LESSON 11: Herbs that Warm the Interior, Expel cold and Herbs that Tonify Yang

Herbs That Warm the Interior and Expel Cold

Herbs that warm the interior are a group of warming herbs that are very similar to yang tonifying herbs, both are warming but this group has stronger actions for expelling the cold. In practice yang tonics and herbs that expel cold and warm the interior are used together.

In general, cold and yang deficiency present simultaneously. The etiology may be a development of external cold moving interiorly and depleting yang, or a deficiency of yang allowing cold to develop in the interior. Accompanying symptoms of interior cold are: cold extremities, aversion to cold, no thirst or desire for warm fluids, loose stools, white tongue coating, tight pulse and a pale or bluish complexion. The differentiating factor of interior cold from yang deficiency is a lack of sweating, when there is a predominant yang deficiency there will be sweating.

Biomedically, these herbs are cardiotonics and stimulate blood flow. They aid digestion, increase intestinal nutrient absorption, release nausea and vomiting. Traditionally, they are considered warming to the kidney and spleen, and are generally pungent warm and drying. As with all warm herbs it is important to use caution when there is yin deficiency and heat.

Herbs that warm the interior and expel cold are:
- Fu zi - *Aconitum carmichaeli*
- Gan jiang - *Zingiber officinale*
- Rou gui - *Cinnamomum cassia*

Herbs That Tonify Yang

Yang and qi are the functional aspects of the body. When deficient, both are characterized by weakness and fatigue; yang is an extension of qi deficiency and also shows signs of cold. Organs that typically show signs of yang deficiency are spleen, kidney and heart.

Symptoms of spleen yang deficiency include: weakness of the 4 limbs and digestive dysfunction; symptoms of heart yang deficiency include: cold limbs, chest pain, heaviness and congestion of the thoracic region; kidney yang deficiency will show symptoms of sexual dysfunction, endocrine deficiency, delayed development, low back pain and immune weakness. Yang tonics are used to warm and stimulate the body's functions, regulating hormones, digestion and improving immune function.
Some of these herbs tonify yang as well as yin, and are useful for rehabilitation, developmental delays or athletic performance improvement.

Yang tonics reviewed in this section are:

- Lu rong - *Cervus Nippon*
- Dong chong xia cao - *Cordycps sinensis*
- Ba ji tian - *Morinda officinalis*
- Hu tao ren, - *Juglans regia*
- Bu gu zhi - *Psoralea corylifolia*
- Du Zhong - *Eucommia ulmoides*
**Fu Zi Aconitum carmichaeli**

*Family: Ranunculaceae*

**Part used:** root (radix)

**Other names:** shu fu zi, fu pian, fu kuai, chuan fu zi, wu tou, chuan wu, cao wu, root of Sichuan aconite, prepared aconite, Monkshood. Blue Rocket. Friar's Cap. Auld Wife's Huid

**Plant description:** Good quality is large and solid with a salty-white surface

**Habitat, ecology and distribution:** Sichuan, Shaanxi; harvested in summer, when the daughter root is separated from the parent, or winter when the parent root has withered.

**History:** Divine Husbandman's Classic of Materia Medica

** Constituents:** hypaconitine, aconitine, mesaconitine, talatisamine, chuan-wu-base A, chuan-wu-base B.

**Energetics Properties and Channels Entered:** pungent, hot and toxic, entering the heart, kidney and spleen meridians.

**Actions and Indications:** antihypertensive, vasodilator, anti-inflammatory, pituitary/adrenal stimulant, adrenergic, antipyretic, cardiotonic, sedative

**Medical Research:**
- Preparations of fu zi given to anesthetized dogs or cats demonstrated a sharp and transient drop in blood pressure that was reversed by a large dose of atropine. In another experiment it was discovered that fu zi caused vasodilation in the lower extremities, as well as the coronary vessels. In normal dosage for humans, fu zi causes bradycardia and slightly lowers the blood pressure, while a large overdose can cause tachycardia or even ventricular fibrillation. Although some of this effect is mediated through the vagus nerve, most of it is believed to be a direct effect. Very high concentrations of calcium block the fibrillation caused by aconitine, which is one of the primary ingredients of this herb. Aconitine is not itself a cardiotonic, but a product of its decoction, aconine, it has a toxicity 1/2000- 1/4000 that of aconitine. This herb does appear to have some cardiotonic function, as well as a regulatory effect on the rhythm of the heart. In one experiment on frog hearts, water in which this herb had been cooked for over 10 hours still had a very weak cardiotonic effect. Many investigators, especially in Japan, believe that the alkaloids are not the source of the cardiotonic action of this herb. Reports from research in China, however, state that preparations of this herb without alkaloids are not cardiotonic, while those with alkaloids are cardiotonic. Fu zi in
combination with other herbs such as rou gui (Cortex Cinnamoni Cassiae), ren shen (Radix Ginseng), gan jiang (Rhizoma Zingiberis Officinalis) and gan cao (Radix Glycyrrhizae Uralensis) raised blood pressure in animals with acute hemorrhage. But a combination of the first two herbs lowered renal hypertension in rats.1

• In one study, 13 patients with congestive heart failure of various etiologies were treated by intramuscular injections of a preparation of fu zi. In all cases, including one of cardiogenic shock, there was improvement in cardiac output, dyspnea, hepatomegaly, and edema. In a few cases, side effects of flushing and slight tremor; appeared, but these were transient and self-limited. 2

• Decoctions of fu zi given either orally or intraperitoneally had significant anti-inflammatory effects against artificially-induced arthritis in animals.3

• Fu zi can reduce the content of vitamin C in the adrenal cortex in rats. Other experiments have shown that it increases the urine content of 17-hydroxysteroid while decreasing the peripheral numbers of neutrophils, and therefore stimulates the pituitary-adrenal axis. Mice given decoctions of this herb showed an increase in secretions by the adrenal cortex and the metabolism of sugar, fats, and proteins. In one clinical study, when fu zi was given to patients with adrenal insufficiency, there was improvement in their condition. However, in another experiment when rough extractions of this herb were given to rats and mice, they showed no sign of any adrenergic effect. 4

• Aconitine in doses of 0.1-0.2mg/kg has the effect of diminishing both conditioned and non-conditioned reflexes, as well as lowering the concentration of ammonia throughout the brain. Aconitine injected into the fourth ventricle of rabbits in a dosage of 0.002mcg/kg produced an anesthetic effect. It was determined from the tail-flick test that aconitine inhibits the respiratory centers in animals, leading to slower breathing.5

• When applied to peripheral sensory receptors, aconitine first stimulates and gives a burning, itching sensation that progresses to numbness.6

• In one experiment aconitine lowered the temperature of both febrile and normal animals. 7

• Experiments in Nanjing on the roots of both Aconitum carmichaeli and Aconitum chinense showed that lengthy decoction increased the cardiotonic effect of both while decreasing toxicity; that between the two, Aconitum carmichaeli had a stronger effect. In these experiments it was felt that the concentration of calcium influenced the degree of cardiotonicity.8

**Toxicity, Contraindications and cautions:** Fu zi is a very toxic drug. Toxicity varies widely depending on the source of the herb, when it was harvested, how it was prepared and how long it was decocted.
For example, the toxicity of fu zi from different locales was found in one study to vary 8-fold. Preparation usually removes much of the toxicity; in one study the toxic properties of the drug had been reduced 81%. Another study found that there was no linear relationship between the amount of alkaloid in the herb and its toxicity. Animals in a hypersympathetic state are more susceptible to the toxic effects than tired or hungry ones. A toxic dose is usually far above normal levels, on the order of 15-60g. When a massive dose of fu zi is administered to animal, atropine reduces the changes on ECG, and in some studies, also reduces mortality. Lidocaine has been shown to be very useful in reducing the morality rate of animals in experimental over dosage of fu zi. Clinically, atropine has been very effective in treating over dosage of this herb.

When gan cao (Rhizoma Glycyrrhizae Uralensis) and gan jiang (Rhizoma Zingiberis Officinalis) are combined with this herb in decoctions, its toxicity is substantially diminished. Xi jiao (Cornu Rhinoceri), jin yin hua (Flos Lonicerae Japonicae) and lu dou (Semen Phaseoli Radiatt) also reduce its toxicity.

Signs of toxic overdose include drooling, nausea, vomiting, diarrhea, lightheadedness, blurred vision and numbness in the mouth and extremities. In advanced cases there may be premature atrial contractions, dyspnea, tremors, incontinence, stupor and reduced temperature and blood pressure.

Contraindicated in cases of yin deficiency with false cold and true heat, and during pregnancy. Traditionally not to be used together with bei mu (Bulbus Fritillariae), gua lou (Fructus Trichosanthis), bai ji (Rhizoma Bletillae Striatae), ban xia (Rhizoma Pinelliae Ternatae) or bai wei (Radix Cynanchi Bai wei).

According to some traditional sources, this herb antagonizes wu gong (Scolopendra Subspinipes) and counteracts xi jiao (Cornu Rhinoceri) and lu dou (Semen Phaseoli Radiatt). Note that the latter 2 herbs are used to reduce the toxicity of this herb.

**Medicinal uses:**

- Restores devastated yang: for devastated yang disorders where the yang qi is extremely weak and the cold yin is abundant. Symptoms include: diarrhea containing undigested food particles, chills, cold extremities and a faint or imperceptible pulse. This condition often occurs after severe vomiting, diarrhea or sweating. This herb is critical in these situations since it both assists the heart yang to unblock the vessels and improve circulation, and tonifies the kidney yang to augment the fire and avoid loss of the basal yang.

- Warms the fire and assists the yang: for any problem associated with weakness or deficiency of the heart, spleen or kidney yang. It is a widely used herb, especially when the pattern involves interior cold due to yang deficiency.
• Disperses cold, warm the meridians and alleviates pain: for wind-damp=cold painful obstruction, especially when cold is predominant. Also for cold blocking the organs, meridians sinews, bones or blood vessels.

• Orally, Fu Zi / Aconite is used for pain, facial paralysis, joint pain, arthritis, gout, rheumatic complaints, inflammation, pleurisy, pericarditis sicca, fever, skin and mucosal diseases, disinfection, and wound treatment.

• Topically, Fu Zi / Aconite is used as a counterirritant in a liniment.

• Historically, Fu Zi / Aconite has been used orally as a cardiac depressant and an agent to induce mild sweating. Aconite has been used topically for facial neuralgia, rheumatism, and sciatica. 10

**Pharmacy and dosage:** 1.5-15g. Boil 30-60 minutes before adding other ingredients in a decoction and then cook the decoction as prescribed (typically another 30-40 minutes), this reduces its toxic properties. Always use Zhi Fu Zi (prepared) as this also greatly reduces its toxicity.

**Major Combinations:**

- With gan jiang (Rhizoma Zingiberis Officinalis) to warm the spleen and kidneys, benefit the yang and disperse cold. Add a large dose of gan cao (Radix Glycyrrhizae Uralensis) to strengthen the combination's action in fortifying the qi and benefiting the yang. Used for chills, cold extremities and diarrhea containing undigested food due to collapse of the spleen and kidney yang.
- With ren shen (Radix Ginseng) for severe deficiency of the source qi and collapse of the yang qi. Symptoms include cold extremities, sweating, weak breathing, dizziness and an extremely pale complexion.
- With rou gui (Cortex Cinnamomi Cassiae) and shu di huang (Radix Rehmanniae Glutinosae Conquitae) for kidney yang insufficiency with waning of the gate of vitality. Symptoms include aversion to cold, weak and sore lower back and legs, impotence and urinary frequency.
- With bai zhu (Rhizoma Atractylodis Macrocephalae) for wind damp painful obstruction.
  - Add fu ling (Sclerotium Poriae Cocos) for kidney and spleen yang deficiency with retention of pathogenic water. Symptoms include abdominal pain aggravated by cold, urinary difficulty and deep aching and heaviness in the extremities.
  - Add gan jiang (Rhizoma Aingiberis Officinalis) for internal ascendance of yin cold leading to lack of arousal of spleen yang. Symptoms include pain and cold in the abdomen with watery diarrhea.
- With ren shen (Radix Ginseng) and gui zhi (Ramulus Cinnamomi Cassiae) for weak heart yang with palpitations, shortness of breath and chest pain.
- With huang qi (Radix Astragali Membranaceus) for spontaneous sweating and chills due to yang deficiency.
• With gui zhi (Ramulus Cinnamomi Cassiae) for damp cold painful obstruction in the meridians with generalized aches and pains and difficulty in rotating the torso.
• With ma huang (Herba Ephedrae) and xi xin (Herba cum Radice Asari) for externally contracted wind cold in cases with preexisting yang deficiency.

ADDENDUM
Wu tou (Radix Aconiti) is an alternative form of this herb. In ancient times there was no consistent differentiation of subtypes; two are now recognized. The first is Sichuan aconite - chuan wu (Aconiti Carmichaeli); it is pungent bitter, warm and very toxic, and enters the heart, liver and spleen meridians. It is used to expel wind dampness, disperse cold, and alleviate pain in the treatment of such disorders as damp cold painful obstruction, cold and pain in the chest and abdomen, intense headaches, and pain from trauma. It is more effective than zhi fu zi (Radix Lateralis Aconiti Carmichaeli Praeparata) in dispelling cold and alleviating pain, but is more toxic and has less tonifying properties. The dosage is 1.5-9g, and the contraindications are identical to those of the principal herb. It should also be cooked for 30-60 minutes before adding other ingredients to the decoction.
The second subtype is wild aconite, or cao wu (Radix Aconiti Kusnezoffii). It is usually wild rather than cultivated, and has properties and action that are similar to the first subtype, but is both stronger and more toxic. Its use is rare.11

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**Gan Jiang** *Zingiber officinalis*  
干姜  

**Family:** Zingiberaceae  

**Other names:** dan gan jiang, dried ginger rhizome, dried ginger  

**Plant description:** Good quality is solid with a grayish yellow exterior and a powdery, grayish white cross section.  

**Part used:** root  

**Habitat, ecology and distribution:** Sichuan, Guizhou, and elsewhere in China; harvested in winter after aerial parts have withered.  

**History:** Divine Husbandman's Classic of the Materia Medica  

**Constituents:** zingiberene, phellandrene, camphene, shogaol, gingerol, zingiberone, borneol, zingiberol, citral  

**Energetics Properties and Channels Entered:** pungent and hot, entering the heart, lung, spleen and stomach meridians  

**Actions and Indications:** hypertensive  

**Medical Research:**  
- By acting on the central sympathetic centers, gan jiang raises blood pressure.¹  
- Ginger extracts have been extensively studied for a broad range of biological activities including antibacterial, anticonvulsant, analgesic, antiulcer, gastric anti-secretory, antitumor, antifungal, antispasmodic, antiallergenic, and other activities. Gingerols have been shown to be inhibitors of prostaglandin biosynthesis. Danish researchers at Odense University have studied the anticoagulant properties of ginger and found that it was a more potent blood-clotting agent than garlic or onion. The same research group studied the potential use of ginger in the treatment of migraine, based on the long history of ginger use for neurological disorders by practitioners of India’s traditional medicine system known as Ayurveda. The researchers proposed that ginger might exert migraine-headache-relieving and preventative activity without side effects.²  
- Other scientific studies show that gingerol, one of the primary pungent principles of ginger, helps counter liver toxicity by increasing bile secretion. Ginger has potent anti-microbial and anti-oxidant (food preservative) qualities as well. A recent study, furthering ginger's reputation as a stomachic, shows that acetone and methanol extracts of ginger strongly inhibits gastric ulceration.³
**Toxicity, Contraindications and cautions:** contraindicated in cases of yin deficiency with heat signs, or the reckless movement of hot blood. Use with caution during pregnancy.

**Medicinal uses:**
- Warms the middle and expels cold: for warming the spleen and stomach both in condition of excess due to externally contracted cold, as well as cold from deficiency due to insufficiency of yang qi.

- Rescues devastated yang and expels interior cold: for devastated yang with such signs as a very weak pulse and cold limbs.

- Warms the lungs and transforms phlegm: for lung cold with expectoration of thin, watery or white sputum.

- Warms the meridians and stops bleeding: for cold from deficiency that may present with hemorrhage of various types, especially uterine bleeding. It is used in treating hemorrhage only if the bleeding is chronic and pale in colour, and is accompanied by cold limbs, ashen white face and a soggy, thin pulse.

- In foods and beverages, ginger is used as a flavoring agent.

- In manufacturing ginger is used as a fragrance component in soaps and cosmetics. The oleoresin of ginger is also used as an ingredient in digestive, laxative, antitussive, anti-flatulent, and antacid preparations.

**Pharmacy and dosage:** 3-12g.

**Major Combinations:**
- With gan cao (*Radix Glycyrrhizae Uralensis*) for epigastric pain and vomiting due to cold deficiency of the stomach and spleen.
- With gao liang jiang (*Rhizoma Alpiniae Officinar*) for abdominal pain and vomiting due to stomach cold.
- With ban xia (*Rhizoma Pinelliae Ternatae*) for vomiting due to cold induced congested fluids. Add ren shen (*Radix Ginseng*) for vomiting due to cold from deficiency.
- With huang lian (*Rhizoma Coptidis*) for epigastric pain and distention, dysenteric disorders and indeterminate gnawing hunger. The latter is a disorder characterized by a feeling of hunger, vague abdominal pain or discomfort sometimes accompanied by belching, distention and nausea, which gradually culminate in pain.
- With hou po (*Cortex Magnoliae Offininalis*) for epigastric distention and pain due to cold induced congealed fluids.
- With bai zhu (*Rhizoma Atractylodis Macrocephalae*) for diarrhea associated with spleen deficiency. Char both herbs for treating bloody stool and excessive uterine bleeding.
• With wu wei zi (Fructus Schisandrae Chinensis) and xi xin (Herba cum Radice Asari) for coughing and wheezing due to cold congested fluids preventing the normal descent of the lung qi.

ADDENDUM
Compared with sheng jiang (Rhizoma Zingiberis Officinalis Recens), gan jiang is more effective in warming the middle burner and expelling interior cold, while sheng jiang promotes sweating and disperses exterior cold.

Pao jiang (quick fried Rhizoma Zingiberis Officinalis) is made by frying the herb until the surface is slightly blackened. It is bitter, astringent, and warm, entering the liver and spleen meridians. It is less potent for warming the interior, but is effective in stopping the bleeding associated with cold from deficiency. Some sources suggest that it is more effective than gan jiang in treating lower abdominal disorders.6

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Rou Gui *Cinnamomum cassia*  
肉桂

**Other names:** cinnamon bark, inner bark of Saigon cinnamon, gui sin, guan gui

**Plant description:** Good quality has a thick cortex, a purplish red cross-section and oily and aromatic.

**Part used:** bark (cortex)

**Habitat, ecology and distribution:** Guangdong, Guangxi, Yunnan, Fujian, Vietnam; harvested September to October from trees that are at least 7 years old (also harvested April to May, but this is poorer quality)

**History:** Tang Materia Medica

**Constituents:** cinnamaldehyde, cinnamyl acetate, phenyl propyl acetate. Its volatile oil contains cinnamic aldehyde, cinnamic acid and cinnamyl acetate, can promote saliva secretion and digestion, and exert an antispasmodic effect on smooth muscles of internal organs.1

**Energetics Properties and Channels Entered:** pungent, sweet and hot, entering the heart, kidney, liver and spleen meridians.

**Actions and Indications:** tranquilizing, antipyretic, antibiotic

**Medical Research:**
- In experiments on mice, cinnamaldehyde had a tranquilizing effect as measured by a decrease in activity. It counterbalanced the stimulatory effect of methamphetamine, and enhanced the effect of Phenobarbital. It also showed an analgesic effect. Cinnamaldehyde delayed the onset of convulsions and death in animals infected with an overdose of strychnine. 2
- Cinnamaldehyde had an antipyretic effect in mice given typhoid vaccine at the same time they were inoculated with *Salmonella typhi*. It also lowered the temperature of normal mice. 3
- A combination of rou gui and fu zi was useful in treating rats with artificially induced adrenal hypertension, but not renal hypertension.4
- Rou gui has shown a very strong inhibitory effect in vitro against many gram positive bacteria and pathogenic fungi. 5
- An alcohol based preparation of rou gui injected into the acupuncture point BL 13 (lung shu point) bilaterally was very effective in controlling bronchial asthma in 19 of 21
cases. Of the remaining 2 cases, one showed some improvement and the other had no change. A limited follow up one month later showed no recurrences. 6

**Toxicity, Contraindications and cautions:** contraindicated in cases of yin deficiency with heat signs, interior excess heat and the reckless movement of blood. Use with caution during pregnancy. Rou gui is a very safe herb, but a large dose can cause respiratory changes, dilation of the auricular blood vessel and convulsions. Toxicity is related to the oil of the herb and varies between different species of animals.

**Medicinal uses:**

- **Warms the kidneys and fortifies yang:** for a wide variety of problems due to insufficiency of kidney yang and waning of the gate of vitality. Common manifestations include: aversion to cold, cold limbs, weak back, impotence and frequent urination. Also for waning of the spleen and kidney yang with abdominal pain and cold, reduced appetite, and diarrhea. Also important for wheezing due to the failure of the kidneys to grasp qi.

- **Leads the fire back to its source:** the principal herb for treating the upward floating of deficient yang. Manifestations include: flushed face, wheezing, severe sweating (sweat pouring out like oil), weak and cold lower extremities, and a deficient and rootless pulse. This pattern is called false heat and true cold, or heat above/cold below. Also used for other conditions where the upper part of the body is hot and the lower part is cold.

- **Disperses deep cold, warms and unblocks the meridians and vessels, and alleviates pain:** for deep cold causing qi stagnation or blood stasis. Associated problems include: cold in the blood causing amenorrhea or dysmenorrhea, damp cold painful obstruction, yin type boils (chronic sores that are usually concave and ooze clear fluid) and abscesses or sores that do not heal.

**Pharmacy and dosage:** 1.5-4.5g. Crush into small pieces before using. Usually it is taken as a powder, pill or tincture. It is rarely decocted because this causes the loss of the volatile oils, which carry much of its effect. When used with decoctions, the powdered herb is generally taken with the strained decoction; less often the herb is added near the end of the decoction process.

**Major Combinations:**

- With fù zǐ (Radix Lateralis Aconiti Carmichaeli Praeparata) for kidney yang insufficiency and waning fire at the gate of vitality. Add gán jìàng (Rhizoma Zingiberis Officinalis) for cold and painful abdomen, reduced appetite and diarrhea due to yang deficiency of the spleen and kidneys.

- With rén shén (Radix Ginseng) and shù dì huáng (Radix Rehmanniae Glutinosae Conquitae) for palpitations and shortness of breath due to deficiency of heart and kidneys.
• With huang bai (Cortex Phellodendri) and zhi mu (Rhizoma Anemarrhenae Asphodeloidis) for urinary discomfort and urinary retention due to kidney deficiency.
• With dang gui (Radix Angelicae Sinensis) and chuan xiong (Radix Ligustici Chuanxiong) for dysmenorrhea or amenorrhea due to cold form deficiency of the penetrating and conception vessels.
• With shu di huang (Radix Rehmanniae Glutinosae Conquitae) and ma huang (Herba Ephedrae) for yin type localized, painful swellings that blend into the surrounding tissue.

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**Lu Rong** *Cervus nippon*

*鹿茸*

**Other names:** nen lu rong, velvet of young deer antler, deer antler, *cervi*

**Herb description:** Good quality is thick, firm, lightweight, fine cross section, fine hairs and oily, shiny appearance.

**Part used:** velvet of deer antler

**Habitat, ecology and distribution:** Jilin, Liaoning, Heilongjiang, Hebei, Beijing (*Cervus Nippon*); Heilongjiang, Jilin, Inner Mongolia, Tibet, Qinghai, Gansu (*G. elaphus*); harvested in late summer or autumn when a male over 3 years old starts to have new velvet. Generally harvested with the use of anesthesia; majority domesticated male deer antlers are removed for reasons of safety even if not used for medicinal purposes.

**History:** Divine Husbandman's Classic of Materia Medica

**Constituents:** calcium, magnesium, phosphorus, small amounts of estrone, pantocrinum

**Energetics Properties and Channels Entered:** sweet, salty and warm, entering the kidney and liver meridians.

**Actions and Indications:** diuretic, immune stimulant, vasodilator, circulatory, anti fungal, anti tumor, anti inflammatory, anti narcotic, anti ulcer1

**Medical Research:**
- Moderate doses of pantocrinum have a significant positive inotropic and chronotropic effect, leading to increased cardiac output in heart specimens. This effect is especially marked on weak hearts; it can also regulate hearts with arrhythmias. Given orally to subjects with chronic poor circulation and low blood pressure, it increased the blood pressure and the strength of the pulse. Very large doses of this substance have a negative inotropic and chronotropic effect and cause peripheral vasodilation, leading to a drop in blood pressure. 2
- Pantocrinum is a general tonic that increases work capacity, improves sleep and appetite, and decreases the rate of muscle fatigue. Lu rong increases the oxygen uptake of the brain, liver, and kidneys of white rats. When fed to rats, it increased their weight with in two weeks. 3
- When powdered lu rong was given orally to rabbits, or when they were injected with preparations of the substance, there was an increase in both red and white blood cells.
When large amounts were given, there was a marked increase in the production of red blood cells. 4

- Preparations of lu rong promote granulation of long standing ulcers and wounds, as well as the healing of fractures. The local metabolism of nitrogen and carbohydrates is also affected. 5
- Preparations of lu rong had no significant sexual hormonal effect on rats and mice that had their gonads removed. 6
- Pantocrininum given to animals that have been sensitized to a particular substance inhibits a reaction when they are re-exposed to the substance. 7
- Preparation of lu rong have a diuretic effect. 8

**Toxicity, Contraindications and cautions**: Start with a mild dosage and gradually increase; this prevents yang from rising and the movement of inner wind from developing (symptoms: dizziness and red eyes). It can also injure yin, which can lead to fire from deficiency and may even cause hemorrhage. Contraindicated in patients with heat from yin deficiency, heat in the blood level, phlegm-hea in the lungs, blazing stomach fire, or warm febrile diseases.

**Medicinal uses**:
- Tonifies kidneys and fortifies yang: for deficient kidney yang patterns with such symptoms as: fatigue, impotence, cold extremities, lightheadedness, tinnitus, soreness and lack of strength in the lower back and knees, and frequent, copious, clear urination.

- Tonifies the governing vessel, augments essence and blood, and strengthens sinews and bones: used especially in cases of deficient essence and blood in children with such physical and/or mental developmental disorders as failure to thrive, mental retardation, learning disabilities, insufficient growth or skeletal deformities (including rickets)

- Regulates the penetrating and conception vessels and stabilizes the girdle vessel: for cold deficient vaginal discharge or uterine bleeding. Also for infertility with a cold womb.

- Tonifies and nourishes the qi and blood: used especially for chronic ulcerations or yin type boils.

- Lu Rong/Deer velvet is also used to improve fertility, for menstrual and menopause problems, to reduce hormone replacement therapy dose, to reduce cholesterol and high blood pressure, for liver and kidney disorders, to protect the liver from toxins, for migraines, asthma, indigestion, osteoporosis, and acne. 9

- Lu Rong/Deer velvet is also used for its anticancer and anti-inflammatory properties, as a source of growth factors IGR-1 & IGF-2, to stimulate production and circulation of blood, to increase blood count, and lower the level of free radicals. 10
• In Korean Medicine, Lu Rong/Deer velvet is used at the onset of winter to ward off infections.11

**Pharmacy and dosage:** 1-3g (as Powder) divided into two or three doses daily; 3- 4.5g (double boiled by itself); it can also be soaked in wine.

**Major Combinations:**
- With shu di huang (*Radix Rehmanniae Glutinoae Conquitae*) for impotence and spermatorrhea (in men) and infertility and thin vaginal discharge (in women) form cold deficient kidneys. This combination is also used for retarded physical development in children.
- With e jiao (*Gelatinum Corii Asini*), dang gui (*Radix Angelicae Sinensis*) and hai piao xiao (*Os Sepiae seu Sepiellae*) for deficient kidney induced excessive uterine bleeding.
- With gou ji (*Rhizoma Cibotii Barometz*) for copious vaginal discharge.
- With ren shen (*Radix Ginseng*) for such symptoms as palpitations, lower back pain, and decreased and difficult urination associated with severely deficient heart and kidneys.
- With dang gui (*Radix Angelicae Sinensis*) and sheng di huang (*Radix Rehmanniae Glutinosae*) for such problems as aplastic anemia associated with severely deficient blood and essence.

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Dong Chong Xia Cao  *Cordyceps sinensis*  

**Family:** Hypocreaceae

**Other names:** chong cao, dong chong cao, cordyceps, Chinese caterpillar fungus, yartsa gungu (Tibetian), keera jhar (India), aweto (Maori), tochukaso (Japanese), dongchungahacho (Korean), literal English translation ‘winter bug summer herb’

**Part used:** fungus.

**Plant description:** Good quality is intact with a short stick like fungus and a bright yellow, fat, full and round insect part with a yellowish white cross-section. There are 680 known species of the *Cordyceps* genus, *Cordyceps sinensis* being the best known. The fungus is a result of a parasitic relationship. The caterpillar (*Lepidoptera*) is invaded by the fungus, typically while the caterpillar is eating on roots underground where the fungus has been busy propagating; the fungus fills the body cavity of the caterpillar with mycelium and eventually the caterpillar dies and becomes mummified. A black-brown fruiting body emerges from the caterpillar’s head and typically emerges from below the ground in the spring or early summer. This fruiting body, which is columnar in shape, reaches 5-15 cm and once emerged releases spores to propagate.

**Habitat, ecology and distribution:** Sichuan, Qinghai, Guizhou, Yunnan, Tibet, India

**History:** Thoroughly Revised Materia Medica. It is believed that the use of caterpillar fungus originated in Tibet in the late 1400’s and is first found in Doctor Zurkar Namnyi Dorje’s book ‘Man ngag bye ba ring bsrel’ (Instructions on a Myriad of Medicines), although other sources say that it was discovered much before that and used by other doctors and lay herbalists.

**Constituents:** cordycepic acid, cordycepin, glutamic acid, phenylalanine, praline, histidien, valine, oxyvaline, arginine, alanine, d-mannitol, vitamin B12

**Energetics Properties and Channels Entered:** sweet and warm entering the lung and kidney meridians

**Actions and Indications:** antibiotic, bronchodilator, anti-stress, anti-aging, aphrodisiac

1. Increases erythroid progenitor cells in bone marrow
2. Immunostimulating and immunoregulating
3. Stimulate phagocytic action
4. Lower cholesterol
5. Improve renal function

**Medical Research:**
- Very dilute solutions of dong chong xia cao have an *in vitro* inhibitory effect against some of the tuberculosis bacilli. Preliminary studies also show an inhibitory effect in vitro on *Streptococcus pneumoniae*. 2
- Water extractions of dong chong xia cao inhibit the contraction of smooth and cardiac muscle in many animal experiments. This herb causes bronchodilation of intestinal and uterine specimens form rabbits, and inhibits heart specimens and in situ heart tissue from frogs. 3
- Cordyceps has been proven by ample medical research to be a powerful energy-builder. Cordyceps also benefits the glandular, circulatory and immune systems producing enormous amounts of endurance and stamina. It is superior to the most potent forms of Ginseng, the better-known energy herb. All this is supported by many Chinese clinical tests -- including the ones at Hunan Medical University and the double blind, placebo-controlled trials at Beijing Medical University. 4
- A study was performed on 155 cases of sexual hypofunction. While 31.57% showed improvement with a placebo, more than twice that many (64.15%) had improvement from using 1/3 gm. of cultivated *Cordyceps sinensis* each time, three times a day for 40 days. More than one quarter of the participants in the study (46) was able to continue with a normal sex life after the study. When tested, an increase in the hormones 17-ketosteroid and 17-hydroxycorticosterone was found in these patients. Treatment of sexual hypofunction with *Cordyceps sinensis*. Yang et al. Jiangxi Zhongyiyao, 1985, 546-475
- A study was conducted at a medical institute in Sichuan China, which found that in addition to several immunological responses, *Cordyceps sinensis* also gave protection against radiation damage and was antitumor against Sarcoma 180.
- Pharmacological action of the polysaccharide from cordyceps (*Cordyceps sinensis*). Zang et al., Zhongcaoyao, 1985, 16(7),306-11 6

**Toxicity, Contraindications and cautions:** use cautiously in exterior conditions; a relatively small dose of dong chong xia cao can be tranquilizing and even hypnotic in animals. Intraperitoneal injection of 5g/kg into mice caused no fatalities, but doses of 30-50 g/kg were universally fatal.

**Medicinal uses:**
- Increases the strength of the kidneys, especially the yang aspect: good for impotence, soreness and weakness in the lower back and lower extremities.

- Tonifies the kidney yang, builds up the lung yin, transforms phlegm, and stops bleeding: for chronic coughs with blood streaked sputum.

- Tonifies both the yin and yang and can therefore be taken over a long period of time. It is a very safe substance.
Pharmacy and dosage: 4.5-12g

Major Combinations:
• With du zhong (Cortex Eucommiae Ulmoidis), yin yang huo (herba Epimedii) and rou cong rong (Herba Cistanches Deserticolae) for such symptoms as impotence, sore and weak lower black and lower extremities, and spermatorrhea associated with deficient kidney yang.
• With sha shen (Radix Adenophorae seu Glehniae), chuan bei mu (Bulbus Fritillariae Cirrhosae) and e jiao (Gelatinum Corij Asini) for such symptoms as: cough, wheezing, coughing up blood, and chest pain form deficient lung yin.
• With duck, chicken, pork or fish as a stew for weakness, dizziness, spontaneous sweating and other symptoms of debility and lowered resistance from a weakened protective qi.

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Image drpinna.com
**Ba Ji Tian** *Morinda officinalis*

巴戟天

**Other names:** ba ji, morinda root

**Plant description:** Good quality is large, thick, interconnected and purple.

**Part used:** root

**Habitat, ecology and distribution:** Guangdong, Guangxi, Fujian; the roots are dug in spring or winter. After the fibrous roots have been removed and the roots are dried in the sun, the dried roots are steamed or soaked. The core of the root is discarded, and the remaining root is cut into slices.

**History:** Divine Husbandman's Classic of Materia Medica

** Constituents:** morindin, vitamin C

**Energetics Properties and Channels Entered:** pungent, sweet and warm, entering the kidney and liver meridians

**Actions and Indications:** Impotence, seminal emission, infertility, menstrual disorders, pain and cold feeling in the lower abdomen; rheumatic arthralgia; limpness of the legs.

**Medical Research:**
- Crude preparations of ba ji tian showed no androgen-like effect when given orally to rats or mice.
- Ba ji tian extract can be used to counter act the adverse effect of hydrocortisone on the atrophy of thymus gland, and adrenal cortex, and the increase level of SGPT.

**Toxicity, Contraindications and cautions:** contraindicated for patients with either damp-heat or heat form yin deficiency, also in patients who have difficulty urinating. According to some traditional sources this herb antagonizes dan shen (*Radix Salviae Miltiorrhizae*).

**Medicinal uses:**
- Tonifies the kidneys and yang: for deficient kidney yang patterns with the symptoms of: impotence, male or female infertility, premature ejaculation, irregular menstruation, frequent urination, urinary incontinence, painful and cold lower abdomen, and weakness and soreness of the back.
• Strengthens the sinews and bones: for deficient kidney patterns with such symptoms as back pain and muscular atrophy.
• Disperses wind and expels damp-cold: for damp cold painful obstruction and leg qi pain in the back and legs.

**Pharmacy and dosage:** 6-15g.

**Major Combinations:**
• With tu si zi (*Semen Cuscutae Chinensis*) and rou cong rang (*Herba Cistanches Deserticolae*) for impotence, spermatorrhea, and premature ejaculation from deficient kidney yang.
• With ren shen (*Radix Ginseng*) and shan yao (*Radix Dioscoreae Oppositae*) for impotence or infertility.
• With bu gu zhi (*Fructus Psoraleae Corylifoliae*), fu pen zi (*Fructus Rubi Ghingii*) and yi zhi ren (*Fructus Alpiniae Oxyphyllae*) for urinary incontinence and frequency form deficient kidney yang.
• With du zhong (*Cortex Eucommiae Ulmoidis*), Niu Xi (*Radix Achyranthis Bidentatae*) and xu duan (*Radix Dipsaci Asperi*) for pain, swelling and muscular weakness and atrophy associated with chronic painful obstruction with deficient kidneys.

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Image mdidea.com
Hu Tao Ren *Juglans regia*  
胡桃仁  

**Other names:** walnut, he tao rou, *Juglans semen*, koto (Japanese), Hodoin or haekdoin (Korean)

**Plant description:** Good quality is large, full, oily and yellowish brown. A large deciduous tree that reaches 25-35 m, with the trunk up to 2 m in diameter. “The bark is smooth, olive brown when young and silvery grey on older branches, and features scattered fissures with a rougher texture...The pith of the twigs contain airspaces; this chambered pith is brownish in color. The leaves are alternately arranged, 25-40 cm long, odd pinnate with 5-9 leaflets, paired alternately with one terminal leaflet. The largest leaflets the three at the apex, 10–18 cm long and 6–8 cm broad; the basal pair of leaflets much smaller, 5–8 cm long, the margins of the leaflets entire. The male flowers are in drooping catkins 5–10 cm long, and the female flowers terminal, in clusters of two to five, ripening in the autumn into a fruit with a green, semi-fleshy husk and a brown corrugated nut. The whole fruit, including the husk, falls in autumn; the seed is large, with a relatively thin shell, and edible, with a rich flavor.”

**Part used:** seed

**Habitat, ecology and distribution:** throughout northern China (Shaanxi is considered best), harvested September to October when ripe. Native to a wide area, from the Balkans, east to the Himalayans and southwest China.

**History:** Materia Medica of the Kai Bao Era

**Constituents:** linoleic acid, linolenic acid, oleic acid, carotene, vitamin B2

**Energetics Properties and Channels Entered:** sweet and warm entering the kidney, large intestine and lung meridians.

**Actions and Indications:** astringent, anthelmintic, antiseptic

**Medical Research:**
- When oil from hu tao ren was mixed with dog feed, the dogs gained weight very quickly, with an increase in serum albumen and a slower rise in serum cholesterol as compared to a control group.
- A paste made of hu tao ren, when given to patients with urinary calculi, usually led to expulsion of stones with in a few days, together with milky urine. It is therefore thought that the herb may have some effect in dissolving calculi.
A paste made of hu tao ren was used for 172 patients with a variety of dermatological diseases (including contact dermatitis, seborrheic dermatitis, and atopic dermatitis) with a 76% cure rate. 3

**Toxicity, Contraindications and cautions:** contraindicated in phlegm fire patterns or hot cough, in deficient yin patterns with heat signs, in patients with watery stool; some traditional sources believe this herb should not be taken with strong tea.

**Medicinal uses:**
- Tonifies the kidneys and strengthens the back and knees: for deficient kidney patterns with such symptoms as cold and painful back and knees and frequent urination.
- Warms the lungs and helps the kidneys to grasp qi: for deficient lungs and kidneys.
- Moistens the intestines and unblocks the bowels: for constipation in the elderly or that from injured fluids following febrile illnesses.
- Topically, Hu Tao Ren/English: walnut hull is used for skin diseases, abscesses, and eyelid inflammation. The leaf is used topically for superficial inflammation of the skin; excessive hand and/or foot perspiration; and for skin conditions such as acne, eczema, scrofula, pyoderma, and ulcers.4

**Pharmacy and dosage:** 9-30g. Traditionally when used for constipation the skin is peeled off; when used for coughing and wheezing it is left on.

**Major Combinations:**
- With ren shen (*Radix Ginseng*) and ge jie (Gecko) for wheezing form deficient lung and kidneys.
- Cooked with honey and taken with warm water for chronic cough from cold deficiency.
- With huo ma ren (*Semen Cannabis Sativae*) and rou cong rong (*Herba Cistanche Desericolae*) for constipation due to insufficient fluids in the intestines.

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Image tcm.health-info.org
Bu Gu Zhi *Psorlea corylifolia*  
补骨脂

**Family:** Leguminosae  

**Other names:** po gu zhi, psoralea fruit

**Plant description:** Good quality is large, full, solid and black.

**Part used:** fruit

**Habitat, ecology and distribution:** throughout China especially the northeast, northwest and southwest; harvested in autumn when fruit is ripe.

**History:** Grandfather Lei's Discussion of Herb Preparations

**Constituents:** psoralen, isopsoralin, bavachin, bavachinin, isobavachalcone, isobavachalcone, bakuchiol, raffinose.

**Energetics Properties and Channels Entered:** pungent, bitter and very warm, entering the kidney and spleen meridians.

**Actions and Indications:** antipruritic, antibiotic, antitumor, anti-aging, hemostatic, anti-arthritis

**Medical Research:**
- Preparations of bu gu zhi selectively dilate the coronary blood vessels in many animals. Psoralen has a positive inotropic effect on guinea pig and white rat hearts.\(^1\)
- Preparations of bu gu zhi have an *in vitro* inhibitory effect against *Staphylococcus aureus*, including penicillin resistant strains.\(^2\)
- Preparations of bu gu zhi stimulated both intact animal intestines as well as intestinal specimens. The herb had a relaxing effect on the uterus of rats.\(^3\)
- Intramuscular injections of bu gu zhi and local antipruritic treatments were given to 120 patients with severe cases of psoriasis with a cure rate of 24%, AND significant improvement in another 40%. In another clinical study of 49 patients with vitiligo, intramuscular injection of a preparation of his herb, in concert with its local application and exposure to ultraviolet light, had some effect. Within 3-6 months 14% were cured and another 19% had at least a 66% return of pigmentation.\(^4\)
- Injection of preparations of bu gu zhi, together with exposure to ultraviolet light, were used for 45 cases of alopecia. With in six months the hair returned completely in 36%, and there was significant return in another 30%.\(^5\)
- A combination of bu gu zhi and chi shi zhi (*Halloysitum Rubrum*) showed over 90% success rate in stopping menorr1agia in one clinical series of more than 300 subjects. In severe cases, other unspecified measures were taken. \(^6\)
**Toxicity, Contraindications and cautions:** contraindicated in deficient yin patterns with heat signs or constipation; use cautiously for deficient cold of the stomach (this herb may be hard on the stomach); traditional sources believe this herb to antagonize gan cao (*Radix Glycyrrhizae Uralnesis*).

**Medicinal uses:**
- Tonifies the kidneys and fortifies the yang: for kidney yang deficiency patterns with such symptoms as impotence, premature ejaculation, cold and painful lower back or weak lower back and extremities.

- Stabilizes the essence and reserves urine: for enuresis, incontinence of urine, frequent urination and spermatorrhea.

- Aids the kidneys to grasp qi: for wheezing when the kidneys do not grasp the lung qi.

- Recently used topically for alopecia, psoriasis and vitiligo.

**Present Applications:**
- Enuresis: bu gu zhi and yi zhi ren 60 g of each. Stir fry with salt. Grind into fine powder and make into 6 packages. Add one bag to rice porridge. Take 1 in the morning. (double the dosage for adults). Six days is therapy cycle. Result: 60 patients, age 2 to 60 years old. All healed. Monitored for 5 years. No relapse [1]
- Leukoderma of the vagina: apply bu gu zhi extract (paste) every other day on affected areas. Result: 53 patients. Healed: 50. Improved: 3. Seven patients developed dermatitis due to allergenic reaction of the herb.[2]

**Pharmacy and dosage:** 3-9g should be crushed before using.

**Major Combinations:**
- With hu tao ren (*Semen Juglandis Regiae*) and chen xiang (*Legnum Aquilariae*) for impotence.
- With rou dou kou (*Semen Myristicae Fragrantis*), wu wei zi (*Fructus Schisandrae Chinensis*) and wu zhu yu (*Fructus Evodiae Rutaecarpae*) for daybreak diarrhea characterized by abdominal pain and borborygmus in the early morning hours that is
alleviated upon evacuation, and is accompanied by a deep, thin pulse and a white coating on the tongue.
• With tu si zi (Semen Cuscutae Chinensis) and yi zhi ren (Fructus Alpiniae Oxyphyllae) for urinary frequency, both daytime and nighttime, from deficient kidney yang.
• With hu tao ren (Semen Juglandis Regiae) for lower back pain, premature ejaculation, coughing and wheezing form deficient kidney yang.

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Image futurosity.com
Du Zhong *Eucommia ulmoides*

**Other names**: eucommia bark, tochu (Japanese), duchung (Korean)

**Plant description**: Good quality is large and thick with a yellowish brown outside and dark purple inside. When broken, the bark should produce many thin white threads.

**Part used**: bark

**Habitat, ecology and distribution**: Hubei, Sichuan, Guizhou, Yunnan, Shaanxi; 15+ year old trees are harvested in spring or summer.

**History**: Divine Husbandman's Classic of Materia Medica

**Constituents**: gutta-percha, aucubin, alkaloids, glycosides, potassium, vitamin C

**Energetics Properties and Channels Entered**: sweet, slightly pungent and warm, entering the kidney and liver meridians.

**Actions and Indications**: antihypertensive, diuretic, anti-aging, sedative, musculoskeletal restorative, connective tissue restorative

**Medical Research**:
- Decoctions of du zhong lower blood pressure profoundly in many animal experiments. However, its effect upon renal hypertension in 3 dogs was not ideal, lowering systolic pressure 8-22 mmHg in four weeks. It had more effect in rabbits with atherosclerosis than upon normal ones. The mechanism of its effect is unknown, but because its direct effect on the heart and peripheral blood vessels is rather mild, it is thought to be central in nature. Decoctions are more effective than alcohol extractions, and the fried herb has a stronger effect than the dried herb.1
- 10% tinctures of du zhong were used for 119 cases of hypertension; satisfactory results were recorded in 46%, without side effects. It was not particularly useful for severe cases. In another experiment while preparations of the herb were found to be much less successful in lowering blood pressure than reserpine, they were much more successful in improving the symptomatology. Clinical studies have demonstrated that fried du zhong has a stronger antihypertensive effect than the dried herb and that water extractions are more potent than alcohol extractions.2
- Large doses (20-25g/kg per day) of du zhong have an inhibitory effect on the central nervous system of dogs and mice.3
- Various preparations of du zhong have a diuretic effect in dogs, rats and mice.4
• *Cortex Eucommiae Ulmoidis* (Du Zhong) contains latex and, therefore, may be allergenic in a certain percentage of patients.

**Toxicity, Contraindications and cautions:** contraindicated in heat from yin deficiency; according to some traditional sources this herb antagonizes xuan shen (*Radix Scrophulariae*); no symptoms of overdose have been recorded in literature. Not be used with persons with latex allergy.

**Medicinal uses:**
- Tonifies the liver and kidneys, strengthens the sinews and bones: for liver and kidney deficiency with such symptoms as weak, sore, or painful lower back and knees, fatigue and frequent urination.
- Aids in smooth flow of qi and blood: used to promote circulation, especially in those with weakness of the sinews and bones.
- Recently used for dizziness and lightheadedness (hypertension) form rising liver yang.

**Pharmacy and dosage:** 6-15g. Salt water fried to increase the kidney tonification properties.

**Major Combinations:**
- With bu gu zhi (*Fructus Psoraleae Corylifoliae*) and hu tao ren (*Semen Juglandis Regiae*) for lower back pain and wheezing from deficient kidney yang.
- With shan zhu yu (*Fructus corni Officinalis*) and tu si zi (*Semen Cuscutae Chinensis*) for impotence and frequent urination form cold deficient kidneys.
- With xu duan (*Radix Dipsaci Asperi*), tu si zi (*Semen Cuscutae Chinensis*) and sang ji sheng (*Ramulus Sangjisheng*) for deficient kidney induced lower back pain or threatened miscarriage.
- With gu i zhi (*Ramulus Cinnamomi Cassiae*), du huo (*Radix Angelicae Pubescentis*) and qin jiao (*Radix Gentianae Qinjiao*) for damp-cold back pain characterized by sore, swollen feeling and localized coldness that is exacerbated by exposure to cold, and accompanied by such signs as deep, slow pulse and white, greasy tongue coating.
- With bai shao (*Radix Paeoniae Lactiflorae*) and xia ku cao (*Spica Prumellae Vulgaris*) for dizziness and lightheadedness form rising liver yang.

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