Wu Wei Zi (Fructus Schisandrae Chinensis)

五味子
Pinyin Name: Wu Wei Zi  
Literal Name: “five-flavored seed”  
Alternate Chinese Names: Bei Wu Wei, Wu Mei Zi, Bei Wu Wei Zi  
Original Source: Shen Nong Ben Cao Jing (Divine Husbandman’s Classic of the Materia Medica) in the second century  
English Name: schisandra, Chinese magnolia vine fruit, orange magnolia vine fruit  
Botanical Name: Schisandra chinensis Baill. (Bei Wu Wei Zi); Schisandra sphenanthera Rehd. et Wils. (Nan Wu Wei Zi)  
Pharmaceutical Name: Fructus Schisandrae Chinensis  
Properties: sour, warm  
Channels Entered: Kidney, Lung, Heart

CHINESE THERAPEUTIC ACTIONS

1. Contains the Leakage of Lung Qi, Arrests Cough, Nourishes the Kidney
Chronic cough, dyspnea or asthma: Chronic dry cough may cause yin and qi deficiencies of the Lung and Kidney. Manifestations include dry cough, loss of voice, shortness of breath, labored respiration, fatigue, weakness, and a lusterless complexion. Wu Wei Zi (Fructus Schisandrae Chinensis) enters the Lung to stop leakage of Lung qi and enters the Kidney to nourish the Kidney and help it grasp qi.

- Chronic consumptive cough: combine Wu Wei Zi with Bai He (Bulbus Lilii), Sheng Di Huang (Radix Rehmanniae), Shan Zhu Yu (Fructus Corni), Zi Wan (Radix Asteris), and Pi Pa Ye (Folium Eriobotryae).
- Asthma: combine it with Ren Shen (Radix Ginseng) and Ge Jie (Gecko).
- Cough due to wind-cold: a small quantity of Wu Wei Zi is used with Ma Huang (Herba Ephedrae) and Xi Xin (Herba Asari). Exemplar Formula: Xiao Qing Long Tang (Minor Bluegreen Dragon Decoction).

2. Generates Body Fluids, Inhibits Sweating
Spontaneous sweating: When Lung qi and wei (defensive) qi are unable to control the pores, body fluids leak out and spontaneous sweating occurs at any time of the day.

- Spontaneous sweating: combine Wu Wei Zi with Huang Qi (Radix Astragali), Fu Xiao Mai (Semen Tritici Aestivi Levis), Ma Huang Gen (Radix Ephedrae) and Suan Zao Ren (Semen Zizyphi Spinosa).
- Spontaneous and night sweating with qi deficiency: add this herb to Ren Shen (Radix Ginseng) and Mai Men Dong (Radix Ophiopogonis) Exemplar Formula: Sheng Mai San (Generate the Pulse Powder).

Night sweating: Yang qi rises to circulate in the wei (defensive) and qi (energy) levels during the day, and returns to the ying (nutritive) and xue (blood) levels at night. If deficient yin or jing cannot keep the yang in check, yang will push yin or jing outwards (in the form of sweating) when yang returns to the ying and xue levels at night. In other words, night sweats represent loss of body fluids paradoxically caused by yin or jing deficiency.

- Night sweats: combine Wu Wei Zi with Mai Men Dong (Radix Ophiopogonis), Sheng Di Huang (Radix Rehmanniae), Xuan Shen (Radix Scrophulariae), Shan Zhu Yu (Fructus Corni), Long Gu (Os Draconis), Mu Li (Concha Ostreae), Huang Bai (Cortex Phellodendri) and Wu Mei (Fructus Mume).

Thirst: Excessive loss of body fluids causes thirst, as do Liver and Kidney yin deficiencies. Wu Wei Zi can be used effectively with yin tonics to retain body fluids. Wu Wei Zi is commonly used in xiao ke (wasting and thirsting) syndrome when the patient has extreme thirst.

- Thirst: combine Wu Wei Zi with Mai Men Dong (Radix Ophiopogonis), Shi Hu (Herba Dendrobii), Sheng Di Huang (Radix Rehmanniae), Xuan Shen (Radix Scrophulariae) and Wu Mei (Fructus Mume).
- Thirst in xiao ke disorders: add this herb to Shu Di Huang (Radix Rehmanniae Preparata), Shan Yao (Rhizoma Dioscoreae), Tian Hua Fen (Radix Trichosanthis), Shi Gao (Gypsum Fibrosum) and Zhi Mu (Radix Anemarrhenae).
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3. Binds Kidney Jing (Essence), Stops Diarrhea and Spermatorrhea

Chronic diarrhea: Chronic diarrhea or dysentery causes Spleen yang deficiency, jing deficiency and Large Intestine qi deficiency. This type of diarrhea is usually watery, may contain undigested food, and usually occurs in the early morning.

- Chronic diarrhea (especially in the early morning): combine Wu Wei Zi with Bu Gu Zhi (Fructus Psoraleae), Wu Zhu Yu (Fructus Evodiae), Rou Dou Kou (Semen Myristicae), Shan Yao (Rhizoma Dioscoreae), Bai Zhu (Rhizoma Atractylodis Macrocephalae) and Ren Shen (Radix Ginseng). Exemplar Formula: Si Shen Wan (Four-Miracle Pill).

Spermatorrhea, nocturnal emissions: Inability of the Kidney to retain jing (essence) because of deficiency.

- Spermatorrhea: combine Wu Wei Zi with Sang Piao Xiao (Ootheca Mantidis), Jin Ying Zi (Fructus Rosae Laevigatae) and Shanzhu Yu (Fructus Corni).
- Nocturnal emissions: add this herb to Long Gu (Os Draconis), Mu Li (Concha Ostreae), Sheng Di Huang (Radix Rehmanniae), Shan Zhu Yu (Fructus Corni), Jin Ying Zi (Fructus Rosae Laevigatae), and Mu Dan Pi (Cortex Moutan).

Polyuria or urinary incontinence: This type of excessive urination is caused by inability of Kidney qi to retain urine. It is usually light in color and is not accompanied by burning pain.

- Polyuria: combine Wu Wei Zi with Wu Yao (Radix Linderae Strychnifolia), Yi Zhi Ren (Fructus Alpiniae Oxyphyllae), Shan Zhu Yu (Fructus Corni), Shan Yao (Rhizoma Dioscoreae) and Dang Shen (Radix Codonopsis).
- Enuresis or urinary incontinence: add this herb to Sang Piao Xiao (Ootheca Mantidis), Shu Di Huang (Radix Rehmanniae Preparata), Shan Zhu Yu (Fructus Corni), Shan Yao (Rhizoma Dioscoreae), Yi Zhi Ren (Fructus Alpiniae Oxyphyllae), Fu Pen Zi (Fructus Rubi), Ji Nei Jin (Endothelium Corneum Gigeriae Galli) and Xu Duan (Radix Dipsaci).

4. Tranquilizes the Heart, Calms the Shen (Spirit)

Yin and blood deficiencies: Common symptoms of inability of blood to nourish shen include: palpitations, anxiety, insomnia and dream-disturbed sleep. Wu Wei Zi is often combined with tonic herbs to nourish the Heart and calm the shen.

- Insomnia caused by Heart and Kidney yin and blood deficiencies: combine Wu Wei Zi with Bai Zi Ren (Semen Platycladi), Yuan Zhi (Radix Polygalae), Fu Shen (Poria Paradisic), Long Chi (Dens Draconis), Zhen Zhu Mu (Concha Margaritiferae), Long Yan Rou (Arillus Longan) and Dang Shen (Radix Codonopsis). Exemplar Formula: Tian Wang Bu Xin Dan (Emperor of Heaven’s Special Pill to Tonify the Heart).

DOSAGE

2 to 6 grams in decoction, 1 to 3 grams in powder.

- Unprocessed Wu Wei Zi more strongly promotes generation of body fluids and stops perspiration. It is commonly used to treat spontaneous perspiration, night perspiration, and thirst due to loss of body fluids.
- Steaming with vinegar increases the sour taste and enhances the astringent function of this herb. It treats cough, wheezing, spermatorrhea, and chronic diarrhea.
- Steaming Wu Wei Zi with grain-based liquor increases the effect of tonifying the Kidney and consolidating jing (essence). This preparation treats spermatorrhea and nocturnal emissions.

CAUTIONS / CONTRAINDICATIONS

- Use of Wu Wei Zi is contraindicated in excess conditions such as heat, damp-phlegm, Liver fire, wind-heat or rashes that have not cleared.
- It is also contraindicated in the initial stages of common colds, cough, rashes or any exterior condition, as Wu Wei Zi may trap pathogenic factors inside the body.
- Two rare incidences of adverse reactions associated with Wu Wei Zi have been reported. In case one, following the ingestion of an herbal decoction including Wu Wei Zi, the patient reported palpitations, shortness of breath, chest congestion, increased heart rate and pre-ventricular contraction. 1 In case two, the patient reported respiratory suppression following the ingestion of an herbal decoction including Wu Wei Zi.2

CHEMICAL COMPOSITION

Deoxyxchisandrin, kadsururan, schisanhenol, schisanhenol acetate, gomisin, schisandrin, isoschisandrin, schisandrol, angeloylgomisin, tigloylgomisin, benzyolgomisin, rubschisandrin, epigomisin, schisantherin, andeloxylgomisin, tigloylgomisin, binankadsurin, angeloylbibinakadsurin, isobutyrylbibinakadsurin, benzoylbibinakadsurin, rubschisandrin.

PHARMACOLOGICAL EFFECTS

- CNS stimulant: Wu Wei Zi stimulates the central nervous system. It increases mental alertness, improves work efficiency, and quickens reflexes.4
- Hepatoprotective: Administration of Wu Wei Zi is associated with marked hepatoprotective effect against various types of drugs and/or chemical-induced toxicity.5
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One study, a preparation of Wu Wei Zi significantly lowered liver enzymes in mice with elevated SGPT levels caused by intraperitoneal injection of 0.1% carbon tetrachloride. In a follow-up study with rats, mice and rabbits, administration of schisandrol (dosages equivalent to 2.5 and 10.0 g/kg of dried herb) demonstrated marked preventative and treatment effects for carbon tetrachloride-induced liver damage. The mechanisms of hepatoprotective function of Wu Wei Zi are attributed to alteration of liver cell-membrane permeability to prevent the entry of toxic substances, and increased blood flow to the liver and increased regeneration of liver cells.6,7

• Gastrointestinal: Deoxyschizandrin inhibits secretion of gastric acid in rats, and has shown beneficial effects in treatment of gastric ulcers. The effective dose of deoxyschizandrin is 50 to 100 mg/kg.8

• Cardiovascular: Wu Wei Zi appears to have a regulating effect on the cardiovascular system. While it may decrease blood pressure in normal subjects, it may increase blood pressure in those with weakened constitutions. Laboratory studies indicate Wu Wei Zi has vasodilating and cardiotonic effects.9

• Respiratory: Both water and alcohol extracts of Wu Wei Zi stimulate the lungs to increase the rate and depth of respiration. They have also been shown to reverse respiratory depression associated with morphine.10

• Reproductive: Administration of Wu Wei Zi powder at a dosage of 1 g/kg for 30 days in mice is associated with a stimulating effect on reproductive organs. The study reported an increase in weight of the testicles in males and an increase in ovulation in females.11

• Immunostimulant: Administration of Wu Wei Zi is associated with stimulation of non-specific immunity.12

• Antibiotic: Alcohol extract of Wu Wei Zi has an inhibitory effect in vitro against Staphylococcus aureus, Bacillus anthracis, Salmonella typhi, Bacillus dysenteriae, Diplococcus pneumoniae, Vibrio cholerae, and Pseudomonas aeruginosa.13

TOXICOLOGY

In one study, 70 mice were given a 15 g/kg bolus dose of Wu Wei Zi. Observation over the next 72 hours showed no change in appetite, no abnormal behavior, and no fatalities. However, the LD50 for oral ingestion of essential oil of Wu Wei Zi is 8.75 +/- 2.41 g/kg in mice.19

HERB-DRUG INTERACTION

• Cycloheximide: Wu Wei Zi has been found to significantly counteract cycloheximide-induced amnesia in rats. The beneficial effect of the herb is amplified by treatment with serotonergic receptor antagonists, but reduced by serotonergic receptor agonists as well as GABA(A) and cholinergic receptor antagonists.20

AUTHORS’ COMMENTS

Wu Wei Zi and Wu Bei Zi (Galla Chinensis) both stop sweating, diarrhea and spermatorrhoea. Wu Wei Zi tonifies the Kidney and generates body fluids, nourishes the Heart and calms the shen (spirit), while Wu Bei Zi cools deficiency heat and stops bleeding.
13. Ibid.