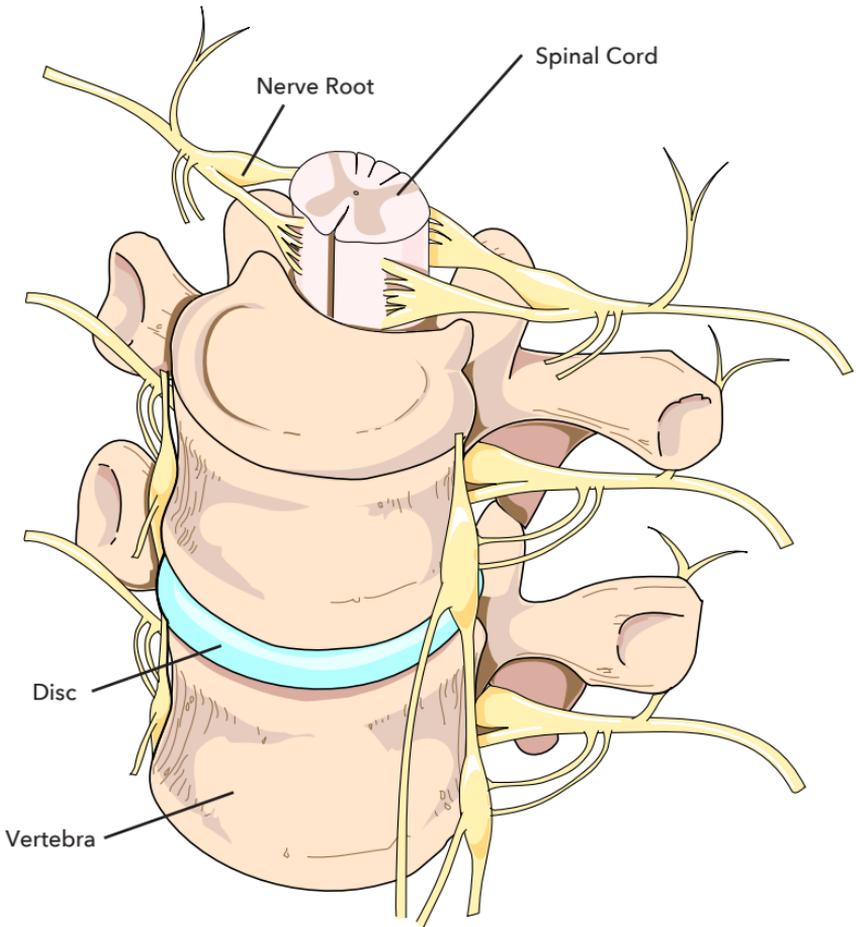
Coccyx



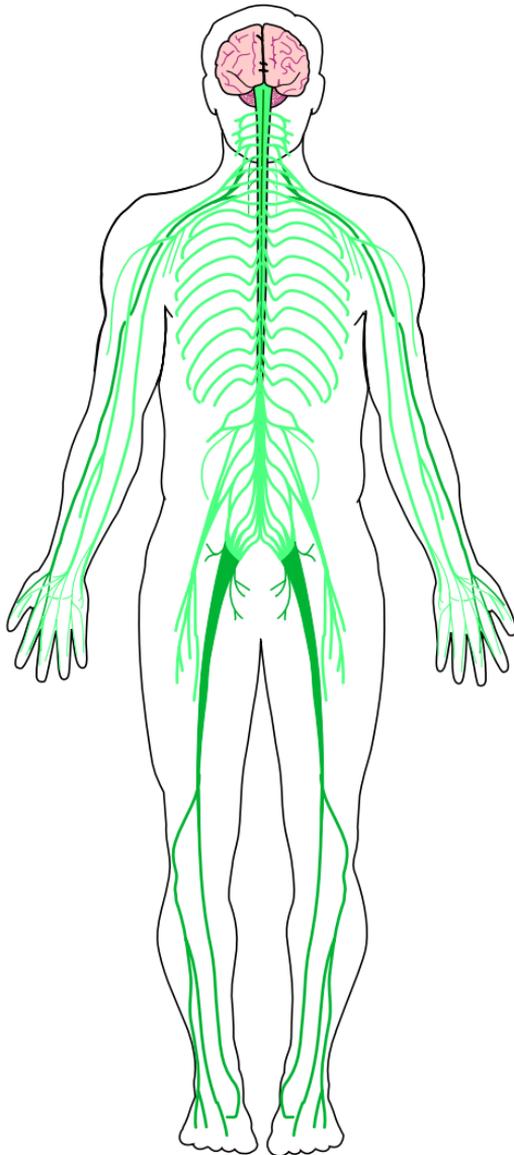
# Structure of Vertebrae

## Vertebrae

The major function of the vertebral column is protection of the spinal cord; it also provides stiffening for the body and attachment for the pectoral and pelvic girdles and many muscles. In humans, an additional function is to transmit body weight while walking and standing.

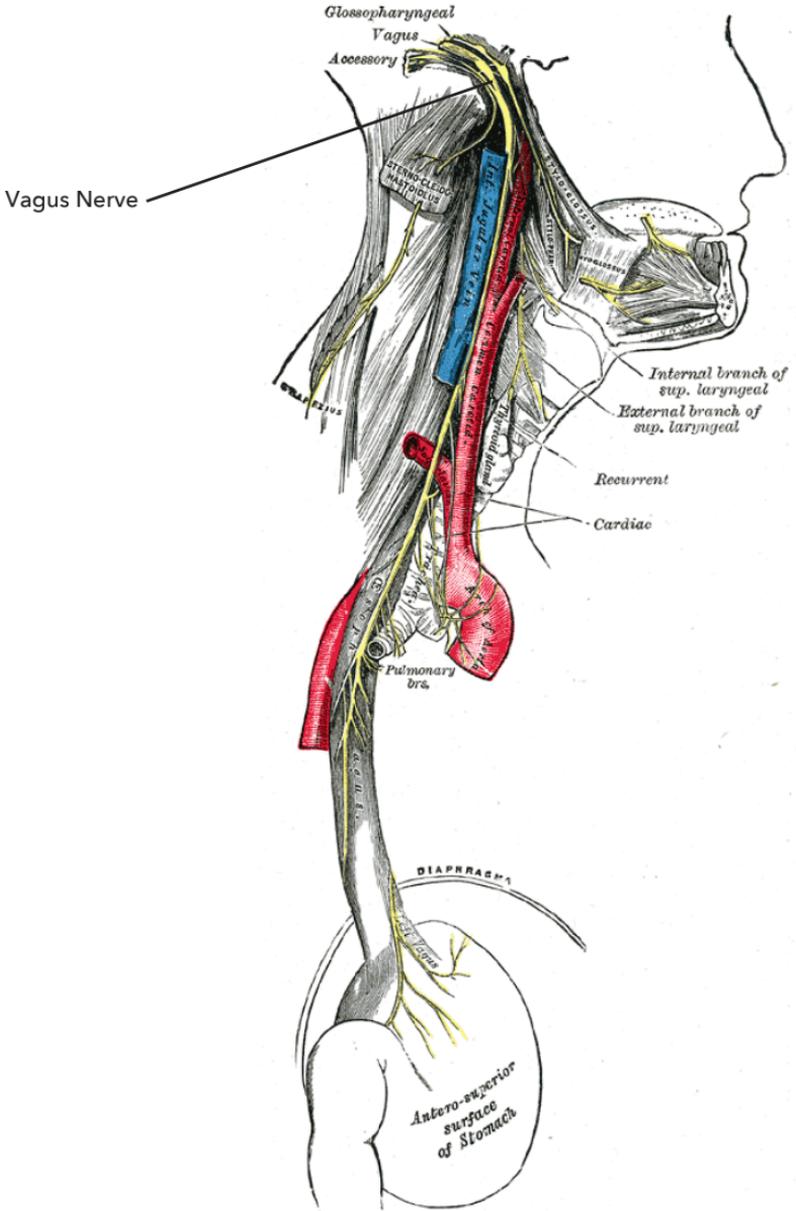


# Central (CNS) and Peripheral Nervous System (PNS)



# The Vagus Nerve (Body's Communication Superhighway)

The vagus nerve is the longest nerve of the autonomic nervous system and is one of the most important nerves in the body. The vagus nerve helps to regulate many critical aspects of human physiology, including the heart rate, blood pressure, sweating, digestion, and even speaking. The vagus nerve also influences your immune system.



# Spinal Cord and Cerebrospinal Fluid (CSF)

## Spinal Cord

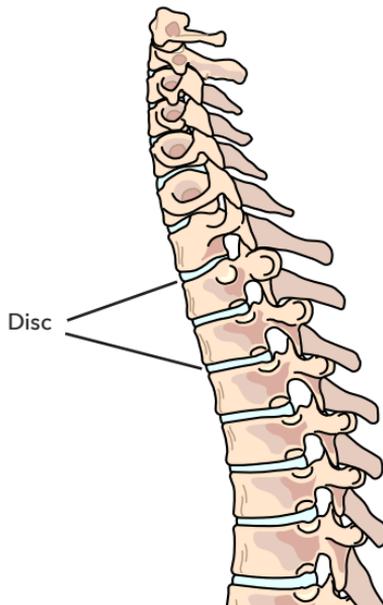
- Transmission of nerve impulses. Neurons in the white matter of the spinal cord transmit sensory signals from peripheral regions to the brain and transmit motor signals from the brain to peripheral regions.
- Spinal reflexes.

## Cerebrospinal Fluid (CSF)

Cerebrospinal fluid (CSF) is a clear, colorless body fluid found in the brain and spinal cord. It is produced by specialized ependymal cells in the choroid plexuses of the ventricles of the brain, and absorbed in the arachnoid granulations. While the primary function of CSF is to cushion the brain within the skull and serve as a shock absorber for the central nervous system, CSF also circulates nutrients and chemicals filtered from the blood and removes waste products from the brain.

## Disc

An intervertebral disk acts as shock absorber between each of the vertebrae in the spinal column by keeping the vertebrae separated when there is impact from activity. They also serve to protect the nerves that run down the middle of the spine and intervertebral disks.



## **C1-C8**

Each cervical nerve innervates or provides sensation (feeling) and motor function (movement) to both sides of a corresponding part of the upper body.

C1, C2, and C3 (the first three cervical nerves) help control the head and neck, including movements forward, backward, and to the sides. The C2 dermatome handles sensation for the upper part of the head, and the C3 dermatome covers the side of the face and back of the head.

The C4 myotome includes certain muscles that help in shoulder movements. The C4 vertebra is the level where nerves run to the diaphragm, the main muscle that allows us to breathe. It separates the chest from the abdomen, and when it contracts, air is sucked into the lungs like a bellows.

The C5 spinal nerve dermatome typically includes parts of skin over the shoulder, upper arm, and forearm. The C5 myotome includes certain muscles that help in shoulder movements.

The C6 myotome is a group of muscles controlled by the C6 nerve. These muscles include the wrist extensor muscles, which allow the wrist to bend backward; and the biceps and supinator muscles of the upper arm, which serve to bend the elbow and rotate the forearm.

The C7's function is to support the skull, enabling head movements back and forth, and from side to side, as well as protecting the spinal cord. It helps control the triceps (the large muscle on the back of the arm that straightens the elbow) and wrist extensor muscles. The C7 dermatome goes down the back of the arm and into the middle finger.

The C8 helps control the hands, such as finger flexion (handgrip).

## **T1-T12**

The thoracic vertebrae's function is to support the back. Their articulations with the ribs allow them to provide a protective cage around the delicate organs of the thorax, including the heart and lungs. There is limited mobility in this section of the spine due to these joint articulations and their design. Unlike sections of the cervical vertebrae that allow nodding and shaking of the head, the thoracic vertebrae allow some twisting and bending motions, but little beyond that.

## **L1-L5**

Lumbar (low back) - the main function of the lumbar spine is to bear the weight of the body. These vertebrae are much larger in size to absorb the stress of lifting and carrying heavy objects.

## **S1-S5**

Many important muscles that facilitate leg motion originate on the sacral surface. The sacrum also acts as a protective shield, enclosing the nerves of the lower back. Together with the hip bones and coccyx, the sacrum forms the pelvis, which surrounds the bladder, colon, reproductive organs, and rectum.

# QIGONG EXERCISES

## I. Health Maintenance and Healing

### Standing/Sitting

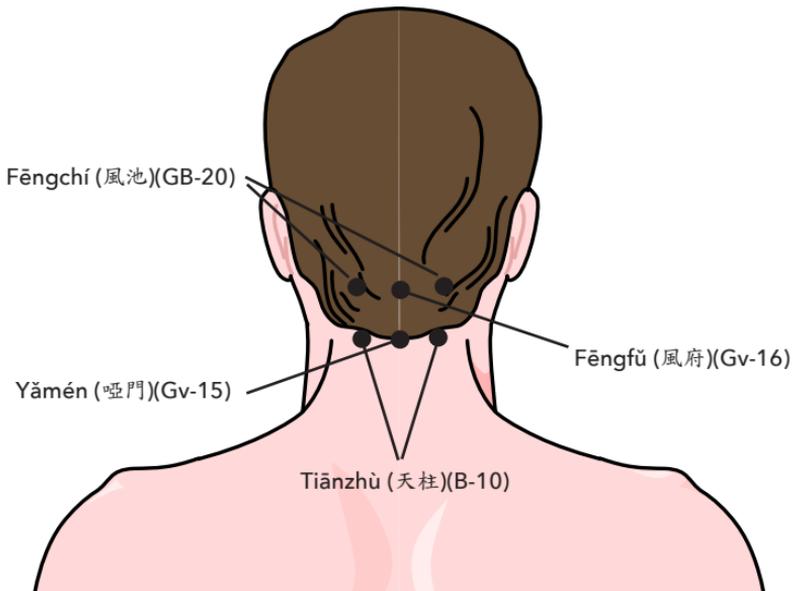
Torso Stretching

Spine Waving Exercises

C1-C7 (Cervical Vertebrae)

- Three Directions of Neck Exercises
- Stretching Neck while Moving Shoulder
- Massage Fēngfǔ (風府)(Gv-16), Yǎmén (啞門)(Gv-15), Fēngchí (風池)(GB-20), Tiānzhù (天柱)(B-10)
- White Crane Neck Gong (Hèjǐngōng, 鶴頸功)
- Massage Tendons on Rear Neck (Nǎohòu Zhāijīn, 腦後摘筋)
- Beat Heavenly Drum (Míngtiāngǔ, 鳴天鼓)
- Nǎzhā Explore the Sea (Nǎzhā Tànǎi, 哪吒探海)

\*\*\*Vagus Nerve – Deep and Slow Breathing, Singing/Chanting, Massage, Meditation, Exercises, Massage, Omega-3 Fatty Acid, Probiotics



### **T1-T12 (Thoracic Vertebrae)**

- Chest In and Out with Shoulders' Circling

### **L1-L5 (Lumber Vertebrae)**

- Lower Back Circling and Spine Wave with Chair
- Lower Back Circling and Spine Wave against Wall

### **S1-S5 (Sacrum & Coccyx)(Massage)**

- Hit Lower Back, Sacrum, and Butt

### **On Floor**

- Torso Stretching
- Waist Circling
- Spine Wave

## **II. Conditioning (Erector Spinae Muscle Exercises)**

### **Standing**

#### **Exercises with Dumbbell**

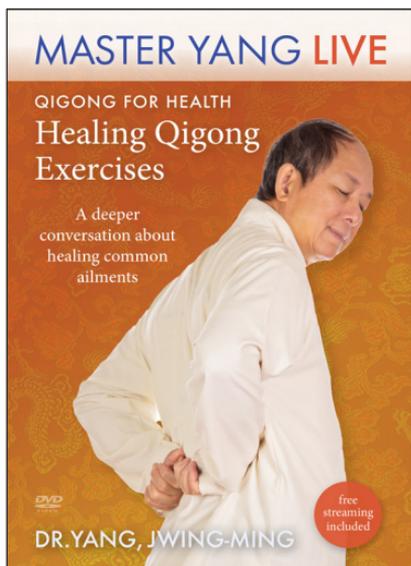
- Up-Down Moving
- Waist Circling
- Spine Waving
- Taiji Ball Qigong (Tàijíqiú Qìgōng, 太極球氣功)

### **On Floor**

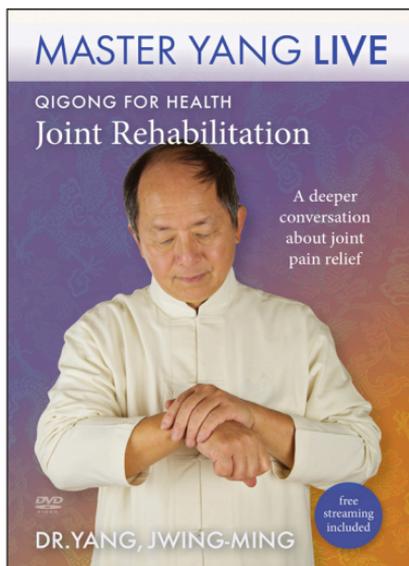
- Left-Right Sway (Loose Up Torso)
- Left-Right Twist (Stretch Torso)
- Up-Down Pulling (Entire Torso) (Exercise)
- Up-Down Pulling (Hip Area) (Exercise)
- Left-Right Twist (Hip Area) (Exercise)
- Up-Down Lifting (Lower Back) (Exercise)
- Torso Bending (Abdomen) (Exercise)



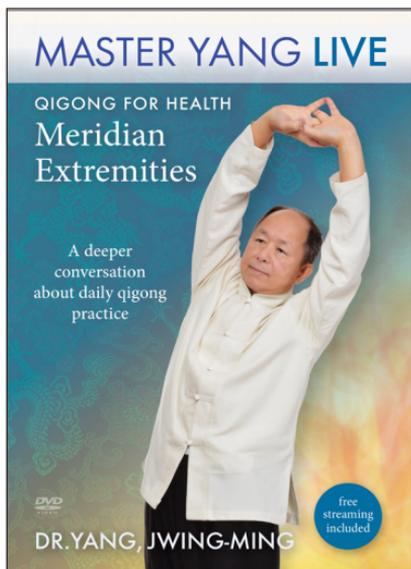
Also available from YMAA:



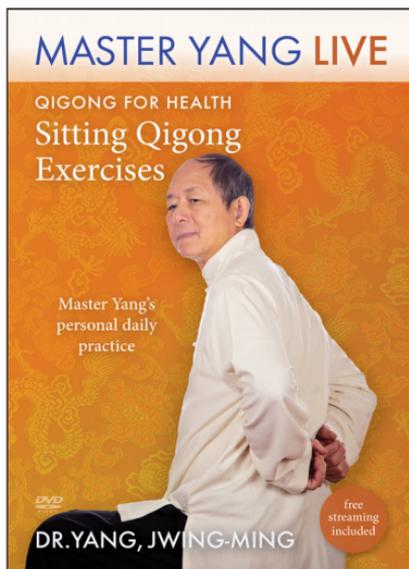
*Qigong for Health: Healing Qigong Exercises*  
DVD D9480 / Stream S9480



*Qigong for Health: Joint Rehabilitation*  
DVD D9466 / Stream S9466

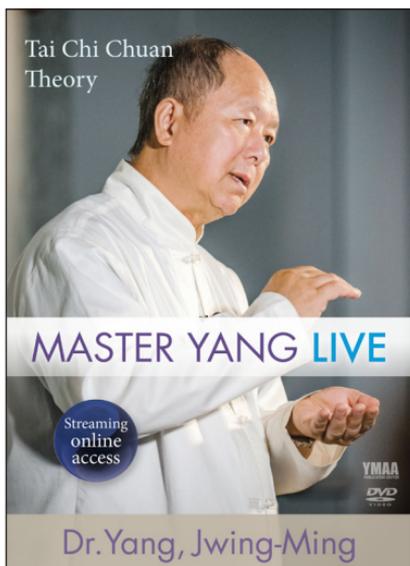


*Qigong for Health: Meridian Extremities*  
DVD D9473 / Stream S9473

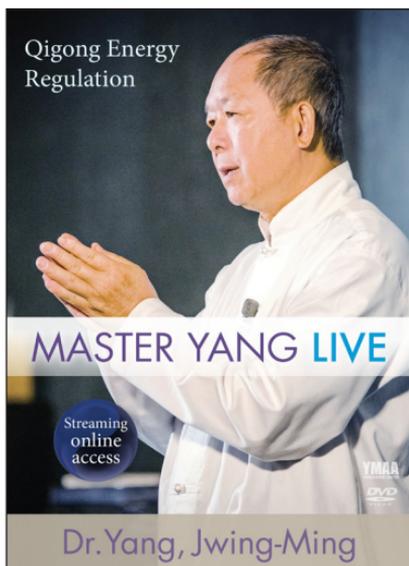


*Qigong for Health: Sitting Qigong Exercises*  
DVD D9497 / Stream S9497

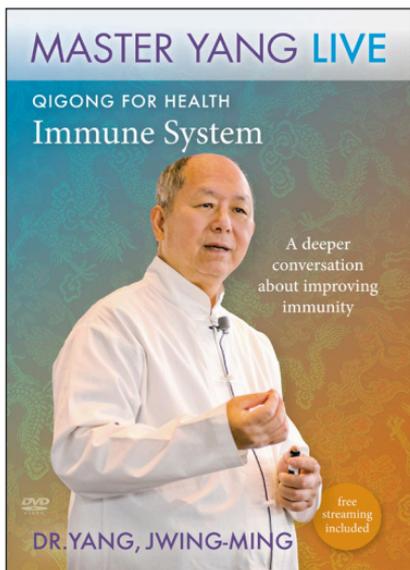
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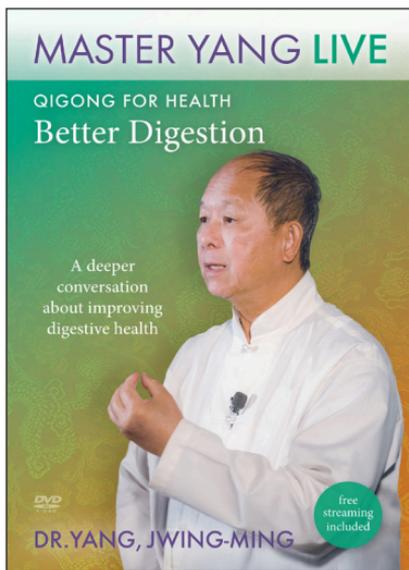
*Tai Chi Chuan Theory*  
DVD D8025 / Stream S8025



*Qigong Energy Regulation*  
DVD D8032 / Stream S8032



*Qigong for Health: Immune System*  
DVD D 8858 / Stream S8858



*Qigong for Health: Better Digestion*  
DVD D9442 / Stream S9442