

## Special Article - Orthopaedic Surgery

# Indication of Traditional Chinese Spinal Orthopedic Manipulation

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## Abstract

This paper deals with the definition of the traditional Chinese spinal orthopedic medicine and Traditional Chinese Spinal Orthopedic Manipulation (TCSOM), the function of the TCSOM, with a special focus on how to make a preliminary diagnosis of one or several spinal segments disorders, and the indications of traditional Chinese spinal orthopedic manipulation in different spinal segments.

**Keywords:** Traditional Chinese Medicine (TCM); Spinal Manipulation; Indication; Spinal Disorders; Spin Genic Disorders

## Introduction

Traditional Chinese Spinal Orthopedic Medicine is an important part of TCM, which is a branch of traditional Chinese orthopedic medicine. Under the guidance of TCM theory, traditional Chinese spinal orthopedic medicine develops based on anatomy, imaging, biomechanics of the spine and study on physiological and pathological changes. By means of spinal manipulation, spinal traction, acupuncture and moxibustion, Chinese herbs and muscle exercising, Traditional Chinese spinal orthopedic medicine can effectively treat and prevent spinal disorders and spin genic disorders. Correcting the abnormal position or state of the spine and adjusting the balance of Yin and Yang of the spine serve as the most important theoretical foundation for traditional Chinese spinal orthopedic medicine to treat spinal disorders and spin genic disorders [1].

Traditional Chinese Spinal Orthopedic Manipulation (TCSOM) [1] is a kind of external therapy of the traditional Chinese medicine, which aims at adjusting the balance of the Yin and Yang of the spine with the thumb or bilateral upper extremities as the main treatment tool. The patient's medical history, clinical symptoms, spinal palpation and the spinal nerve inspection, spinal imaging and other examinations are all taken into account when making preliminary diagnosis of one or several spinal segments disorders. TCSOM treatment for disorders is to use the thumb or upper limbs to press, pull, rotate the spine and correct the abnormal position or state of the spine.

### The functions of the TCSOM are as follows

1. Relocating the dislocation or semi-dislocation of the spine joint and adjusting the balance of the Yin and Yang of the spine.
2. Relaxing the muscles around the spine by pressing, pulling and rotating the spine.
3. Stimulating the acupoints around the spine, and subsequently producing these acupoints' therapeutic effect.
4. Relaxing the veins, activating blood and relieving the pain.

Based on our clinical experience and classical literatures of TCM [2-14] about spinal disorders and spin genic disorders treated by

traditional Chinese spinal orthopedic manipulation, indications of traditional Chinese spinal orthopedic manipulation in different spinal segments are summarized below.

Indication of the traditional Chinese spinal orthopedic manipulation in Atlanta-occipital joint (C0,1): Headache, dizziness, nausea, vomiting, pain in the eyes, pain in the occipital, insomnia, irritability, amnesia and hypertension.

Indication of the traditional Chinese spinal orthopedic manipulation in Atlanto-axial Joint (C1,2): Neck pain, torticollis, headache, dizziness, nausea, vomiting, scalp superior and posterior to ear sensory disturbance, blurred vision, lip and tongue numbness, tinnitus and deafness.

Indication of the traditional Chinese spinal orthopedic manipulation between the second cervical vertebra (C) and the third cervical vertebra (C2,3): Neck pain, headache, dizziness, nausea, vomiting, scalp to ear sensory disturbance, blurred vision, lip and tongue numbness, tinnitus and deafness.

Indication of the traditional Chinese spinal orthopedic manipulation between C3 and C4 (C3,4): Pain in the neck and shoulder, shoulder joint function limited, chest pain, superior chest and shoulder sensory disturbance, pharyngeal foreign body sensation and diaphragmatic spasm.

Indication of the traditional Chinese spinal orthopedic manipulation between C4 and C5 (C4,5): Shoulder joint pain and function limited, deltoid weakness, shoulder sensory disturbance.

Indication of the traditional Chinese spinal orthopedic manipulation between C5 and C6 (C5,6): Pain in anterolateral arm, anterolateral forearm and the thumb, biceps brachia weakness, thumb sensory disturbance.

Indication of the traditional Chinese spinal orthopedic manipulation between C6 and C7 (C6,7): Pain in neck, posterior shoulder, back, lateral arm, lateral forearm, index finger, middle finger, triceps brachia weakness, index finger and middle finger sensory disturbance.

Indication of the traditional Chinese spinal orthopedic

- (C0,1): Headache, dizziness, nausea, vomiting, pain in the eyes, pain in the occipital, insomnia, irritability, amnesia and hypertension.
- (C1,2): Neck pain, torticollis, headache, dizziness, nausea, vomiting, scalp superior and posterior to ear sensory disturbance, blurred vision, lip and tongue numbness, tinnitus and deafness.
- (C2,3): Neck pain, headache, dizziness, nausea, vomiting, scalp to ear sensory disturbance, blurred vision, lip and tongue numbness, tinnitus and deafness.
- (C3,4): Pain in the neck and shoulder, shoulder joint function limited, chest pain, superior chest and shoulder sensory disturbance, pharyngeal foreign body sensation and diaphragmatic spasm.
- (C4,5): Shoulder joint pain and function limited, deltoid weakness, shoulder sensory disturbance.
- (C5,6): Pain in anterolateral arm, anterolateral forearm and the thumb, biceps brachii weakness, thumb sensory disturbance.
- (C6,7): Pain in neck, posterior shoulder, back, lateral arm, lateral forearm, index finger, middle finger, triceps brachii weakness, index finger and middle finger sensory disturbance.
- (C7,T1): Pain in the shoulder and back, posterolateral arm, posterolateral forearm, little finger and ring finger, palmar interossei muscles weakness, little finger and medial aspect of ring finger sensory disturbance, cough, asthma and urticaria.
- (T1,2): Neck, shoulder and back pain, manic psychosis, bone-steaming fever, tidal fever, febrile disease, malaria, aversion to cold, fever, cough and asthma.
- (T2,3): Stiff neck, shoulder and back pain, fever, headache, cough and asthma.
- (T3,4): Stiff neck, pain in the chest and back, fever, headache, cough, asthma, hemoptysis, bone-steaming fever, tidal fever, night sweating and seminal emission.
- (T4,5) Stiff neck, pain in the chest and back, cough, asthma, chest oppression, angina pectoris, palpitation and vomiting.
- (T5,6): Pain in the chest and back, posterior shoulder pain, cough, asthma, hematemesis, chest oppression, angina pectoris, palpitation, insomnia, amnesia, epilepsy, night sweating and seminal emission.
- (T6,7): Pain in the chest and back, angina pectoris, chest oppression, cough, asthma, abdominal pain, abdominal distension, vomiting, hiccups and borborygmus.
- (T7,8): Pain in the chest and back, anemia, vomiting, hiccups, cough, asthma, hematemesis, urticaria, skin itchy, jaundice and hypochondriac pain.
- (T8,9): Stomachache, hypochondriac pain, vomiting, diarrhea and cough.
- (T9,10): Pain in the chest and back, hypochondriac pain, stiffness of spine, flaccidity of limbs, spasm, stomachache, jaundice, diarrhea, depressive psychosis, manic psychosis, epilepsy, redness of eyes, blurred vision, night blindness and epiphora.
- (T10,11): Pain in the chest and back, hypochondriac pain, stomachache, vomiting, abdominal distension, borborygmus, diarrhea, jaundice, bitter taste in the mouth, lung tuberculosis and tidal fever.
- (T11,12): Pain in the chest and back, abdominal distension, vomiting, diarrhea, dysentery, hemorrhoids, hematochezia, edema, jaundice and epilepsy.
- (T12,L1): Low back pain, superior lateral gluteal region and inferior abdominal wall sensory disturbance, stomachache, vomiting, abdominal distension, borborygmus, infantile malnutrition and edema.
- (L1,2): Stiffness and pain in the loins and spine, knee joint pain, knee weakness, jaundice, vomiting, diarrhea, abdominal distension, abdominal pain, borborygmus, dysentery, hemorrhoids, hematochezia, prolapsed of rectum, dysuria, edema and epilepsy.
- (L2,3): Pain in lower back, medial thigh, knee joint, sensory disturbance in medial thigh, the knee joint weakness, easy to "give up", vomiting, diarrhea, abdominal distension, abdominal pain, borborygmus, dysentery, irregular menstruation, dysmenorrhea, amenorrhea, leucorrhea, dysgenesis, seminal emission, impotence, unsmooth urination, frequent urination, enuresis and urolepsia.
- (L3,4): Pain in lumbosacral region, anterolateral gluteal region, anterior thigh, anteromedial leg, anteromedial leg sensory disturbance, quadriceps femoris weakness, abdominal distension, borborygmus, irregular menstruation, dysmenorrheal and leucorrhea.
- (L4,5): Pain in the lumbosacral region, posterolateral gluteal region, anterolateral leg, anterolateral leg sensory disturbance, back foot and great toe, extensor muscles weakness of great toe, irregular menstruation, leucorrhea, dysmenorrheal, irregular menstruation, dysmenorrhea, amenorrhea, leucorrhea, dysgenesis, seminal emission, impotence, frequent urination, urgent urination, enuresis, urolepsia. diarrhea, abdominal distension and constipation.
- (L5,S1): Pain in the lumbosacral region, posterior gluteal region, posterior thigh and leg, posterolateral leg and lateral three toes sensory disturbance, toes flexion muscles weakness, urolepsia, frequent urination, unsmooth urination, irregular menstruation, leucorrhea, diarrhea, abdominal distension, constipation and fecal incontinence.

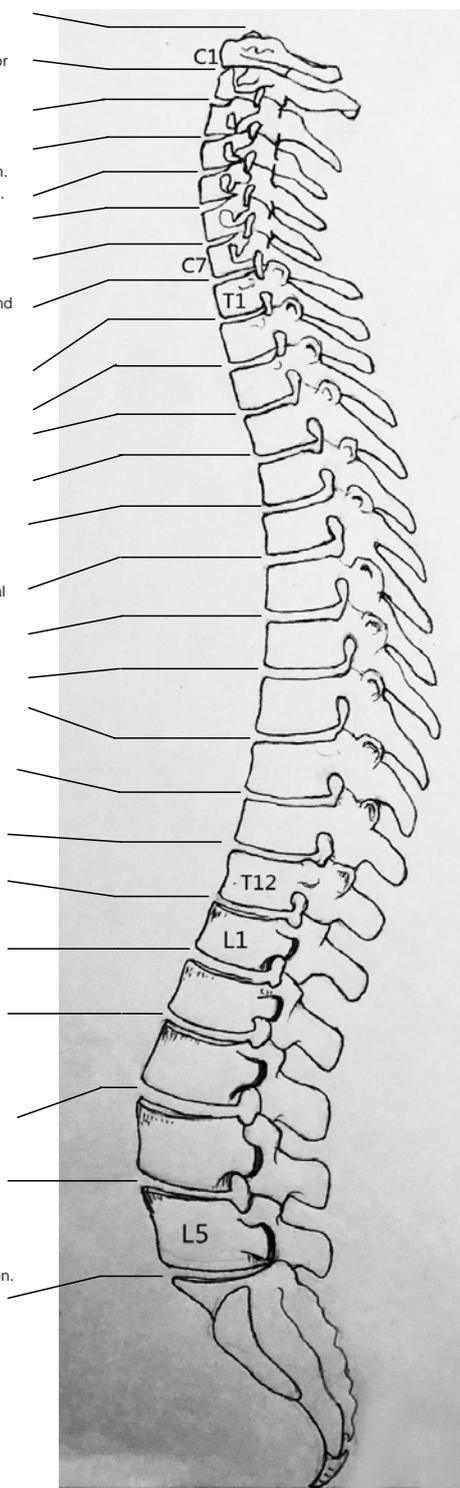


Figure 1: Indication of the traditional Chinese spinal orthopedic manipulation.

manipulation between C7 and the first thoracic vertebra (T1) (C7,T1): Pain in the shoulder and back, posterolateral arm, posterolateral forearm, little finger and ring finger, palmar interpose muscles weakness, little finger and medial aspect of ring finger sensory disturbance, cough, asthma and urticarial.

Indication of the traditional Chinese spinal orthopedic manipulation between T1 and T2 (T1,2): Neck, shoulder and back pain, manic psychosis, bone-steaming fever, tidal fever, febrile disease, malaria, aversion to cold, fever, cough and asthma.

Indication of the traditional Chinese spinal orthopedic manipulation between T2 and T3 (**T2,3**): Stiff neck, shoulder and back pain, fever, headache, cough and asthma.

Indication of the traditional Chinese spinal orthopedic manipulation between T3 and T4 (**T3,4**): Stiff neck, pain in the chest and back, fever, headache, cough, asthma, hemoptysis, bone-steaming fever, tidal fever, night sweating and seminal emission.

Indication of the traditional Chinese spinal orthopedic manipulation between T4 and T5: Stiff neck, pain in the chest and back, cough, asthma, chest oppression, angina pectoris, palpitation and vomiting.

Indication of the traditional Chinese spinal orthopedic manipulation between T5 and T6 (**T5,6**): Pain in the chest and back, posterior shoulder pain, cough, asthma, hematemesis, chest oppression, angina pectoris, palpitation, insomnia, amnesia, epilepsy, night sweating and seminal emission.

Indication of the traditional Chinese spinal orthopedic manipulation between T6 and T7 (**T6,7**): Pain in the chest and back, angina pectoris, chest oppression, cough, asthma, abdominal pain, abdominal distension, vomiting, hiccups and borborygmus.

Indication of the traditional Chinese spinal orthopedic manipulation between T7 and T8 (**T7,8**): Pain in the chest and back, anemia, vomiting, hiccups, cough, asthma, hematemesis, urticarial, skin itchy, jaundice and hypochondriac pain.

Indication of the traditional Chinese spinal orthopedic manipulation between T8 and T9 (**T8,9**): Stomachache, hypochondriac pain, vomiting, diarrhea and cough.

Indication of the traditional Chinese spinal orthopedic manipulation between T9 and T10 (**T9,10**): Pain in the chest and back, hypochondriac pain, stiffness of spine, flaccidity of limbs, spasm, stomachache, jaundice, diarrhea, depressive psychosis, manic psychosis, epilepsy, redness of eyes, blurred vision, night blindness and epiphora.

Indication of the traditional Chinese spinal orthopedic manipulation between T10 and T11 (**T10,11**): Pain in the chest and back, hypochondriac pain, stomachache, vomiting, abdominal distension, borborygmus, diarrhea, jaundice, bitter taste in the mouth, lung tuberculosis and tidal fever.

Indication of the traditional Chinese spinal orthopedic manipulation between T11 and T12 (**T11,12**): Pain in the chest and back, abdominal distension, vomiting, diarrhea, dysentery, hemorrhoids, hematochezia, edema, jaundice and epilepsy.

Indication of the traditional Chinese spinal orthopedic manipulation between T12 and the first lumbar vertebra (L1) (**T12,L1**): Low back pain, superior lateral gluteal region and inferior abdominal wall sensory disturbance, stomachache, vomiting, abdominal distension, borborygmus, infantile malnutrition and edema.

Indication of the traditional Chinese spinal orthopedic manipulation between L1 and L2 (**L1,2**): Stiffness and pain in the loins and spine, knee joint pain, knee weakness, jaundice, vomiting,

diarrhea, abdominal distension, abdominal pain, borborygmus, dysentery, hemorrhoids, hematochezia, prolapsed of rectum, dysuria, edema and epilepsy.

Indication of the traditional Chinese spinal orthopedic manipulation between L2 and L3 (**L2,3**): Pain in lower back, medial thigh, knee joint, sensory disturbance in medial thigh, the knee joint weakness, easy to “give up”, vomiting, diarrhea, abdominal distension, abdominal pain, borborygmus, dysentery, irregular menstruation, dysmenorrhea, amenorrhea, leucorrhea, dysgenesis, seminal emission, impotence, unsmooth urination, frequent urination, enuresis and urolepsia.

Indication of the traditional Chinese spinal orthopedic manipulation between L3 and L4 (**L3,4**): Pain in lumbosacral region, anterolateral gluteal region, anterior thigh, anteromedial leg, anteromedial leg sensory disturbance, quadriceps femora’s weakness, abdominal distension, borborygmus, irregular menstruation, dysmenorrheal and leucorrhea.

Indication of the traditional Chinese spinal orthopedic manipulation between L4 and L5 (**L4,5**): Pain in the lumbosacral region, posterolateral gluteal region, anterolateral leg, anterolateral leg sensory disturbance, back foot and great toe, extensor muscles weakness of great toe, irregular menstruation, leucorrhea, dysmenorrheal, irregular menstruation, dysmenorrhea, amenorrhea, leucorrhea, dysgenesis, seminal emission, impotence, frequent urination, urgent urination, enuresis, urolepsia, diarrhea, abdominal distension and constipation.

Indication of the traditional Chinese spinal orthopedic manipulation between L5 and the first sacral vertebra (S1) (**L5,S1**): Pain in the lumbosacral region, posterior gluteal region, posterior thigh and leg, posterolateral leg and lateral three toes sensory disturbance, toes flexion muscles weakness, urolepsia, frequent urination, unsmooth urination, irregular menstruation, leucorrhea, diarrhea, abdominal distension, constipation and fecal incontinence.

Traditional Chinese Spinal Orthopedic Manipulation (TCSOM) is a kind of normal external therapy for treating spinal disorders and spin genic disorders, which often gets good curative effect after the treatment. Most patients’ symptoms are significantly relieved and improved immediately after the treatment of TCSOM. Traditional Chinese spinal orthopedic medicine has already become a subject at many TCM universities in China. However, the indications of each spinal segment treated by TCSOM are scattered in some released traditional Chinese ancient classical books and some medical journals and, not a single book or journal embodies all the indications. Therefore, we collect, summarize and compile all the related indications based on a large amount of traditional Chinese ancient classical books and some medical journals. Hopefully, it will be of great practical value for the further research and development of traditional Chinese spinal orthopedic medicine.

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