



1. Case Study in the Treatment of Male Infertility
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## Case Study in the Treatment of Male Infertility

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Various factors such as the increasing age at which people marry, environmental pollution, and increasing stress have affected the quality of many men's sperm, leading to an increase in many couples' inability to conceive children. According to investigations on infertility done by the WHO in 2004, one out of every four couples has had issues with infertility. Chinese herbal medicine can improve the quality of sperm, and in particular can reduce the percentage of abnormal sperm cells as well as markedly increase their motility. Chinese medicine has the potential to play an important role in reproductive health.

From a medical perspective there are numerous causes of male infertility. Nevertheless, these various causes are independent of each other and the etiology, pathology and treatment for each is unique and specific. Male infertility is best seen as a combination of causes, or a syndrome, that encompasses many pathological factors. Consequently, it is important when diagnosing to properly identify the primary factors involved.



In the *Principles of Women's Health (Furen Gui)* it says, "In regards to illnesses associated with fertility, men's illnesses have to do with essence, whereas women's with blood." It also says, "In most cases of men with deficiency, the problems include: leakage of essence, dilute essence, and cold essence. Also included are those who cannot get firm when the time arrives, those whose essence flows out but cannot be discharged forcefully, those who often have nocturnal emissions, or those with strangury and cloudy urine." These statements point to the causes of male infertility being due to impotence, low sperm count, low sperm motility, high levels of morbid sperm, impotence, premature ejaculation, frequent involuntary loss of semen, turbid strangury, and weak ejaculation.

According to Chinese medicine the most common reasons for infertility include Kidney *Yang* deficiency, Kidney *Yin* damage, deficiency of *Yin* and *Yang*, damp heat accumulation, *Qi* and blood stagnation and deficiency.

## CLINICAL CASE STUDY

### [Patient Information]

Name: Mr. Chen	Gender: male
Marital status: married	Occupation: laborer
Height: 178cm	Weight: 74kg
Age: 45	Date: 4/20/2006

### [Chief Complaint]

No children after three years of marriage

### [Patient History]

The patient was a 45-year-old man who had been diagnosed as having low sperm count, low sperm motility, and a high percentage of abnormal sperm cells. He had been married for three years and his wife had already undergone three unsuccessful attempts at artificial fertilization and one unsuccessful attempt at in vitro fertilization. The patient came to the Tainan Municipal Hospital because his doctor recommended he strengthen his constitution with Chinese medicine before trying in vitro fertilization again.

### [Chinese Medicine Diagnosis]

**Inspection:** Average build (height 178cm, weight 74kg). He had a pale complexion, pink lips, and a pink tongue with a thin white coating.

**Listening and smelling:** No unusual odors. Normal speech.

**Inquiry:** The patient is a laborer and often gets very fatigued because of his work. He complains of lumbar soreness. His bowel movements, urination, and appetite and sleep are all normal, with no bitter taste or dryness in his mouth.

### [Prescription]

<b>Formula</b>	Ginseng & Astragalus Combination ( <i>Bu Zhong Yi Qi Tang</i> )	Supplements <i>Qi</i> and fortifies the Spleen, benefits those who are weak with lumbar soreness and low sperm motility.
<b>Single herbs</b>	Epimedium ( <i>Yin Yang Huo</i> ), Psoralea Fruit ( <i>Bu Gu Zhi</i> ), Cistanche ( <i>Rou Cong Rong</i> ), Cuscuta ( <i>Tu Si Zi</i> ), Curculigo ( <i>Tian Xian Mao</i> ), and Eucommia Bark ( <i>Du Zhong</i> )	Medicinals to warm and supplement Kidney <i>Yang</i>
	Taxilli ( <i>Sang Ji Sheng</i> ), Dendrobium ( <i>Shi Hu</i> ), Eclipta ( <i>Han Lian Cao</i> ), Asparagus ( <i>Tian Men Dong</i> )	Medicinals to enrich and supplement Kidney <i>Yin</i> .
	Astragalus ( <i>Huang Qi</i> )	Medicinals to supplement <i>Qi</i> .

**Palpation:** Blood

pressure: 134/78

**Pulse:** deep

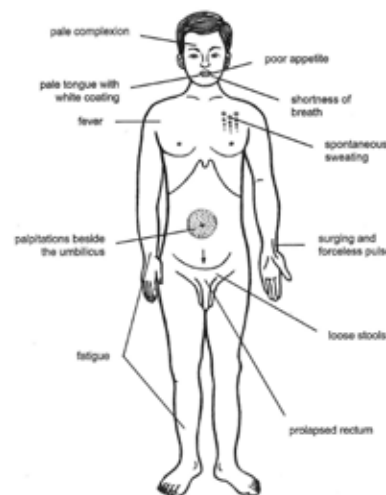
### [Diagnosis]

**Western medical**

**diagnosis:** Infertility

**TCM diagnosis:**

Infertility due to debilitated Kidney *Yang* and Spleen *Qi* deficiency



Pattern of Spleen and Stomach *Qi* Deficiency/Sinking of *Qi*

### [Analysis]

Despite being married for three years the patient and his wife have yet to conceive. The patient had a pale complexion, complained that he often felt fatigued, and had lumbago. He had no complaints of dry mouth or unusual sweating and his appetite was fine. His pulse was deep and his tongue was pink with a thin white coating. Such signs indicate *Qi* deficiency as well as kidney deficiency. An initial examination of the patient's sperm showed that he had low sperm motility, a low sperm count and a high rate of abnormal sperm. The combination of these factors indicated debilitated Kidney *Yang* and Spleen *Qi* deficiency.



Epimedium (*Yin Yang Huo*): This herb is commonly used for treating impotence, seminal emission, and weakness of the limbs.

### [Treatment Plan]

Supplement Kidney *Yin* and *Yang*, fortify the Spleen and raise the *Yang*

## [Treatment Courses]

### ■ Initial visit: 3/9/2006

**Chief complaint:** Sperm 10,000,000/ml, motility 30%, abnormality rate 20%, BM and urination: normal, sleep: normal.

**Examination:** deep pulse, pink tongue with thin white coating

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 6g, Epimedium (*Yin Yang Huo*) 2g, Psoralea Fruit (*Bu Gu Zhi*) 1g, Cistanche (*Rou Cong Rong*) 2g, Cuscuta (*Tu Si Zi*) 2g, Curculigo (*Tian Xian Mao*) 1.5g and Astragalus (*Huang Qi*) 1.5g, taken 3 times/day for 7 days.

### ■ Second visit: 3/16/2006

**Examination:** deep pulse, pink tongue with a thin white coating. Lumbar pain and soreness – add Eucommia Bark (*Du Zhong*).

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 6g, Epimedium (*Yin Yang Huo*) 2g, Psoralea Fruit (*Bu Gu Zi*) 1g, Cistanche (*Rou Cong Rong*) 2g, Cuscuta (*Tu Si Zi*) 2g, Curculigo (*Tian Xian Mao*) 1.5g and Eucommia Bark (*Du Zhong*) 1g, taken 3 times/day for 7 days.

### ■ Third and fourth visits: 3/23 and 4/6/2006

**Examination:** deep pulse, pink tongue with thin white coating.

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 4g, Epimedium (*Yin Yang Huo*) 1.5g, Psoralea Fruit (*Bu Gu Zhi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1.5g, Curculigo (*Tian Xian Mao*) 1g, Eucommia Bark (*Du Zhong*) 0.5g, taken twice/day for 14 days.

### ■ Fifth through ninth visits: 4/20-6/15/2006

**Examination:** deep pulse, pink tongue with a thin white coating. Lumbar pain and soreness, add Taxilli (*Sang Ji Sheng*), Asparagus (*Tian Men Dong*).

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 3.5g, Epimedium (*Yin Yang Huo*) 1.5g, Psoralea Fruit (*Bu Gu Zhi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1.2g, Curculigo (*Tian Xian Mao*) 1g, Eucommia Bark (*Du Zhong*) 1g, Asparagus (*Tian Men Dong*) 0.5g, Taxilli (*Sang Ji Sheng*) 0.5g, taken twice/day for 14 days.



Psoralea Fruit (*Bu Gu Zhi*): This herb is commonly used for impotence, seminal emission, enuresis, frequent urination, and aching of the loins and knees with cold sensation. (Photo courtesy of Brion Research Institute of Taiwan)

### ■ Tenth visit: 6/29/2006

**Examination:** deep pulse, pink tongue with a thin white coating. Dry mouth, add Dendrobium (*Shi Hu*).

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 3.5g, Epimedium (*Yin Yang Huo*) 1.5g, Psoralea Fruit (*Bu Gu Zhi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1g, Curculigo (*Tian Xian Mao*) 1g, Eucommia Bark (*Du Zhong*) 1g, Taxilli (*Sang Ji Sheng*) 0.5g, Dendrobium (*Shi Hu*) 1g, taken twice/day for 14 days.



Cistanche (*Rou Cong Rong*): This herb is commonly used for impotence, infertility, and general weakness with aching of the lower back and knees, and constipation. (Photo courtesy of Brion Research Institute of Taiwan)

### ■ Eleventh visit: 7/13/2006

**Examination:** deep pulse, pink tongue with a thin white coating.

**Prescription:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 3g, Epimedium (*Yin Yang Huo*) 1.5g, Psoralea Fruit (*Bu Gu Zhi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1g, Curculigo (*Tian Xian Mao*) 1g, Eucommia Bark (*Du Zhong*) 1g, Taxilli (*Sang Ji Sheng*) 0.5g, Dendrobium (*Shi Hu*) 1g, Eclipta (*Han Lian Cao*) 0.5g, taken twice/day for 14 days.

### ■ Twelfth visit: 7/27/2006

**Examination:** deep pulse, pink tongue with a thin white coating.

**Formula:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 3g, Epimedium (*Yin Yang Huo*) 2g, Psoralea Fruit (*Bu Gu Zi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1.5g, Curculigo (*Tian Xian Mao*) 1.5g, Eucommia Bark (*Du Zhong*) 1g, Taxilli (*Sang Ji Sheng*) 1g, Dendrobium (*Shi Hu*) 1g, Eclipta (*Han Lian Cao*) 0.5g, taken twice/day for 14 days.

### ■ Thirteenth visit: 8/10/2006

**Examination:** deep pulse, pink tongue with a thin white coating.

**Formula:** Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) 3g, Epimedium (*Yin Yang Huo*) 2g, Psoralea Fruit (*Bu Gu Zi*) 0.7g, Cistanche (*Rou Cong Rong*) 1g, Cuscuta (*Tu Si Zi*) 1.5g, Curculigo (*Tian Xian Mao*) 1.5g, Eucommia Bark (*Du Zhong*) 1g, Taxilli (*Sang Ji Sheng*) 1g, Dendrobium (*Shi Hu*) 1g, Eclipta (*Han Lian Cao*) 0.5g, taken twice a day for 14 days.

**[Treatment Results]**

Post treatment test results indicated the patient's sperm count had increased to 11,000,000/ml and abnormal sperm cells dropped from 20% to 15%, which is within the normal range. The most remarkable improvement was his sperm motility, which jumped from 35% to 75%.

**DISCUSSION**

Chinese medicine has a long history of treating infertility, and many ancient physicians have written extensively on the subject. Overall, the ancients have strongly emphasized internal causes as the source of male infertility. Pathogenic *Qi* is considered secondary to the deficiency of healthy *Qi* recognized the primary underlying cause of infertility in men. Of the various manifestations of deficiency, debilitating deficiency (a severe form of deficiency) stands among the most prevalent factors.

**1. Warm and Supplement Kidney Yang**

This treatment method addresses infertility due to Kidney *Yang* deficiency due to decline of life-gate fire with cold, diluted essence.

Common formulas include:

- Five Seeds for Treating Masculine Sterility Pill (*Wu Zi Yan Zong Wan*)
- Special Pill to Aid Fertility (*Zan Yu Dan*)
- Eucommia & Rehmannia Formula (*You Gui Wan*)

**2. Enrich and Nourish Kidney Yin, Nurture and Engender Essence**

This method is suitable for those patients with Kidney *Yang* depletion and scant *Yin* essence, or those with exuberant ministerial fire that scorches and consumes the *Yin* essence and fluids.

Common formulas include:

- Rehmannia Six Formula (*Liu Wei Di Huang Wan*)
- Achyranthes & Rehmannia Formula (*Zuo Gui Wan*)
- Major *Yin*-Replenishing Pill (*Da Bu Yin Wan*)

**3. Clear and Eliminate Damp-Heat**

This method is used in cases of damp-heat pouring downwards with the heat pathogen distressing the essence chamber. This causes essence and fluids to congeal, which

prevents their proper flow and the inability to impregnate.

Common formulas include:

- Tokoro Combination (*Bi Xie Fen Qing Yin*)
- Anemarrhena, Phellodendron & Rehmannia Formula (*Zhi Bo Di Huang Wan*)

**4. Invigorate Blood and Transform Stasis, Free Up the Essence Pathway**

This method is used for blood stasis and decayed essence obstructing the essence pathway, or in cases of chronic *Qi* stagnation that develops into blood stasis and blocks the channel vessels, inhibiting the generation of essence.

Common formulas include:

- Persica & Achyranthes Combination (*Xue Fu Zhu Yu Tang*)
- Cnidium & Bulrush Combination (*Shao Fu Zhu Yu Tang*)

**5. Supplement Qi and Blood**

Used for cases of infertility due to *Qi* and blood deficiency, and inadequate essence and blood.

Common formulas include:

- Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*)
- Lycium Formula (*Huan Shao Dan*)
- Unicorn-Rearing Pill (*Yu Lin Zhu*)

**CONCLUSION**

According to Chinese medicine theory, the Kidneys store essence and govern reproduction. Kidney *Qi* is a key factor in the reproductive activities of humans and the state of kidney essence and *Qi* directly affects a person's ability to reproduce. Inadequate congenital endowments and the inability to practice sexual temperance can damage the essence and lead to a diminished sperm count, a reduction of its quality and poor motility. Consequently, treatment of male infertility should focus on the Kidneys.

In this case, the patient's poor quality of sperm is caused by essence depletion due to Kidney deficiency and Spleen deficiency, which led to low sperm count and decreased motility. Asthenospermia is due to depletion of Kidney *Yang* as well as deficiency of kidney *Yin* and damp heat accumulation. Treatment thus depends on enriching Kidney *Yin*, coursing the essence pathway of the Kidneys, supplementing Spleen *Qi*, supplementing and invigorate Kidney *Yang*, and

clearing and eliminating damp-heat.

The use of Ginseng & Astragalus Combination (*Bu Zhong Yi Qi Tang*) boosts the *Qi* and fortifies the Spleen and is suitable for those with weak constitutions, lumbar soreness and weakness in the knees. It can also increase sperm motility.

Epimedium (*Yin Yang Huo*), Psoralea Fruit (*Bu Gu Zi*), Cistanche (*Rou Cong Rong*), Cuscuta (*Tu Si Zi*), Curculigo (*Tian Xian Mao*) and Eucommia Bark (*Du Zhong*) warm and supplement Kidney *Yang* and have androgenic functions, which stimulate the formation of sperm. Taxilli (*Sang Ji Sheng*), Dendrobium (*Shi Hu*), Eclipta (*Han Lian Cao*), Asparagus (*Tian Men Dong*) enrich Kidney *Yin* and improve sperm morphology.

### Commonly Used Formulas and Herbs for Treating Male Infertility

Code	Chinese Name	Pin-Yin Name	English Name
0408	六味地黃丸	<i>Liu Wei Di Huang Wan</i>	Rehmannia Six Formula
0415	少腹逐瘀湯	<i>Shao Fu Zhu Yu Tang</i>	Cnidium & Bulrush Combination
0523	右歸丸	<i>You Gui Wan</i>	Eucommia & Rehmannia Formula
0524	左歸丸	<i>Zuo Gui Wan</i>	Achyranthes & Rehmannia Formula
0605	血府逐瘀湯	<i>Xue Fu Zhu Yu Tang</i>	Persica & Achyranthes Combination
0805	知柏地黃丸	<i>Zhi Bo Di Huang Wan</i>	Anemarrhena, Phellodendron & Rehmannia Formula
1311	補中益氣湯	<i>Bu Zhong Yi Qi Tang</i>	Ginseng & Astragalus Combination
1702	還少丹	<i>Huan Shao Dan</i>	Lycium Formula
5615	肉蓯蓉	<i>Rou Cong Rong</i>	Cistanche
6101	淫羊藿	<i>Yin Yang Huo</i>	Horny Goat
6226	補骨脂	<i>Bu Gu Zhi</i>	Psoralea Fruit

## Herb Focus

## Are You Using the Right and Safe Herb?

Sun Ten secures the resources by maintaining long-term relationships with each of the supplying parties and routinely purchasing crops that pass criteria specifications. Purchasing materials directly from the public market can result in problematic source materials with issues such as non-authentic herbal medicinals, contaminated herbal medicinals, toxicity or lacing, and those with inferior constituent ratios. Sun Ten believes that by establishing the professional herb sourcing system, can assure the quality and traceability of herbs.

This spring, from April 11-15, non-profit organization Brion Research Institute of Taiwan and Anhui University of TCM organized the "Sun Ten 2011 Chinese Herb Origin Investigation Program" in Bozhou city of Anhui province, China.

Key purposes of this program is to understand Anhui medicinal herbs origin and resources, visiting geographic authenticated (dao di) herbs origin of Bozhou, and learn basics of specimen preparation and TCM herb processing (pao zhi). Below are the experience shared by participants.

"We want to express our gratitude towards the event, an event that I'd love to repeat it." "I would recommend using Sun Ten products to benefit human health!" by Pedro González, Spain, invited by Harmonia I Naturalesa.

"Seeing is believing. This trip broadened my knowledge and earned a lot of practical experience that I cannot get from books. Sun Ten demonstrates a good model how to control the herb origin to offer consumers the safe, efficacy, consistence Chinese medicine." by Dr. Roger S. Chan, United States, invited by Brion Herbs Corporation.

"This trip is unforgettable. I appreciated Sun Ten organized this educational trip and learnt AnHui University of TCM plays an important role of medical research." by Sui Na, China, invited by Harmonia I Naturalesa.



# Chinese Medicinal Processing Methods

by Dr. Wu-chang Chuang

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## PROCESSING OF CHINESE MEDICINE

Chinese medicinal processing includes various techniques used on traditional Chinese medicinals that serve to address the needs of clinical application, compounding, and the creation of prepared Chinese medicinal products. *Pao Zhi* (炮炙), *Xiu Shi* (修事) and *Xiu Zhi* (修治) are some of the terms used to describe medicinal processing throughout Chinese history. The earliest



implication of the term *Pao Zhi* was the treatment of medicinals with fire, something akin to baking or roasting. *Pao* (炮) means to “wrap substances and heat”, which is akin to dry frying or scalding. *Zhi* (炙) indicates heating with fire or frying with liquids.

The earliest processing techniques were written as footnotes to the medicinals in a given formula, for example: “Rhubarb (*Da Huang*) - 4 liang, washed in alcohol”, “Cornus (*Shan Zhu Yu*) - 4 liang, moistened with alcohol”, “Hoelen (*Fu Ling*) - 3 liang, stirred with milk”, or “Cooked Rehmannia (*Shu Di Huang*) - 8 liang, stirred with Amomi seed alcohol, then steamed nine times and sundried nine times.” Over time greater importance was gradually given to the art of medicinal processing and monographs on herbal processing were written.

Nowadays, the production of Chinese medicinal substances has already moved away from traditional “mom and pop” operations towards centralized, large scale mechanized facilities. This means that there is a greater research going into the mechanization and technological innovations involved in medicinal processing. This has resulted in greater standardization and modernization of the entire process and a more scientific approach to Chinese medicinal processing in general.

Because the use of herbal medicine in modern times has tended towards standardization, the traditional idea of “one medicinal one method” for herbal processing no longer exists. There are numerous traditional processing methods that are very unique and result in a medicinal that is particularly effective, nevertheless many of these techniques have been lost. Currently there are few of the old time processors left yet many of them are reluctant to share the knowledge they have gained over a lifetime of work in the field. The traditional processing techniques are all but gone and deserve special attention, lest they be lost forever.



① Traditional frying wok      ② Modern mechanized facility  
③ Traditional steaming stove      ④ Modern steaming equipment

According to modern scientific research, there are numerous purposes for medicinal processing which include the following:

- Reduce unwanted side effects of the medicinals
- Change the original nature and function of the medicinal
- Making the medicinal more brittle
- Remove impurities and unwanted parts from the medicinals
- Improve solubility
- Strengthen the functions of the medicinal
- Prolong shelf life
- Rectify flavor, eliminate odors and alter color

## RECORDS ON PROCESSING

In the third printing of the 1977 edition of the Pharmacopoeia of People's Republic of China (PPRC), under the section on General guidelines for medicinal processing, processing is divided into three categories: *jingzhi* – “clean” processing, *qiezhi* – cutting processing, and *paozhi* – processing with fire; following editions of the Pharmacopoeia have continued to use these categorizations. Modern processing methods have gone far beyond the scope of using fire to process medicinals. Consequently, the ancient character of *paozhi* (炮炙), processing with fire, is now generally replaced with *paozhi* (炮制), which includes processing with fire but also refers to all methods of processing. *Pao* (炮) refers to the various processing methods that use fire in some capacity. *Zhi* (製) is a general term that means “to make” and includes the numerous processing methods common today. Its meaning is more indicative of current practices.

Most of those in the medicinal herb industry refer to the craft of *paozhi* as “*yin pian* processing” or “*yin pian paozhi*” (*yin pian* means sliced medicinals). “*yin pian* processing” usually refers to medicinals that have been cleaned and sliced, whereas “*yin pian paozhi*” refers to sliced or unsliced medicinals that have been treated with fire, water or a combination of the two so as to steam, stir-bake with some sort of fluid, calcine, cook, or soak.



Processing of Pinellia Rhizome with Ginger (*Jiang Ban Xia*)

The 2010 edition (ninth printing) of the PPRC has a new orientation and standard for medicinal processing. In addition to increasing the number of criterion for standardization, it also listed the medicinals that undergo various processing methods separately, thus treating them as separate entries while also clarifying the channels to which each distinct specimen homes to as well as their functions and primary symptoms treated. Some examples are, Pinellia Rhizome processed with Alum (*Qing Ban Xia*), Pinellia Rhizome processed with Ginger (*Jiang Ban Xia*), and Processed Multiflorum (*Zhi Shou Wu*). In addition, the pharmacopoeia has new definitions and corrections of general processing

methods that better reflect current craft operations and the functions of processing equipment.

## CHINESE MEDICINAL PROCESSING METHODS AND EXAMPLES

The PPRC is the chief source in Mainland China for the handling standards for Chinese medicinals. According to the 2010 edition of the pharmacopoeia, the processing methods for Pinellia Rhizome (*Ban Xia*) and White Atractylodes (*Bai Zhu*) are as follows:

### ■ Pinellia Rhizome (*Ban Xia*)

#### 1. Raw Pinellia Rhizome (*Sheng Ban Xia*)

**Properties:** acrid, warm, toxic

**Channels entered:** Spleen, Stomach and Lung

**Actions and Indications:** Dries dampness and transforms phlegm, settles rebellious *Qi* and alleviates vomiting, eliminates focal distention and disperses binds. Used for dampness phlegm and cold phlegm, cough and dyspnea with copious phlegm, dizziness and palpitations due to phlegm-rheum, vertigo due to wind-phlegm, phlegm reversal headache, vomiting and stomach reflux, focal distention and a sense of congestion in the chest and epigastrium, and plum pit *Qi*. Used externally for abscesses and phlegm nodules.



Pinellia Rhizome (*Ban Xia*)

#### 2. Pinellia Rhizome processed with Alum (*Qing Ban Xia*)

**Properties:** acrid, warm

**Channels entered:** Spleen, Stomach and Lung

**Processing method:** Separate cleaned Pinellia Rhizome (*Ban Xia*) into small and large sizes. Soak the Pinellia in an 8% Alum (*Bai Fan*) solution until thoroughly saturated and the specimen slightly numbs the tongue when tasted. Remove the Pinellia, wash it, cut into thick slices, and then dry. Use 20kg of Alum for every 100kg of Pinellia.



Left: Raw Pinellia Rhizome (*Sheng Ban Xia*)  
Right: Pinellia Rhizome processed with  
Ginger (*Jiang Ban Xia*)

(Photo courtesy of Brion Research Institute of Taiwan)

**Actions and Indications:** Dries dampness and transforms phlegm. Used for phlegm-damp cough, focal distention and fullness in the epigastrium, inability to expectorate congealed phlegm-drool.

### 3. Pinellia Rhizome processed with Ginger (*Jiang Ban Xia*)

**Properties:** acrid, warm

**Channels entered:** Spleen, Stomach and Lung channels

**Processing method:** Separate cleaned Pinellia Rhizome (*Ban Xia*) into small and large sizes. Soak in water until thoroughly saturated. Take fresh ginger, slice and cook in water. Add Alum (*Bai Fan*) along with the Pinellia Rhizome (*Ban Xia*) to the ginger decoction and cook until the Pinellia is cooked through. Remove and air dry until it is half dry, then slice and finish drying.

Use 25kg of Ginger (*Sheng Jiang*) and 12.5kg of Alum (*Bai Fan*) per 100kg of Pinellia Rhizome (*Ban Xia*).

**Actions and Indications:** Warms the middle and transforms phlegm, settles rebellious *Qi* and alleviates vomiting. Used for retching and vomiting due to phlegm-rheum, and focal distention and fullness in the epigastrium.

### ■ White Atractylodes (*Bai Zhu*)

#### 1. White Atractylodes (*Bai Zhu*)

**Properties:** bitter, acrid, warm

**Channels entered:** Spleen and Stomach

**Actions and Indications:** Fortifies the Spleen and boosts *Qi*, dries dampness and disinhibits water, arrests sweating, and “calms the fetus”.

Used to treat Spleen deficiency with poor appetite, abdominal bloating and diarrhea, dizziness or palpitations due to phlegm-rheum, edema, spontaneous sweating, and restless fetus.

#### 2. White Atractylodes Stir-fried with Bran (*Fu Chao Bai Zhu*)

Sprinkle honey-baked wheat bran into a wok until it begins to smoke. Add sliced White Atractylodes (*Bai Zhu*) and dry-fry until golden brown; avoid burning. Remove and sift out the honey-baked wheat bran. Use 10kg of honey-baked bran for each 100kg of sliced White Atractylodes (*Bai Zhu*).

White Atractylodes Stir-fried with Bran (*Fu Chao Bai Zhu*) is less dry in nature than unprocessed white Atractylodes and is better at strengthening the Spleen.



White Atractylodes (*Bai Zhu*)

### CONCLUSION

The effectiveness of Chinese medicinals is contingent on proper processing. Different processing methods will produce different products with different effects. For example Raw Pinellia Rhizome (*Sheng Ban Xia*) is able to dry dampness and transform phlegm, settle rebellious *Qi* and stop vomiting, as well as eliminate focal distention and disperse binds. Processing Pinellia Rhizome processed with Alum (*Qing Ban Xia*) strengthens its ability to dry dampness and transform phlegm as well as reduces its toxicity. Pinellia Rhizome processed with Ginger (*Jiang Ban Xia*) primarily warms the middle burner, transforms phlegm, settles rebellious *Qi* and checks vomiting. Processing with ginger also reduces Pinellia's toxicity.

White Atractylodes (*Bai Zhu*) fortifies the Spleen and boosts *Qi*, dries dampness and disinhibits water, arrests sweating, and “calms the fetus”, while dry-frying White Atractylodes with wheat bran (*Fu Chao Bai Zhu*) primarily serves to mollify its dry nature and strengthen its ability to fortify the Spleen.

If a practitioner wants to strengthen the effects of a Chinese medicinal formula, it is best to choose medicinals that have undergone processing techniques, which are appropriate to the needs of the patient. This will ensure a more precise formula and better results. Practitioners should reference classical sources and use medicinals that have been processed according to proper standards. In recent years people with traditional processing skills have diminished in number and use of proper techniques has declined. Consequently, certain unique processing methods have been lost and others are in danger of not being passed on unless this issue receives the proper attention it deserves.