

Section 3

利水渗湿剂

— Water-Regulating and Damp-Resolving Formulas

Wū Líng Sǎn (Five-Ingredient Powder with Poria)

五苓散

Pinyin Name: *Wu Ling San***Literal Name:** Five-Ingredient Powder with Poria**Alternate Names:** Five-Ling Formula, Poria Powder with Five Herbs, Hoelen Five Herb Formula**Original Source:** *Shang Han Lun* (Discussion of Cold-Induced Disorders) by Zhang Zhong-Jing in the Eastern Han Dynasty**COMPOSITION**

<i>Ze Xie</i> (Rhizoma Alismatis)	3.75g [15g]
<i>Zhu Ling</i> (Polyporus)	2.25g [9g]
<i>Fu Ling</i> (Poria)	2.25g [9g]
<i>Bai Zhu</i> (Rhizoma Atractylodis Macrocephalae)	2.25g [9g]
<i>Gui Zhi</i> (Ramulus Cinnamomi)	1.5g [6g]

DOSAGE / PREPARATION / ADMINISTRATION

The source text instructs to grind the ingredients into powder and take 1 spoonful [6g] with boiled water three times daily. The source text recommends drinking plenty of warm water to promote sweating. Today, it is normally taken in powder form, 3-6g per dose. This formula may also be prepared as a decoction with the doses suggested in brackets.

CHINESE THERAPEUTIC ACTIONS

1. Regulates water circulation and dispels dampness
2. Warms yang and disperses water accumulation

CLINICAL MANIFESTATIONS

1. Exterior syndrome accompanied by accumulation of water and dampness in the interior: headache, fever, irritability, thirst with a strong desire to drink but vomiting immediately after drinking, urinary difficulty, white tongue coating, and a superficial pulse.
2. Accumulation of water and dampness in the interior: edema, loose stools, urinary difficulty, vomiting, and diarrhea due to sudden turmoil disorder.
3. *Tan yin* (phlegm retention): abdominal pulsation below the umbilicus, vomiting of foamy saliva, vertigo, shortness of breath, and possibly coughing.

CLINICAL APPLICATIONS

Acute and chronic nephritis, renal failure, gestational hypertension, urolithiasis, urinary tract infection, liver cirrhosis and ascites, acute enteritis with diarrhea, hydrocephalus, and Meniere's syndrome.

EXPLANATION

Wu Ling San (Five-Ingredient Powder with Poria), as originally used in *Shang Han Lun* (Discussion of Cold-Induced Disorders), treats water accumulation syndrome caused by disorders of both the *taiyang* channel and the *taiyang* organ. This syndrome begins with *taiyang* exterior (channel) syndrome, and, if left untreated, the pathogen may travel via the *taiyang* channel to affect the *taiyang* organ of the Urinary Bladder. At this point, the patient can be said to be suffering from both *taiyang* exterior (channel) and interior (organ) syndromes. Because the exterior condition has not been treated, there will still be exterior symptoms, such as headache and fever. Moreover, the pathogenic factors have moved interiorly to the *taiyang* organ of the Urinary Bladder to impair its water-dispersing function. Because fluids have accumulated in the lower *jiao* and are not being properly dispersed, irritability and a strong desire to drink are present. And since there is already fluid accumulation in the body, vomiting may occur after intake of water. The treatment

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Diagnosis	Signs and Symptoms	Treatment	Herbs
Exterior syndrome accompanied by accumulation of water and dampness in the interior	<ul style="list-style-type: none"> • Headache and fever: exterior condition • Urinary difficulty, strong desire to drink with vomiting after drinking: accumulation of water and dampness in the interior • Superficial pulse: exterior condition 	<ul style="list-style-type: none"> • Regulates water circulation and dispels dampness • Warms yang and disperses water accumulation 	<ul style="list-style-type: none"> • <i>Ze Xie</i> (Rhizoma Alismatis) induces urination and eliminates water accumulation. • <i>Zhu Ling</i> (Polyporus) and <i>Fu Ling</i> (Poria) strengthen the Spleen, resolve dampness, and eliminate water accumulation. • <i>Bai Zhu</i> (Rhizoma Atractylodis Macrocephalae) strengthens the Spleen to dispel water and dampness. • <i>Gui Zhi</i> (Ramulus Cinnamomi) releases the exterior and promotes the flow of yang qi in the interior.

plan for this syndrome is to dispel water accumulation in the interior quickly through diuresis, and to release the *taiyang* syndrome at the exterior.

Ze Xie (Rhizoma Alismatis), the chief herb, directly enters the Urinary Bladder to induce urination and eliminate water accumulation. *Zhu Ling* (Polyporus) and *Fu Ling* (Poria) act as deputy herbs to strengthen the diuretic function of *Ze Xie* (Rhizoma Alismatis). *Bai Zhu* (Rhizoma Atractylodis Macrocephalae) strengthens the Spleen to dispel water and dampness. *Gui Zhi* (Ramulus Cinnamomi) relieves the *taiyang* syndrome with its exterior-releasing action, and promotes the flow of yang qi in the interior to help invigorate the function of the Urinary Bladder.

This formula can also be used to treat edema or urinary difficulty. In addition, since this formula can help the body excrete water through urination, it can also treat the type of diarrhea caused by excessive water or dampness traveling with the feces. The diarrhea stops once the water is separated from the feces and is directed out of the body through urination.

MODIFICATIONS

- With cold and dampness, add *Cang Zhu* (Rhizoma Atractylodis).
- With exterior symptoms, add *Yue Bi Tang* (Maid servant from Yue Decoction).
- With urinary incontinence and *zhong* (central) *qi* deficiency, add *Dang Shen* (Radix Codonopsis).
- With damp-heat jaundice, add *Yin Chen* (Herba Artemisiae Scopariae).
- With edema due to Spleen deficiency, add *Wu Pi Yin* (Five-Peel Decoction) and *Dang Shen* (Radix Codonopsis).

- With edema due to Kidney yang deficiency, add *Wu Pi Yin* (Five-Peel Decoction) and *Fu Zi* (Radix Aconiti Lateralis Praeparata).
- With edema due to Liver qi stagnation, add *Wu Pi Yin* (Five-Peel Decoction), *Qing Pi* (Pericarpium Citri Reticulatae Viride), and *Mu Xiang* (Radix Aucklandiae).
- With severe edema, add *Da Fu Pi* (Pericarpium Arecae), *Sang Bai Pi* (Cortex Mori), and *Chen Pi* (Pericarpium Citri Reticulatae).
- For diarrhea due to heat, remove *Gui Zhi* (Ramulus Cinnamomi) and add *Che Qian Zi* (Semen Plantaginis) and *Mu Tong* (Caulis Akebiae).
- For diarrhea due to damp-heat, add *Jin Yin Hua* (Flos Lonicerae Japonicae) and *Yin Chen* (Herba Artemisiae Scopariae).
- For diarrhea due to summer-dampness, add *Huo Xiang* (Herba Agastaches) and *Pei Lan* (Herba Eupatorii).
- For diarrhea due to summer-heat invasion, add *San Wu Xiang Ru Yin* (Mosla Three Decoction).
- With abdominal bloating and distention, add *Hou Po* (Cortex Magnoliae Officinalis) and *Chen Pi* (Pericarpium Citri Reticulatae).
- With thirst due to summer-heat, add *Bai Hu Tang* (White Tiger Decoction).
- With general thirst, add *Shi Gao* (Gypsum Fibrosum) and *Zhi Mu* (Rhizoma Anemarrhenae).
- With thirst and constipation, add *Gan Cao* (Radix et Rhizoma Glycyrrhizae), *Hua Shi* (Talcum), *Zhi Zi* (Fructus Gardeniae), and *Deng Xin Cao* (Medulla Junci).
- With body aches due to cold and damp accumulation, add *Qiang Huo* (Rhizoma et Radix Notopterygii).

CAUTIONS / CONTRAINDICATIONS

- Because this formula eliminates excess body fluids through the urine, it should not be used for a prolonged period of time.

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- This formula is contraindicated in individuals who have depleted body fluids from profuse perspiration or excessive vomiting or diarrhea, as its use could lead to further loss of body fluids
- *Wu Ling San* is contraindicated in cases of damp-heat accumulation or urinary difficulty due to yin deficiency.
- In order to restore normal water metabolism, the Spleen and Kidney must be tonified if they are deficient, as these two organs regulate water circulation.

PHARMACOLOGICAL EFFECTS

1. **Diuretic:** *Wu Ling San* had a marked diuretic effect in rats 1-2 hours after oral ingestion.¹ Another study reported that intravenous injection of *Wu Ling San* in dogs was associated with increased elimination of urine, sodium, chloride, potassium, and other electrolytes.² Lastly, administration of *Wu Ling San* in healthy adults was associated with 112% increase in urine output without any side effects.³
2. **Antihypertensive:** One study reported a significant and prolonged reduction in blood pressure using a *Wu Ling San* preparation in rats. The mechanism of this antihypertensive effect was attributed to the diuretic and vasodilative actions of the formula. The herbal formula contained the following ingredients: *Zhu Ling* (Polyporus) 9g, *Ze Xie* (Rhizoma Alismatis) 15g, *Bai Zhu* (Rhizoma Atractylodis Macrocephalae) 9g, *Fu Ling* (Poria) 9g, and *Gui Zhi* (Ramulus Cinnamomi) 6g.⁴
3. **Nephroprotective:** Administration of *Wu Ling San* was associated with protecting the kidneys by decreasing plasma levels of blood urea nitrogen (BUN) and creatinine (Cr). This formula was found to also increase urine output, as well as elimination of electrolytes such as sodium, chloride, potassium, calcium, and magnesium.⁵
4. **Hepatoprotective:** *Wu Ling San* has been shown to have a remarkable hepatoprotective effect in mice, especially against alcohol-induced liver damage.⁶
5. **Liver cirrhosis and ascites:** Use of modified *Wu Ling San* was associated with 89% effectiveness for treatment of 43 patients with liver cirrhosis and ascites. The herbal formula contained *Wu Ling San* plus *Dan Shen* (Radix et Rhizoma Salviae Miltiorrhizae), *Che Qian Zi* (Semen Plantaginis), *Bai Mao Gen* (Rhizoma Imperatae), *Da Fu Pi* (Pericarpium Arecae), *Dang Gui* (Radix Angelicae Sinensis), and *Chi Shao* (Radix Paeoniae Rubra) given in decoction. 30g of *Da Huang* (Radix et Rhizoma Rhei) were given via rectal enema. Of 43 patients, the study reported complete recovery in 23 cases, improvement in 13 cases, and no effect in 4 cases. The average duration of treatment was 31 days. Information was unavailable on 3 individuals who did not complete the study.¹²
6. **Hydrocephalus:** Use of modified *Wu Ling San* was beneficial in 4 patients with hydrocephalus. The herbal formula was given in decoction, and contained *Fu Ling* (Poria) 15g, *Da Fu Pi* (Pericarpium Arecae) 15g, *Zhu Ling* (Polyporus) 10g, *Ze Xie* (Rhizoma Alismatis) 10g, *Niu Xi* (Radix Achyranthis Bidentatae) 10g, *Che Qian Zi* (Semen Plantaginis) 10g, *Bai Zhu* (Rhizoma Atractylodis Macrocephalae) 5g, and *Gui Zhi* (Ramulus Cinnamomi) 2g.¹³
7. **Meniere's syndrome:** One study reported success using modified *Wu Ling San* to treat 61 patients with Meniere's syndrome. The herbal treatment contained *Wu Ling San* plus *Dang Shen* (Radix Codonopsis) and *Huang Qi* (Radix Astragali), with additional modifications as needed. The overall effectiveness varied from 71.4-96.8%, depending on the traditional Chinese medical diagnosis. Those diagnosed with Spleen and Heart deficiencies were least responsive, while those with phlegm and damp accumulation were most responsive.¹⁴
3. **Gestational hypertension:** Use of modified *Wu Ling San* was associated with a 75% success rate in treating hypertension during pregnancy. Of 209 patients, the study reported complete recovery in 156 cases. The treatment protocol was to administer the herbs in decoction daily for 10 days per course of treatment. The herbal formula included *Wu Ling San* plus *Sang Ji Sheng* (Herba Taxilli), *Da Fu Pi* (Pericarpium Arecae), *Mu Gua* (Fructus Chaenomelis), and *Sha Ren* (Fructus Amomi).¹⁰
4. **Urolithiasis:** One study reported marked effect using modified *Wu Ling San* to treat urinary stones. Of 53 patients, 33 successfully passed stones. The duration of treatment varied between 2-50 packs of herbs.¹¹

CLINICAL STUDIES AND RESEARCH

1. **Acute nephritis:** According to one study, 36 of 38 patients with acute nephritis had complete recovery using herbs in decoction. The herbal formula contained *Wu Ling San*, *Bai Mao Gen* (Rhizoma Imperatae) and other herbs as deemed necessary. The study reported resolution of edema in 25 cases within 1-5 days, and 13 cases within 6-10 days. The duration of treatment was 15 days or less in 27 cases, 16-30 days in 9 cases, and over 1 month in 2 cases.⁷
2. **Renal failure:** Modified *Wu Ling San* had good results in treating early stages of renal failure. Out of 20 patients, one study reported a marked improvement in 6 cases

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HERB-DRUG INTERACTION

Selective serotonin reuptake inhibitors (SSRIs): Use of *Wu Ling San* was beneficial in relieving adverse gastrointestinal events such as nausea and dyspepsia associated with the use of SSRIs in 20 patients (17 females and 3 males, between 21 to 74 years of age). After adding this formula to the previous drug regimen, the study reported complete disappearance of nausea and dyspepsia in 9 cases, improvement in 4 cases, slight improvement in 2 cases, and no change in 5 cases. Addition of *Wu Ling San* to SSRIs did not cause any adverse events in the 20 patients.¹⁵

RELATED FORMULAS

Sì Líng Sǎn (Four-Ingredient Powder with Poria)

四苓散

Pinyin Name: *Si Ling San*

Literal Name: Four-Ingredient Powder with Poria

Original Source: *Ming Yi Zhi Zhang* (Displays of Enlightened Physicians) by Huang Fu-Zhong in 16th century

<i>Bai Zhu</i> (Rhizoma Atractylodis Macrocephalae)	9g
<i>Fu Ling</i> (Poria)	9g
<i>Zhu Ling</i> (Polyporus)	9g
<i>Ze Xie</i> (Rhizoma Alismatis)	9g

The source text states to prepare the ingredients as a decoction. *Si Ling San* (Four-Ingredient Powder with Poria) is essentially *Wu Ling San* minus *Gui Zhi* (Ramulus Cinnamomi). Its main actions are to regulate water circulation and drain dampness. Clinically, this formula is used to treat interior dampness due to an inappropriate diet (such as excessive intake of dairy, greasy or deep-fried foods), resulting in such symptoms as scanty urine (oliguria) and loose stools.

Bái Máo Gēn Tāng (Imperata Decoction)

白茅根湯

白茅根汤

Pinyin Name: *Bai Mao Gen Tang*

Literal Name: Imperata Decoction

Original Source: *Guang An Men Yi Yuan* (Guang An Men Hospital) in 1990

Bai Mao Gen (Rhizoma Imperatae)

Huang Qi (Radix Astragali)

Lu Xian Cao (Herba Pyrolae)

Shan Zhu Yu (Fructus Corni)

Du Zhong (Cortex Eucommiae)

Huang Bo (Cortex Phellodendri Chinensis)

Fu Ling (Poria)

Mu Li (Concha Ostreae)

Jin Ying Zi (Fructus Rosae Laevigatae)

Shi Wei (Folium Pyrrosiae)

Bai Mao Gen Tang (Imperata Decoction) treats chronic *lin zheng* (dysuria syndrome) with urinary difficulty or anuria. It contains herbs that clear heat, promote normal urination, and eliminate water accumulation. Clinically, it is used to treat kidney disorders such as chronic nephritis, chronic nephrotic syndrome, and proteinuria.

Fú Líng Tāng (Poria Decoction)

茯苓湯

茯苓汤

Pinyin Name: *Fu Ling Tang*

Literal Name: Poria Decoction

Original Source: *Guang An Men Yi Yuan* (Guang An Men Hospital) in 1990

Fu Ling (Poria)

Zhu Ling (Polyporus)

Ze Xie (Rhizoma Alismatis)

Bai Zhu (Rhizoma Atractylodis Macrocephalae)

Sang Bai Pi (Cortex Mori)

Yi Yi Ren (Semen Coicis)

Gui Zhi (Ramulus Cinnamomi)

Hua Shi (Talcum)

Chen Pi (Pericarpium Citri Reticulatae)

Xiang Fu (Rhizoma Cyperi)

He Zi (Fructus Chebulae)

Wu Wei Zi (Fructus Schisandrae Chinensis)

Fu Ling Tang (Poria Decoction) treats edema and urinary difficulty caused by water accumulation. Clinical manifestations include edema, generalized swelling, feelings of heaviness or sluggishness in the body, fatigue, and hypersomnia. This formula contains herbs to strengthen the Spleen, resolve dampness, promote normal urination, and eliminate edema.

AUTHORS' COMMENTS

There are four formulas with similar compositions that regulate water and dispel dampness:

- *Wu Ling San* (Five-Ingredient Powder with Poria) is generally considered the standard formula. It has a dual function to release the exterior syndrome and dispel accumulation of water and dampness in the interior.
- *Si Ling San* (Four-Ingredient Powder with Poria) is formulated by removing *Gui Zhi* (Ramulus Cinnamomi) from *Wu Ling San*. It dispels accumulation of water and dampness in the interior, but does not release the exterior.

Wǔ Líng Sǎn (Five-Ingredient Powder with Poria)

- *Wei Ling Tang* (Calm the Stomach and Poria Decoction) combines *Ping Wei San* (Calm the Stomach Powder) and *Wu Ling San*. It dispels dampness and harmonizes the Stomach to treat accumulation of water and dampness in the interior causing abdominal distention and edema.
- *Yin Chen Wu Ling San* (Artemisia Scoparia and Five-Ingredient Powder with Poria) is formulated by adding *Yin Chen* (Herba Artemisiae Scopariae) to *Wu Ling San* to treat damp-heat jaundice (more heat than dampness) with urinary difficulty.

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Wèi Líng Tāng (Calm the Stomach and Poria Decoction)

胃苓湯
胃苓汤

Pinyin Name: *Wei Ling Tang*

Literal Name: Calm the Stomach and Poria Decoction

Alternate Names: Weiling Decoction, Stomach-Comforting with Five-Ling Decoction, Magnolia and Hoelen Combination

Original Source: *Dan Xi Xin Fa* (Teachings of [Zhu] Dan-Xi) by Zhu Zhen-Heng in 1481

COMPOSITION

<i>Ping Wei San</i> (Calm the Stomach Powder)	3g
<i>Wu Ling San</i> (Five-Ingredient Powder with Poria)	3g

DOSAGE / PREPARATION / ADMINISTRATION

The source text instructs to cook the ingredients with *Sheng Jiang* (Rhizoma Zingiberis Recens) and *Da Zao* (Fructus Jujubae). Take the decoction on an empty stomach.

CHINESE THERAPEUTIC ACTIONS

Dispels dampness and harmonizes the Stomach

CLINICAL MANIFESTATIONS

External cold damaging the Stomach and Spleen during the late summer and early fall: loose stools containing undigested food, continuous diarrhea, edema, fullness of the abdomen, and dysuria.

CLINICAL APPLICATIONS

Chronic gastritis, gastric neurosis, acute enteritis, diarrhea, ascites, nephritis, nephritic and cardiac edema, urinary retention, and Meniere's syndrome.

EXPLANATION

Wei Ling Tang (Calm the Stomach and Poria Decoction) is composed of *Ping Wei San* (Calm the Stomach Powder) plus *Wu Ling San* (Five-Ingredient Powder with Poria). Thus, this formula harmonizes the Stomach and dispels dampness. Clinically, it is often used for external cold damaging the Stomach and Spleen during the late summer and early fall. Patients in this case may have loose stools containing undigested food, continuous diarrhea, edema, abdominal fullness, and dysuria.