

## Erectile Dysfunction And Traditional Oriental Herbal Medicinals

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### INTRODUCTION

Erectile Dysfunction (ED), also known as impotence, is the inability to have or maintain an erection sufficient for normal sexual activity. More than 50% of men between the ages of 40 and 70 years experience ED to some degree. In recent years there has been an increased awareness of the problem of ED. This increased public interest in ED is evident by the fact that the number of physician visits for ED nearly tripled between 1985 and 1999 (National Ambulatory Medical Care Survey). This is probably related to the introduction of the drug Viagra (sildenafil citrate) in March of 1998. Practitioners of Oriental Medicine have, for a long time, offered traditional solutions for this very private male complaint. However, with the introduction of new drugs for an old problem, we as herbalists are asked to look at our practice with greater wisdom and insight as part of the ever growing marriage of East-meets-West medicine. I believe that while Oriental Medicine practitioners enjoy a wide and flexible view of our patients' entire health, Western medical science can open our eyes even wider if we look in the correct manner. Here I will attempt to do this very thing.

This article will 1) review the Western physiological process of erection and its dysfunction, 2) examine ED in the context of overall health and disease, 3) review what information exists in the professional literature about Chinese herbal medicinals and their role in erectile physiology, and 4) tie this information together by analyzing some formulas and products for ED.

### ERECTILE PHYSIOLOGY IN WESTERN MEDICINE

The key to breakthrough drugs for ED such as Viagra, Cialis, and Levitra lies in within the details of a chemical pathway called the *Nitric Oxide Cycle*. Here is the process of normal erection. *First*, the smooth muscle chambers in the penis (Corpus Cavernosa and Corpus Spongiosa) are in a state of relative tension which squeezes off blood flow and prevents blood from filling these spongy tissue chambers. *Next*, in response to sexual arousal, signals from the brain and spinal cord cause the smooth muscles in these chambers to relax. This relaxation allows blood

to fill the penile chambers and erection begins. Here is how this process works:

1. Nerves stimulate the release of Nitric Oxide which activates a chemical called cGMP (cyclic guanosinmonophosphate or "cyclic GMP" as it is commonly referred to) inside the smooth muscle chambers.
2. cGMP causes the smooth muscles in the penis to relax.
3. This relaxation allows blood to flow into the chambers.
4. As the blood pressure increases in the penis, venous return is squeezed off and blood is trapped inside. This completes the erection phase.
5. Erection goes away when an enzyme called PDE5 (Phosphodiesterase type 5) degrades cGMP.
6. Without cGMP the smooth muscles in the chambers can not stay relaxed. They contract and blood flow is squeezed off to the chambers and the erection decreases.

Current drug therapy for ED works by altering this nitric oxide cycle. Drugs such as Viagra and Cialis work by inhibiting PDE5 from degrading cGMP so that cGMP stays around longer. The smooth muscle chambers then remain relaxed and blood continues to flow in. This inhibition of PDE5 leads to improved erectile strength and duration. There are a few lessons here. First, ED is mostly based upon proper or improper blood flow and not based on the common belief that male hormone levels are low (although this is sometimes the case). Second, blood flow depends on the Nitric Oxide Cycle to relax smooth muscles and dilate blood vessels. Later this paper will introduce several Oriental herbal medicinals that have an influence on this nitric oxide cycle.

Western physiology recognizes two types of erection: reflexogenic and psychogenic. *Reflexogenic erections* result from direct stimulation of the genital area. They are called reflexogenic because they are controlled by a reflex arc between the genitals and the spinal cord. *Psychogenic erections* result when messages are passed down the spinal cord from the brain to the sacral area and then to the genitals. Therefore Erectile Dysfunction has both physical and psychological mechanisms. Oriental Medicine also recognizes both physiological aspects of erectile dysfunction (qi, blood, yin, yang) and psychological aspects (Heart-Spirit and Liver-Gallbladder patterns).

## ERECTILE PHYSIOLOGY IN ORIENTAL MEDICINE

Oriental Medicine views the erection process in a way that is actually somewhat similar to the Western physiological model. Erection involves the accumulation of both Yang-Qi (function) and Yin-Blood (substance) to the penis. There are several Organ Systems that are involved with erection, namely the Kidneys, Liver, Spleen, and Heart.

The Kidneys are in charge of reproduction and the reproductive organs. The testes are called the “External Kidneys”; The urethra is one of the two “Lower Portals” which is controlled by this Kidney system; The Kidneys are the root of True Yin and True Yang and an emptiness of either means a failure for the penis to fill up with substance (Yin) or a failure of the motive force (Yang-Qi) to move Yin substances into the penis.

The Liver pertains to the sinews in Oriental Medicine and the penis is the meeting point of the hundred sinews. Also, the Liver Channel encircles the genitals which provide both qi and blood to the genitals. The Liver “Stores the Blood” and if Blood is empty then the penile sinews can not become full. Constrained Liver Qi may inhibit the flow of Qi (Yang function) and Blood (the Yin substance) to the genitals. The Liver is easily affected by stress, anger, and un-fulfilled desires which relates to some of the psychological factors associated with ED.

The Spleen-Stomach System in Oriental Medicine is the postnatal source of Qi and Blood production from food. Insufficiency of the Spleen-Stomach system may lead to insufficient Qi and Blood. If there is insufficient Qi and Blood to raise the penis and fill its sinews then there is ED. The Spleen is also the source of *Dampness* (pathological body fluids). This Dampness may sink downward and obstruct the Liver and Kidney systems thereby interfering with the process of the penile sinews filling up with blood.

The Heart “Governs the Blood” and sends blood to the penis. Erectile potency is dependent upon “Heart-Fire” which connects to the penis. Dysfunction of the Heart is associated with psychogenic factors of erectile dysfunction such as premature ejaculation or ED due to fear and timidity.

## CAUSES OF ERECTILE DYSFUNCTION IN WESTERN MEDICINE

Both Western medicine and Oriental Medicine share a common view that ED does not exist by itself in a particular man. Rather, it exists within the context of other conditions. The following analogy may illustrate this concept more clearly. ED is like a picture of a cypress tree; Alone on a blank canvas it has little meaning because it is out of context. But a cypress tree placed in the context of Vincent van Gogh’s famous painting, *Starry Night*, becomes deeply profound and has meaning because of its relationship to everything around it. This contextual idea is all-pervading in Oriental Medicine and makes up the Oriental Medicine concept of pattern-discrimination. Western medicine’s view of ED is also based on context. The Western Medicine causes of ED are as follows:

1. **Hypertension:** leads to hardening and narrowing of vessels. Decreasing blood flow to the penis. *More than 65% of men with high blood pressure have ED.*
2. **High Cholesterol:** clogs the arteries which slows blood to the penis. *High cholesterol raises the risk of ED by 80%.*
3. **Heart Disease:** Coronary Artery Disease also leads to poor blood

flow as in the above components of hypertension and high cholesterol.

4. **Diabetes:** High blood sugar damages nerves and blood vessels leading to ED. *Up to 85% of men with diabetes have at least some erection difficulty at times.*
5. **Prostate Problems:** Some prostate treatments affect erections due to the close proximity of the prostate to nerves needed for erection.
6. **Depression:** Some medications for depression cause ED. ED may lower self-esteem and may strain relationships which further aggravate depression.
7. **Stress:** Stress and anxiety can affect the ability to get an erection.
8. **Spinal Cord Injury:** Interferes with signals from the brain to the genitals
9. **Medication:** Some medicines for the heart, blood pressure, cancer and depression may lead to ED.
10. **Smoking/Alcohol:** Smoking damages blood vessels and can lead to decreased blood flow to the penis. Alcohol temporarily impairs the ability to get an erection. It is best not to drink large amounts of alcohol before sex.

The above causes or “contexts” in which ED is a part of demonstrate a strong emphasis on blood flow and its lack thereof in the etiology of ED. Any of the above listed disease scenarios involve multiple Oriental medicine pattern diagnoses. There are thirteen possible Oriental medicine patterns associated with ED. The following list is adapted from *A Handbook of TCM Urology & Male Sexual Dysfunction* (Lin; 1992):

1. Kidney Yang Deficiency (Shen yang xu)
2. Kidney Yin Deficiency (Shen yin xu)
3. Kidney Yin & Yang Dual Deficiency (Shen yin yang liang xu)
4. Damp-Heat Pouring Down Into The Kidney Channel (Shi re xia zhu shen jing)
5. Liver Depression Qi Stagnation (Gan yu qi zhi)
6. Liver Channel Damp-Heat (Gan jing shi re)
7. Liver Cold (Gan han)
8. Liver Blood & Yin Deficiency (Gan xue yin xu)
9. Heart-Gall Bladder Qi Deficiency (Xin dan qi xu)
10. Spleen-Stomach Deficiency Weakness (Pi wei xu rou)
11. Spleen Deficiency Phlegm Dampness (Pi xu tan shi)
12. Heart Spleen Deficiency (Xin pi xu)
13. External Attack of Damp-Heat (Wai gan shi re)

These patterns and their combinations are listed in order to highlight the magnitude of possible contextual presentations of ED. Worth noting, here, is that both Western medicine and Oriental medicine view ED as one manifestation within several possible scenarios with each scenario being addressed in treatment as part of an overall treatment plan.

## CURRENT TREATMENT OPTIONS FOR ED IN WESTERN MEDICINE

The first line of treatment for ED is oral medication with Viagra, Cialis, or Levitra. There are other treatment options as well. *Intraurethral Therapy* involves placing a soft pellet of medicine into the urethra which increases blood flow to the penis. *Penile Injection Therapy* is a self-administered injection into the penis at the desired time. *Vacuum Therapy* involves a vacuum device placed over the penis to manually increase blood flow. A constriction ring is then placed at the base of the penis to help maintain the erection. More radical treatment is *Penile Implant Surgery* where a pair of rods are placed in the erection chambers of the penis. A

pump is placed in the scrotum and the man squeezes the pump to fill the chambers with a liquid. This is mostly done when other treatments fail. *Sex Therapy*, a form of counseling that improves communication between partners may be indicated as well. Future Treatment may come in the form of a nasal spray, PT-141, which targets the brain rather than genital system. This treatment is also promising for women.

Western medicine follows a general clinical pathway for ED treatment. Step-1 is to stabilize the man's general clinical condition. For example, getting high blood pressure under control. Step-2 is treating any medical condition such as diabetes, high cholesterol, heart disease, etc.. Step-3 is to initiate specific therapy for ED as follows:

- first line:** Viagra
- second line:** transurethral alprostadil
- third line:** refer for injectable alprostadil
- any stage:** consider vacuum devices
- last resort:** penile implant surgery

## TREATMENT OF ED BY ORIENTAL HERBAL MEDICINALS

Unfortunately, referral to alternative medicine is not part of the clinical pathway for ED treatment in the Western medical design. There is growing evidence that Oriental herbal medicine and acupuncture are clinically sound treatments for ED. Oriental Medicine also addresses the other Western medical conditions that lead to ED such as coronary artery disease, diabetes, and so on. Diagnosis is based upon patient symptoms leading to enough evidence for the Oriental medicine doctor to diagnose one or more patterns of disharmony. Herbal treatment is based upon choosing formulas that match treatment principles designed to correct the patterns involved. This must be respected by the practitioner of Oriental Medicine especially since Male Urology or *Nan Ke* is a relatively new specialty in China (over the past 30 + years). I stress this need to diagnose and treat ED with Traditional Chinese Medical theories alone and not to intermix Western and Oriental paradigms. That being said, modern research offers fascinating insights into the possible biochemical basis of Oriental Herbal medicinal's mechanisms of action as well as outcome studies that are clinically significant for our practice.

### Herbs & The Nitric Oxide Pathway

Achike and Kwan (2003) published an article looking at herbal products that affect the nitric oxide signaling pathway. Many of these products are part of the traditional Oriental pharmacopeia.

Chinese Medicinals or Compounds With Nitric Oxide Promoting Effects		
Form	Pin Yin Name	Botanical Name
Ginsenosides	Ren Shen	Panax ginseng
Andrographolides	Chuan Xin Lian	Andrographis paniculata
Aqueous Extract	Shan Zha	Cretagus, Hawthorn Fruit
Aqueous Extract	Du Zhong	Eucommia
Standard Extract	Yin Xing Ye	Ginko biloba
Aqueous Extract	Bai Shao	Paeonia lactiflora
Danshinoate-B	Dan Shen	Salvia miltorriza
Berberine	Huang Lian	Coptis chinensis
Gypenosides	Jiao Qiu Lan	Gynostemmapentaphyllum
Methanol Extract & Haematoxylin	Su Mu	Casalsipinia sappan
Rutaecarpine	Wu Zhu Yu	Evodia

Adapted from Achike and Kwan (2003)

Achike and Kwan explain the role that nitric oxide plays in many diseases: hypertension, diabetes, stroke recovery, migraine, parkinsons, alzheimers, pulmonary hypertension, and acute respiratory disease. Nitric oxide modifying substances may be indicated for many diseases. Looking at the list of Chinese Medicinals that play a role in promoting the nitric oxide pathway there is no clear pattern linking these substances together. Rather, they are a seemingly random list of herbs, some have Cold natures while others have Hot natures, some are Qi supplements, others are Heat clearing. This information does however bring to mind the traditional Oriental Medical principle, "same disease different treatment; different disease same treatment" (*tong bing yi zhi; yi bing tong zhi*). Where one disease may have many possible treatments because of several possible pattern-diagnoses. Likewise, one particular set of herbal ingredients may treat a number of different disease categories, again, due to shared pattern-diagnoses. The main point here is that since the nitric oxide pathway is involved with many different diseases, and since there are Chinese herbal medicinal's that promote the nitric oxide pathways smooth muscle relaxing actions, that there should be a wide distribution of herbs across different herb categories in order to meet different traditional treatment principles.

In order to treat ED a practitioner would never wisely give a patient the entire group of herbal medicinal's from Achike & Kwan's list. The extent to which these ingredients work is not well known. In fact the authors mention that the nitric oxide promoting effects of ginseng, a famous aphrodisiac, are probably mild. Oriental doctors would agree as ginseng plays only a supportive role in the disease category of Yang Wilting (impotence). This information is useful though, as a guide when choosing ingredients for ED. Also, there are many ingredients used for ED in Oriental Medicine that are not known to affect the nitric oxide cycle, yet they are chosen based on traditional principles and get predictably good results. Since both Western and Oriental medicine treat ED in the context of other larger diseases it is interesting to note that nitric oxide plays a role in many vascular-based diseases such as hypertension, stroke recovery, and even diabetes. After all, the underlying etiologies of these conditions also cause poor penile blood flow resulting in ED. In other words by influencing the nitric oxide pathway these herbs not only affect erectile physiology but also play supportive roles in other conditions, some of which, promote ED.

## ANALYSIS OF HERBAL FORMULAS FOR ED AND RELATED CONDITIONS

The purpose of this article is not to cover the treatment for all of the patterns of ED. Readers are instead referred to publications devoted to that cause. Here, a variety of prepared herbal formulations available through Sun Ten Laboratories, will be introduced and analyzed based on laboratory and clinical research related to ED to demonstrate how to use such information at different levels of practice.

It is common in Oriental medicine for ED to fall into a pattern of insufficient kidneys and its related complications. MENS FORMULA MA-511 (Wen Yang) through Sun Ten Laboratories' Probotanix line is a well compiled prescription to address ED due to a Kidney Yang Deficient presentation.

### MENS FORMULA MA-511 (Wen Yang)

Decreased sexual vitality; impotence; general weakness, fatigue; lower back pain

**Ingredients**

Huang Qi	Astragalus
Ren Shen	Ginseng
Lu Jiao Jiao	Deer Antler Gelatin
Du Zhong	Eucommia
Tu Si Zi	Cuscuta
Yin Yang Huo	Epimedium
Gui Pi	Cinnamon
Dang Gui	Radix Angelica
Di Huang	Rehmannia
Gou Qi Zi	Lycium Fruit
Shan Zhu Yu	Cornus
Shan Yao	Dioscorea

**Traditional Function**

- Warms Kidney Yang
- Nourishes Blood and Essence

**Modern Function**

- Enhances Functions of the Endocrine System and Increases Vitality
- Improves Energy Metabolism
- Improves Function of Sexual Glands

**Analysis**

**Ren Shen (Ginseng) and Du Zhong (Eucommia):** Shown to activate the nitric oxide pathway which allows increased blood flow to the penis.

**Deer Antler Gelatin:** A traditional ingredient for men's virility. It includes several amino acids that have a positive effect on energy metabolism.

**Yin Yang Huo (Epimedium):** Improves the function of sexual glands and accelerates secretion of sperm.

Wang (2004) conducted a clinical trial of 58 men with ED using the treatment principle of fortifying the spleen & supplementing the Kidneys. This trial used a formula that is representative of common formulas that supplement spleen qi and nourish and warm the Liver and Kidneys. This formula contained seven of the same ingredients as MEN'S FORMULA MA-511 making it very similar. The results were as follows: 79% were deemed cured; 17% were improved and 3% had no effect. Another study looked at ED in rats treated with a Chinese herbal mixture (Bakir et. al; 2000) that was remarkably similar to MEN'S FORMULA MA-511, sharing eleven of the same ingredients. In this laboratory study, rats were fed a high cholesterol diet for 4 months. One group received the Chinese herbal mixture and another group did not. The non-herbal mixture group showed microscopic evidence of structural changes in the penis which led to ED. The group of rats taking the herbal mixture were protected from developing ED. The blood pressure and cholesterol levels were the same for both groups of rats indicating that the herbs did not decrease ED by lowering blood pressure or cholesterol. Instead, the rats in the herbal group showed increased expression of two proteins (caveolin-1 and basic fibroblast growth factor) in their penile tissue. The authors hypothesized that these proteins may have an important compensatory role, perhaps creating new vessel growth, nerve repair/regeneration, or other microstructure changes in the presence of harmful cholesterol-induced vascular disease.

The above studies demonstrate two principles. *One*, that there may be many pathways by which Oriental herbal medicines may work biochemically, be it a nitric oxide pathway, a growth factor pathway, or many other possibilities that are known or unknown. *Two*, that following the traditional methods of choosing Oriental herbal treatment leads to

treatments that work irrespective of any knowledge on the practitioners part of a biomedical process even though a substantial biomedical process is there.

Another common pattern-diagnosis for ED in Oriental medicine is spleen-stomach deficiency that leads to insufficient qi and blood to fill the penile sinew. Spleen-stomach deficiency may eventually lead to a kidney deficiency. Thus there is a constant transformation of one pattern to others. Probably the most common prescription for this presentation of ED is the formula *Ren shen yang rong tang* (ginseng nutritive combination)

**Ginseng Nutritive Combination  
(Ren Shen Yang Rong Tang)**

Spleen-Stomach Deficiency leading to impotence with generalized weakness and digestive complaints such as poor appetite, abdominal distension and loose stools

**Ingredients**

Ren Shen	Ginseng
Bai Zhu	Atractylodis
Fu Ling	Hoelin, Poria
Gan Cao	Licorice
Huang Qi	Astragalus
Chen Pi	Citrus
Dang Gui	Angelica
Bai Shao	Paoniae
Shu Di Huang	Rehmannia
Wu Wei Zi	Schizandra
Yuan Zhi	Polygala
Gui Zhi	Cinnamon Twig

**Traditional Functions**

- Supplements Qi and Blood
- Strengthens the Internal Organs

**Analysis**

**Ginseng and Paoniae (Bai Shao):** Activate the nitric oxide pathway that leads to increased blood flow to the penis.

*Ren shen yang rong tang* shares eight ingredients with either of the formulas discussed in the clinical trial and rat model study mentioned above. This formula has multiple effects on the body including blood sugar lowering properties, improvement of pulmonary function and immune boosting abilities. By using a somewhat different treatment principle than MENS FORMULA MA-511, yet still being effective for ED, this supports the concept mentioned earlier, *same disease different treatment; different disease same treatment*. It is interesting that only two out of twelve ingredients in *Ren shen yang rong tang* are known to activate the nitric oxide pathway, yet its use is commonplace for this pattern of ED. Again, illustrating the need to treat based on pattern discrimination. Knowledge of the biochemical mechanisms are useful and may even give confidence in what we do but this knowledge is again adjunctive to the traditional process of Oriental medicine.

Roughly 40% of ED is due to vascular causes, 30% to diabetes, another 25% or so is due to surgery, traumatic injury or other neurological diseases, and only about 3% of ED cases are actually endocrine or hormonal in nature, contrary to popular belief. What might Oriental Medicine do in such a rare case? Xu (2003) treated 58 cases of impotence caused by prolactinemia with *Jia wei shao yao gan cao tang* (Added flavors peony & licorice decoction). According to this author the causes of hyperprolactinemia include pituitary tumors, certain drugs, and hypothyroidism. The basic formula was as follows:

### *Jia Wei Shao Yao Gan Cao Tang (Added Flavors Peony & Licorice Decoction)*

Taken 2 times per day for 4 weeks equaling 1 course of treatment. Outcomes were assessed after 3 courses of treatment.

Bai Shao	(radix paeoniae lactiflorae)	18g
Gan Cao	(mix-fried radix glycyrrhizae uralensis)	18g
Tu Si Zi	(semen cuscutae chinensis)	15g
He Huan Pi	(cortex albizziae julibrissinis)	15g
Mai Ya	(fructus germinatus hordei vulgaris)	15g
Gou Qi Zi	(fuctus lycii chinensis)	10g
Dang Gui	(radix angelicae sinensis)	10g
Yin Yang Huo	(herba epimedii)	10g

Modifications were made by adding sets of herbs for individual patient patterns allowing the study to keep the flexibility of the traditional treatment methods in Oriental medicine. The results were as follows: 68.97% were cured (complete disappearance of all symptoms. Fully satisfactory erections. Normal serum prolactin and testosterone), 10.34% showed a marked effect (disappearance of symptoms, 80% or more erectile hardness. Serum prolactin & testosterone gradually becoming normal), 8.62% had some effect (Improvement in clinical symptoms. Improved erectile strength but still not good. Improved serum prolactin & testosterone but still not normal), and 12.07% had no effect (Symptoms did not meet any of the above criteria after 3 courses of treatment). This special formula could be made as needed but since this article is keeping with products sold from a single manufacturer and since this article aims to demonstrate practical applications of the information discussed, one could produce a very similar product by simply combining the base formula (Shao yao gan cao tang) with MENS FORMULA MA-511 (Wen Yang). Choosing treatment in this way combines practicality with evidence-based decision making that is sound from both Oriental and Western perspectives.

## ADDRESSING OTHER CONTEXTUAL PRESENTATIONS FOR ED

Since ED is a condition that exists within the context of other systemic conditions and since Oriental medicine, like Western medicine, treats ED as part of other medical conditions (eg. High Blood Pressure, High Cholesterol, Diabetes, Prostatitis, Mental-Emotional Health, etc.), a look at some examples is warranted here.

Prostatitis and its treatments may contribute to ED. As mentioned earlier there is a close proximity of the nerves involved with erectile physiology to the location of the prostate. The following Sun Ten formula from the probotanix line is **PROSTATE FORMULA PR-681 (Tong dao)**.

### *PROSTATE FORMULA PR-681 (Tong Dao)*

Indicated for impotence complicated by prostatitis.

#### Ingredients

Tao Ren	Persica
Mu Dan Pi	Moutan
Sheng Di Huang	Rehmannia
Shan Zhu Yu	Cornus

Shan Yao	Dioscorea
Fu Ling	Hoelin
Ze Xie	Alisma
Yi Yi Ren	Coix
Gui Zhi	Cinnamon
Da Huang	Rhubarb
Mang Xiao	Mirabilitum
Dong Gua Zi	Benincasa
Cang Zhu	Atractylodis
Gan Cao	Licorice

#### Traditional Functions

- Supplements Kidney Yang
- Disperses Blood Stasis
- Clears Heat

#### Modern Functions

- Reduces Inflammation
- Promotes Blood Circulation
- Strengthens Urinary Function

#### Analysis

- Prostate disease is one cause of ED secondary to the prostate's proximity to nerves involved with erectile physiology.
- This combination has been used extensively in Japan for enlarged prostate conditions.
- Data from Japan shows that this formula effectively addresses symptoms such as weak urinary function and frequent urge to urinate at night.
- Has an anti-inflammatory action and promotes regional blood circulation.
- There are no medicinals in this formula known to affect the nitric oxide cycle

Use of a formula like PROSTATE FORMULA PR-681 (Tong Dao) draws a parallel to the Western medical clinical pathway where the patient's general condition is stabilized and any general medical conditions are treated first. From an Oriental medicine view this would be root or branch treatment. A prostatitis situation would take precedence over ED in the short-term and adequately treating this more acute situation is in it self a treatment for ED from a long-term perspective.

Other prepared formulas that represent a contextual approach to ED are listed below:

### *HYPERTENSION HB-345 (Jiang Ya)*

Treats High Blood Pressure; hyperthyroidism; cerebral vascular accident; epilepsy and vertigo.

- Clams the Liver and Extinguishes Wind
- Clears Heat
- Supplements the Liver and Kidneys
- Contains Eucommia (Du Zhong) which promotes erection by both Oriental (Yang supplement) and Western (linked to activation of the nitric oxide pathway) perspectives.

By addressing the patients overall clinical picture from an Oriental medicine perspective there is automatically at least some treatment for ED from a Western physiological perspective.



## CHOLESTEROL REDUCTION CR-201

### (Jiang Zhi)

Treats high blood cholesterol and/or high triglyceride levels

- In addition to the other main ingredients is Cretagus (Shan Zha) a.k.a. Hawthorn Fruit, which is also linked to activation of the nitric oxide pathway thereby promoting erection.

CR-201 (Jiang zhi) represents a general treatment for high cholesterol which causes vascular diseases and is clearly associated with ED. Again, like the treatment formula for hypertension above, there is at least one ingredient which activates penile blood flow via the promotion of the nitric oxide pathway. This demonstrates another example of sound Oriental medical theory leading to far reaching effects on the overall clinical picture. CR-201 is not designed for ED but taking a second look we see that it is supportive of ED treatment while addressing the clinical disease presentation.

Some herbal products on the market are not designed for professional practice in the same manner as a trained herbalist choosing a formula for an individual patient's patterns. The following products from the Sun Ten Healthy & Natural Line are well-designed, safe, and meant for overall optimum health and disease prevention. These products are mentioned here as examples of Oriental herbal products that also show some evidence of ED appropriateness.

### Three Ginsengs Pill (San Shen Pian)

Boosts energy, enhances immunity, promotes blood circulation, and improves overall health.

#### **Ingredients:**

Ren Shen	Chinese White Ginseng
Si Wu Jia	Siberian Ginseng
Xi Yang Shen	American Ginseng
Dan Shen	Salvia

Since ginseng products are so frequently sought by the general population, this combination offers a balance of warm and cool natures. Two of the four ingredients in Three Ginsengs Pill (Ginseng and Dan Shen *Salvia*) are herbs linked to the nitric oxide cycle that promotes erection.

### Ginko Cnidium Pill YSP

Promotes Cerebral Blood Circulation and Improves Memory

#### **Main Ingredients**

Ginko Biloba	(Yin Xing Ye)
Cnidium	(Chuan Xiong)

This product is designed to meet the needs of those who want to improve their memory. Interestingly, there is evidence that Ginko Biloba is beneficial for low sex drive as a side effect of antidepressant medication. Cohen and Bartlik (1998) found that 120mg of Ginko Biloba was 84% effective in improving sexual desire, excitement and orgasm, in 63 patients with antidepressant induced sexual dysfunction. These authors mention that these effects were even better for women.

Vitamin Supplements play a large role in the health plans of many people and healthcare providers. The following set of vitamin products blend in the unique Oriental medicine perspective of Yin-Yang balance by adding certain herbal medicines. As it just so happens, these general health products also include ingredients that promote healthy erectile function.

### Yin Essentials

- A complete blend of 10 vitamins, 10 minerals, 7 herbs, and 10 bio-nutritionals for the support of the body's nighttime regulatory functions and activities.
- Includes Hawthorn Berry Extract (Shan Zha *Crataegus*) which activates the nitric oxide cycle to promote erectile blood flow.
- Schizandra is included which is a Traditional Kidney supplement that supports the main Oriental medical organ system regulating sex and reproduction.
- Turmeric Extract (Curcumin C3 Complex): Improves blood flow, an essential part of healthy erectile function.

### Yang Essentials

- A complete blend of 11 vitamins, 9 minerals, 9 herbs, and 9 bionutritionals for the support of the body's daytime regulatory functions and activities.
- Green Tea Extract (50% Polyphenols): tea catechins have demonstrated various blood flow increasing abilities. Likely due to green tea polyphenols' ability to increase cGMP numbers (Achike and Kwan, 2003).
- Contains Ginseng, Hawthorn Extract, and Ginko Biloba Extract. All are associated with erectile promoting effects.

## FINAL THOUGHTS

Both Oriental and Western view ED as a symptom related to a larger picture of health and disease. There is evidence supporting both the physiological basis and clinical effectiveness of Oriental herbal medicinals for the treatment and prevention of ED. Several herbal medicinals have been identified that promote the nitric oxide cycle which is the main biochemical pathway involved in the erection process. There are a small number of clinical trials that give good support of the effectiveness of Oriental herbal medicine for ED. When Oriental medicine treatment is based upon pattern discrimination there is a natural selection of ingredients that create the necessary physiological environment, both known and unknown, for proper erectile function.

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**Experience:**

- Purcell Acupuncture & Herbal Therapy**      **January 2006 to present**  
Private practice
- Kindred Healthcare Center of Orange**      **September 2004 to present**  
Full-time occupational therapist  
Rehab Manager
- Stanbridge College**      **March 2006 to present**  
Instructor/ vocational nursing program:
  - anatomy & physiology
  - nutrition
  - growth & development
  - pharmacology
- Park Superior Skilled Nursing Facility**      **October 2006 to present**  
Per Diem occupational therapist
- Garden Grove Hospital**      **December 2004 to June 2005**  
Per Diem occupational therapist
- South Baylo University of Oriental Medicine**      **March 2000 to Present**  
Adjunct Faculty member, Clinical Supervisor, Research Associate
  - Teaching: acupuncture principles, theory, techniques, prescriptions, and safety.
  - Acupuncture modalities: electro-acupuncture, moxibustion, auriculotherapy.
  - Internal medicine: diagnosis and treatment using acupuncture and herbal medicine.
  - Review classes for the National and California board exams.
  - Treating patients and supervising interns at the South Baylo University Acupuncture & Herb Center.
  - Assisted in the planning and administration of acupuncture treatments for a clinical trial investigating the use of acupuncture for HIV/AIDS patients.
- Pacific College**      **June 1999 to April 2001**  
*Adjunct Faculty Member, Physical Medicine Assistant program*
  - Instruction included sports medicine, orthopedics, anatomy, pathology, physical rehabilitation, and modalities.
- Advanced Acupuncture**      **July 1999 to September 2000**
  - Private Practice Chinese medicine clinician.
- Golden Needle Acupuncture Inc.**      **January 1999 to July 2000**
  - Private apprenticeship in acupuncture and Chinese herbal medicine.

**Other Experience:**

- Q-Puncture 1<sup>st</sup> edition, Acupuncture Software: professional consultant/editor
- California AIDS Ride 6 and 7 (June 1999; June 2000): sports medicine crew for the annual 7-day cycling event from San Francisco to Los Angeles. Performed stretching, athletic taping, physical agent modalities, and education for injured cyclists.

**Education:**

**M.S., Acupuncture and Oriental Medicine**  
South Baylo University of Oriental Medicine, July, 1997  
**Master of Occupational Therapy**  
Loma Linda University, June, 2004  
**B.A., Health Sciences, cum laude**  
Loma Linda University, June, 2004

**Certifications:**

**Certified Acupuncture Orthopedic Specialist**  
American Acupuncture Academy, 1997  
**Advanced training in Traditional Chinese Orthopedics**  
Dong Zhi Men Hospital of Orthopedics and Traumatology:  
China Academy of Traditional Chinese Medicine, April 1997  
**Physical Agent Modalities Advanced Practice Certification**  
California Board of Occupational Therapy, 2005

**Research:**

The associations among occupations, falls and self-reported risk factors.  
 • This was a Joint project with the Loma Linda University Occupational Therapy department and The Jerry L. Pettis Memorial VA Hospital. Several significant findings were uncovered. Currently seeking publication.

**Occupational Therapy Fieldwork Associations:**

- **Arrowhead Regional Medical Center-** Occupational Therapy Out-Patient department (hand clinic). Assessed incoming clients, designed exercise programs, administered physical agent modalities, splinting, and flexor-tendon protocols. Also ran several groups in the acute psychiatric department.
- **Alternatives to Domestic Violence-** Part of a team that designed and administered a six-week program for children who have been exposed to domestic violence.
- **Corona-Norco Unified School District-** School-based occupational therapy. Administered standardized assessments, delivered interventions, ran the “Alert Program”, and attended individual education plans.
- **The Children’s Center of Riverside-** Early intervention program for infants, toddlers, and preschool children.
- **Casa Colina Hospital, Pomona California-** acute and sub-acute physical dysfunction.
- **Grove High School, Redlands California-** mentored poorly performing students and ran groups on life skills.
- **San Bernardino County Behavioral Health, Rancho Cucamonga facility-** assisted OTR in running group activities, workshops, and community integration field trips. Assisted social worker during screening sessions and participated in multidisciplinary meetings.

**Areas of proficiency:**

**Pain management-** excellent skills dealing with painful conditions. Majority of patients experience pain relief within several minutes of acupuncture treatment. Proficient with a number of acupuncture styles/techniques including electro-acupuncture methods.  
**Orthopedics-** proficient with orthopedic testing, exercise programs, manual techniques including joint mobilizations, acupressure, and tui na (Oriental Medical manual techniques), specialty acupuncture techniques for orthopedic conditions, specialty herbal formulations for orthopedics.  
**Chinese herbal prescriptions-** very experienced with advanced training in Chinese herbal medicine for internal and external applications  
**Physical disabilities -** experience working with orthopedic and neurological disabilities. Physical disabilities are an area of expertise and interest to me. I make a point of searching for the root causes of orthopedic dysfunction, looking at client’s daily routines, habits, and efficiency of movement, in order to teach clients how they can impact their own course of recovery.

**Professional Associations:**

- American Occupational Therapy Association
- Occupational Therapy Association of California
- California Association of Acupuncture & Oriental Medicine

**Interests:**

I am a connoisseur of martial arts and I enjoy cross-cultural studies that include cooking, philosophy, and travel. I have taught martial arts classes including Tai Chi groups in the acute psychiatric setting. I have traveled to India, Malaysia, & China and offer a culturally sensitive approach to my clients. Amateur actor with formal training, stage and film experience.





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