#### The Healthcare Medicine Institute presents

# High Cholesterol and Dietetics, Part 3

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## High Cholesterol and Dietetics A Three Part Series

#### Outlines of All Three Courses

## High Cholesterol and Dietetics, Part One

This course covers the diagnosis of treatment of hyperlipidemia (high cholesterol and triglycerides) according to western biomedicine and presents the Chinese medicine theoretical foundations concerning hyperlipidemia including diagnostics and treatment principles. This course is approved for 6 acupuncturist continuing education credit hours.

#### Introduction

#### 1. Hyperlipidemia in Western Medicine

- 1.1 Definition
- 1.2 Prevalence
- 1.3 Pathophysiology
- 1.4 Signs and Symptoms
- 1.5 Description of Lipoproteins

Characteristics of the Major Lipoprotein Classes

Characteristics of Lipoproteins:

1.6 Serum Lipid Levels

ATPIII Serum Lipid Level Classification (mg/dL):

- 1.7 Determining Risk
- 1.8 Therapeutic Options:

Effects of the major dyslipidemia drugs on serum lipid levels

1.9 Non-Mainstream Ideas about Cholesterol and Dyslipidemia

#### 2. Hyperlipidemia in Chinese Medicine

- 2.1 Fundamentals of Dyslipidemia in Chinese Medicine
- 2.1.1 The Spleen and Dyslipidemia

Obstruction of Spleen Transportation is a Key Component in Dyslipidemia Spleen Deficiency and Dyslipidemia in Modern Research

2.1.2 Liver and Dyslipidemia

Liver Qi Stagnation as a Factor in Dyslipidemia

Liver Qi Invading the Spleen

Liver Qi Deficiency as a Factor in Dyslipidemia

Liver Yin Deficiency and Deficiency Heat Scorching the Fluids as a Factor in Dyslipidemia

#### 2.1.3 Kidney and Dyslipidemia

Kidney deficiency is a primary factor in the development of dyslipidemia

Kidney Yang Deficiency, Water Congealing and Becoming Phlegm

Kidney Yin Deficiency, Deficient Fire Scorching the Fluids

Kidney Essence Deficiency and Stagnation of Fat

Kidney Tonifying Medicinals and Dyslipidemia

Conclusion

**Heart Section** 

## High Cholesterol and Dietetics, Part Two

This course takes a detailed look at Chinese medicine dietetics and its relationship to the treatment of hyperlipidemia. Participants learn lifestyle changes important to reducing cholesterol and triglyceride levels according to Chinese Medicine principles. In addition, participants learn the Chinese medicinal properties of individual foods and their effects upon blood lipid levels. Also, participants learn how to apply Chinese Medicine lipid reducing food formulas to reduce cholesterol and triglyceride levels. This course is approved for 6 acupuncturist continuing education credit hours.

## 3. Prevention & Treatment of Dyslipidemia in Chinese Medicine

#### 3.1 Lifestyle

- 3.1.1 Sleep Hygiene
- 3.1.2 Elimination
- 3.1.3 Dietary Habits

#### 3.2 Food Therapy

- 3.2.1 Individual Foods
  - 1. Fruits & Nuts
  - 2. Vegetables, Grains, Tofu

#### 3.2.2 Lipid-Reducing Food Formulas

- 1. Teas
- 2. Conjee
- 3. Soups

## High Cholesterol and Dietetics, Part Three

This course details the medicinal properties of Chinese herbs and their relationship to lowering serum lipid levels. Modern research is presented in addition to Chinese medicine theoretical principles. Individual herbs and herbal formulas are presented to make the clinical application of this material helpful to a licensed acupuncturist for the treatment of hyperlipidemia. Learn how to lower cholesterol and triglyceride levels with Chinese medicinal herbs. This course is approved for 13 acupuncturist continuing education credit hours.

#### 3.3 Herbal Therapy

#### Introduction

#### 3.3.1 Individual Medicinal Herbs

- 3.3.1.1 Transform Phlegm and Direct Turbidity Downward Medicinals
- 3.3.1.2 Reduce and Guide Out, Direct Turbidity Downward Medicinals
- 3.3.1.3 Transform Blood Stasis and Direct Turbidity Downward Medicinals
- 3.3.1.4 Supplement the Liver and Direct Turbidity Downward Medicinals
- 3.3.1.5 Clear, Drain, and Direct Turbidity Downward Medicinals
- 3.3.1.6 Boost the Qi, Strengthen the Spleen, and Direct Turbidity Downward also

#### 3.3.2 Treatment Strategies and Herbal Formulas

- 3.3.2.1 Treatment of the Spleen
- I. Strengthen the Spleen and Transform Damp
- II. Regulate the Spleen and Transform Damp
- 3.3.2.2 Treatment of the Liver
- I. Course the Liver and Strengthen the Spleen Method
- II. Clear the Liver and Transform Phlegm Method
- III. Course the Liver and Nourish the Blood Method
- IV. Pacify the Liver, Extinguish Wind, Invigorate the Blood, and Transform Blood Stasis Method
- V. Harmonize Shaoyang Method

#### 3.3.2.3 Treatment of the Kidney

- I. Boost the Kidney, Drain Turbidity, and Transform Blood Stasis Method
- II. Warm the Kidney, Drain Turbidity, and Transform Blood Stasis Method
- III. Boost the Qi, Nourish the Yin, and Transform Blood Stasis Method
- 3.3.2.4 Treatment of the Heart
- I. Boost the Qi and Invigorate the Blood Method
- II. Free the Yang, Drain Turbidity, and Invigorate the Blood Method
- 3.3.2.5 Treating Phlegm and Blood Stasis
- I. Invigorate the Blood and Transform Blood Stasis Method

#### **Comparison of Blood Invigorating Formulas**

I. Draining Dampness, Transforming and Expelling Phlegm, Guiding Out 3.3.2.5 Concluding Remarks

#### Conclusion

## High Cholesterol and Dietetics, Pt. 3

#### 3.3 Herbal Therapy

#### Introduction

There are copious amounts of literature in Chinese discussing Chinese herbal medicine and dyslipidemia. There are the prevalent theories and some novel theories, interesting applications of classical formulas and many new formulas, as well as discussion of the effects of individual herbs. Following is a distillation of some of the literature, including discussion of single herbs and formulas. While many of the formulas are of interest and could possibly be used as-is, it is the author's opinion that the objective should be to better understand the theories behind them, and work toward a finer understanding of the unique qualities of each medicinal. Then this knowledge can be flexibly applied in to create unique formulas for each clinical encounter.

#### 3.3.1 Individual Medicinals

#### 3.3.1.1 Transform Phlegm and Direct Turbidity Downward Medicinals

#### 1. Hai Zao 海藻 Herba Sargassii

Nature: salty, cold.

Channels entered: Liver and Kidney.

#### Functions:

Dissolves phlegm and softens hardness, promotes water and reduces swelling.

#### Indications:

Goiter, scrofula, phlegm-drink (tan-yin), testicular swelling and pain, leg-qi, edema, etc. Recently used to treat hyperlipidemia, chronic bronchitis, hepatosplenomegaly, and hypertension.

#### Modern research:

Hai zao has been shown in animal studies to control the rise in serum cholesterol levels that is usually accompanied by intake of fatty foods, increase HDL levels, improve HDL/TG ratio, and prevent atherosclerosis.

#### Clinical application:

Hai zao can expel phlegm and move water, and is useful to reduce serum lipids. It also softens hardness, and can speed up the dissolution of atherosclerotic plaque. It is used in cases of coronary artery disease, dyslipidemia, obesity, and hypertension presenting with phlegm dampness and blood stagnation.

#### 2. Kun Bu 昆布 Ecklonia Kurome

Nature: salty, cold.

Channels entered: Liver, Kidney.

Functions:

Dissolves phlegm and softens hardness, moves water and reduces swelling.

**Indications:** 

Goiter, scrofula, leg-qi, edema, dyslipidemia, hypertension, atherosclerosis.

Modern research:

Shown to reduce serum lipids, inhibit intestinal absorption of lipids, and increase lipid excretion. Also shown to reduce blood pressure and slow heart rate, possibly via inhibition of adrenaline.

#### Clinical application:

Kun bu is salty and can dissolve phlegm, soften hardness, and disperse nodules. It removes phlegm turbidity from the blood, therefore reducing serum lipids, speeds up the dissolution of atherosclerotic plaque, and reduces blood pressure. It is well suited to treat dyslipidemia presenting with phlegm and blood stagnation, and is often combined with Hai Zao for this and other purposes.

#### Comparison of Kun Bu and Hai Zao:

Both these substances are salty and cool, go to the Liver and Kidney, dissolve phlegm and soften hardness, and move water and reduce swelling. They both reduce phlegm nodules, and are commonly used together to treat lymph nodules and thyroid nodules. They also both soften the blood vessels, reduce uric acid, and reduce serum lipids. However, hai zao goes more to the blood level, while kun bu goes more to the qi level.

#### 3. Xie Bai 薤白 Bulbus Allii

Nature: spicy, bitter, warm.

Channels entered: Lung, Heart, Stomach, Large Intestine.

Functions:

Regulates qi and loosens the chest, frees the yang and dissipates binding.

Indications:

Dyslipidemia, hypertension, coronary artery disease, chest-impediment (xiong-bi 胸痹)

Modern research:

Increases fibrinolysis, reduces arterial plaque and serum lipids, and inhibits platelet aggregation and serum lipid oxidization.

#### Clinical application:

Xie bai has long been considered a longevity herb due to its ability to regulate the qi, disperse blood stagnation, and loosen the chest. It is spicy and thus opens the circulation, warming and thus can free the yang qi and allow it to penetrate and move, and bitter and draining so can remove phlegm turbidity. It disperses yin-cold natured phlegm turbidity stagnation, frees the yang qi of the chest, and treats cold, phlegm, damp, turbid stagnation in the blood vessels with symptoms such as stuffy chest, angina pectoris, shortness of breath, etc. For this purpose it is commonly combined with medicinals that transform phlegm and disperse binding, invigorate blood and transform stasis, and disperse cold and stop pain, such as Gua Lou, Dan Shen, Wu Ling Zhi, Pu Huang, Ban Xia, Chen Pi, Yu Jin, Jiang Huang, etc.

#### 4. Bai Jiang Can 白僵蚕 Bombyx Batryticatus

Nature: spicy, salty, neutral.

Channels entered: Heart, Liver, Spleen, Lung.

#### Functions:

Extinguishes wind and stops tremors, expels wind and stops pain, transforms phlegm and disperses binding.

#### **Indications:**

Dyslipidemia, arteriosclerosis, elevated blood sugar.

#### Modern research:

Bai Jiang Can has been shown to be effective in the prevention and treatment of dyslipidemia. It can increase serum albumin, decrease serum globulin and cholesterol, prevent arteriosclerosis, and lower blood sugar.

#### Discussion:

Bai Jiang Can is an important herb to extinguish wind, transform phlegm, and stop tremor. Its nature is neutral and its traditional application is extremely broad. Like most animal substances, Jiang Can enters the collaterals, where it removes phlegm stagnation from this deep space. Ye Tian-Shi said, "disease of long-duration enters the collaterals", implying that chronic disease moves from the superficial layers (the main channels/jing/经, and the qi level) to a deeper layer (the collaterals/luo/络, the grandsonvessels/sun-mai/孙脉, and the blood level). Disease at this level is more stubborn, and requires the use of substances that can reach this space. Jiang Can effectively enters the collaterals and grandson-vessels to remove the phlegm stagnation that has settled here due to chronic illness.

#### Dose and precautions:

3 to 10 grams, or 1.5 to 3 grams as a powder. Normally it is dry fried. A small number of people may develop a skin rash after taking Bai Jiang Can, but this resolves within a

couple days after ceasing administration. Some individuals will become nauseas from the strange smell and taste of Bai Jiang Can.

#### 3.3.1.2 Reduce and Guide Out, Direct Turbidity Downward Medicinals

#### 1. Da Huang 大黄 Radix Et Rhizoma Rhei

Nature: bitter, cold.

Channels entered: Stomach, Large Intestine, Spleen, Liver.

#### Functions:

Drains downward and unblocks the bowels, clears heat and resolves toxin, invigorates blood and transforms blood stasis, clears and resolves damp heat.

#### **Indications:**

Dyslipidemia presenting with heat, damp, and blood stagnation.

#### Modern research:

Inhibits the intestinal absorption of cholesterol, reduces blood viscosity, and regulates lipid metabolism. Da Huang contains anthraquinones which are largely responsible for its downward draining function (although heat/cooking reduces the strength of this function), and which increase intestinal peristalsis, and reduce absorption and increase elimination of cholesterol.

#### Clinical application:

Da Huang's application is very broad, but its function is largely dependent on processing/pao-zhi/炮制. There are many different forms of Da Huang, including raw/unprocessed, steamed, wine-fried, vinegar-fried, scorch-fried, char-fried, etc. Raw Da Huang retains all of its downward draining function, especially if added to the decoction in the last 5 minutes, or ground to powder and added to the strained decoction. Raw Da Huang is generally used for serious, acute conditions, such as Yangming Fu excess syndrome, is not generally suited for long-term use, and therefore not the first choice for lowering serum lipids. The following forms are better tolerated, can be taken for longer periods of time, and are thus more suitable for treating dyslipidemia. Steamed Da Huang (Shu Da Huang, or Jiu Zhi Da Huang) is milder than raw Da Huang but still retains more of its downward draining function than the next two forms, and can remove heat and dampness, and invigorate the blood. Scorch-fried Da Huang (Jiao Da Huang) is 10-15% blackened, goes to the blood level and is good for heat and dampness in the blood. Char-fried Da Huang (Da Huang Tan) is 80-90% blackened, is milder than Jiao Da Huang, also goes to the blood level but even deeper, and removes heat and damp from deep in the blood. It is very mild and can be taken even in cases of Spleen deficiency, and for extended periods of time. Another preparation, called Qing Ning Wan, consists of steamed Da Huang and is used to reduce cholesterol, blood sugar, triglycerides, and uric acid levels.

#### 2. Shan Zha 山楂 Fructus Crataegi

Nature: sour, sweet, slightly warm.

Channels entered: Spleen, Stomach, Liver.

#### Functions:

Dissolves food stagnation and strengthens the Stomach, transforms blood stasis and disperses binding.

#### **Indications:**

Dyslipidemia with presence of food stagnation (particularly meat stagnation), and blood stagnation.

#### Modern research:

A large amount of research has been done on the lipid-lowering properties of Shan Zha in recent years. Shan Zha has been shown to increase HDL levels, reduce LDL levels, and increase elimination of cholesterol. It also has significant effects on the cardiovascular system, increasing coronary artery perfusion and reducing myocardial oxygen consumption, and is therefore useful in cases of decreased myocardial blood and oxygen flow. It can also reduce blood pressure.

#### Clinical application:

Shan Zha is particularly useful in cases of dyslipidemia with food stagnation, blood stagnation, obesity, coronary artery disease, and hypertension. It is commonly combined with herbs such as Yu Zhu, Ju Hua, Yan Hu Suo, Jin Yin Hua, Mai Ya, Dan Shen, He Ye, etc.

Raw Shan Zha goes to the blood, and is better for dispelling blood stagnation. Jiao/scorch-fried Shan Zha is better for food stagnation. Shan Zha is very sour, so not suitable in cases with excessive stomach acidity. However, the acidity can be neutralized to some extent by the addition of Shen Qu or roasted Gu Ya/Mai Ya.

#### 3. Lai Fu Zi 莱菔子 Semen Raphani Sativi

Nature: spicy, sweet, neutral.

Channels entered: Spleen, Stomach, Lung, Large Intestine.

#### Functions:

Dissolves food and guides out stagnation, descends qi and transforms phlegm.

#### Indications:

Dyslipidemia with food and phlegm stagnation.

#### Modern research:

Lai Fu Zi has been shown to reduce serum cholesterol, prevent atherosclerosis, and treat coronary artery disease.

#### Clinical application:

Lai Fu Zi has both ascending and descending functions, and is particularly useful to remove phlegm and regulate qi. It is sweet, neutral, and non-toxic, and can be taken for extended periods of time without damage to the organs. It is particularly suitable for cases of dyslipidemia in the elderly with concurrent hypertension and/or coronary artery disease, especially when stagnation of phlegm, food, and qi are present.

Dry-fried Lai Fu Zi is better for food stagnation. Raw Lai Fu Zi is stronger to remove damp-phlegm and descend the Lung qi.

#### 4. Ze Xie 泽泻 Rhizoma Alismatis

Nature: sweet, bland, cold.

Channels entered: Kidney, Urinary Bladder.

#### Functions:

Promotes water and leaches dampness, drains heat and unblocks painful urinary dribbling.

#### Indications:

Dyslipidemia with dampness and yin deficiency with deficient heat.

#### Modern research:

Shown to increase serum HDL and HDL/TG ratio, prevent atherosclerosis, prevent fatty liver, and promote weight loss.

#### Clinical application:

Shen Nong Ben Cao Jing states that Ze Xie can not only "dissolve water, but can also nourish the five viscera, boost qi, and that long term consumption can benefit the eyes and ears, increase longevity, and make the body lighter." Therefore, Ze Xie is not just an herb for clearing heat and draining dampness, mainly from the Urinary Bladder, but rather can also supplement the body, primarily the Kidney yin. It is particularly useful in cases of dyslipidemia with phlegm and damp accumulation and yin deficiency heat, with elevated blood sugar and/or hypertension, and where its ability to prevent fatty liver and premature aging are desired. It is commonly paired with Shan Zha, and 6-9 grams of each can be boiled in one liter of water and sipped as a tea over the course of the day to help prevent and treat dyslipidemia when stagnation of food, dampness and blood are present.

#### Cautions:

Large doses of Ze Xie in animal studies have caused liver and kidney damage, however, there are no known clinical reports of significant side effects in humans. A small number of patients may experience mild diarrhea, borborygmus, or other GI discomfort, slight and temporary elevation of ALT, or skin rash. Should be avoided in cases of polyuria. There are reports that long-term use at high doses can lead to electrolyte imbalance, therefore it is not recommended to use it at high doses or for extended periods of time. However, there are also reports of using large doses of Ze Xie (up to 42 grams per day) for up to three months in the treatment of hyperlipidemia with no adverse effects.

#### 5. Yin Chen Hao 茵陈蒿 Herba Artemisiae Yinchenhao

Nature: slightly bitter, slightly spicy, slightly cold.

Channels entered: Liver, Gall Bladder, Spleen, Stomach, Urinary Bladder.

#### Functions:

Clears heat and resolves dampness, benefits the Gall Bladder and removes jaundice.

#### Indications:

Dyslipidemia presenting with damp-heat or damp-cold stagnation in the Liver and Gall Bladder.

#### Modern research:

Shown to promote the production and excretion of bile, reduce blood pressure, reduce serum cholesterol, reduce atherosclerosis, and reduce fatty deposit on the internal organs.

One study using 15 grams of Yin Chen Hao per day (taken as a tea over the course of the day) for one month showed significant reduction in serum cholesterol. Another report claims good results in reducing serum lipids using syrup made from Yin Chen Hao 30 grams, Shan Zha and Mai Ya each 15 grams.

#### Clinical application:

Yin Chen Hao is traditionally used to benefit the Gall Bladder and clear jaundice. Zhang Xi-Chun said, "Yin Chen (Hao) excels at clearing heat from the Liver and Gall Bladder and regulating Liver and Gall Bladder stagnation. Once heat is removed and stagnation opened, the bile can enter the Small Intestine without obstruction." Modern research shows that Yin Chen Hao increases production and excretion of bile and thus can reduce serum cholesterol, reduce lipid deposit on the internal organs, and reduce blood pressure.

Yin Chen Hao is most often used in cases of damp-heat obstructing the Liver and Gall Bladder giving rise to yang-jaundice, in which case it clears heat and removes the dampness through the urine. However, in cases of cold-damp yin-jaundice it can be combined with warm herbs, as in Yin Chen Zhu Fu Tang, Yin Chen Si Ni Tang, etc. Therefore, in treating dyslipidemia it can also be flexibly applied to a variety if etiologies.

#### 3.3.1.3 Transform Blood Stasis and Direct Turbidity Downward Medicinals

#### 1. Hu Zhang 虎杖 Radix Et Rhizoma Polygoni Cuspidati

Nature: bitter, sour, slightly cold. Channels entered: Liver, Gall Bladder.

#### Functions:

Invigorates the blood and disperses blood stasis, expels wind and unblocks the collaterals, clears heat and removes dampness, resolves toxins and disperses binding, transforms phlegm and stops cough.

#### Indications:

Dyslipidemia presenting with damp-heat, toxin, and blood stasis.

#### Modern research:

Animal studies have show Hu Zhang can significantly reduce serum triglycerides, total cholesterol, and LDL, as well as increase HDL/TC and HDL/LDL ratios.

#### Clinical application:

Hu Zhang and Da Huang both belong to the polygonaceae family, substantially drain downward and unblock the bowels, clear heat and resolve toxins, invigorate the blood and stop bleeding, benefit the Gall Bladder and remove jaundice. Hu Zhang, however, primarily enters the Liver (while Da Huang also strongly affects Yangming) and additionally transforms phlegm and stops cough. In recent years Hu Zhang's lipid reducing function has undergone significant research, showing it is well suited to treat dyslipidemia in cases of phlegm turbidity and blood stasis.

Hu Zhang primarily acts on the Liver, and is well suited to treat viral hepatitis (in this capacity it can help reduce viral load and liver enzymes), cholecystitis, and jaundice. It is often combined with Yin Chen Hao to clear heat and toxin and remove dampness.

#### Cautions:

Contraindicated in pregnancy.

Hu Zhang is traditionally considered non-toxic, and modern reports tell of patients taking 30 grams per day continuously for thirty days with no obvious side effects. However, with the same regiment a small number of patients have reported decreased appetite, nausea, vomiting, diarrhea, and dizziness. This is in part due to its relatively cold and bitter nature, which can obstruct the Stomach. Therefore, it is not recommended to use in large dose or long-term. 6 to 9 grams per day is sufficient, and at this dose it can be taken for extended periods of time without problem.

#### 2. San Qi 三七 Radix Pseudoginseng

Nature: sweet, slightly bitter, warm.

Channels entered: Liver, Stomach, Heart, Lung, Large Intestine.

#### Functions:

Disperses blood stagnation and stops bleeding, reduces swelling and stops pain.

#### Indications:

Dyslipidemia with blood stagnation and bleeding due to cold and deficiency.

#### Modern research:

San Qi has been show to reduce serum cholesterol and prevent and treat arteriosclerosis. It can inhibit platelet aggregation, decrease blood viscosity, increase coronary artery perfusion, reduce myocardial oxygen consumption, increase cardiac output, and promote development of collateral blood circulation in cases of coronary artery occlusion.

#### Clinical application:

San Qi can stop bleeding without causing blood stasis, and can dissipate blood stasis without causing bleeding or damaging the Zheng qi. Zhang Xi-Chun stated, "San Qi excels at transforming blood stasis as well as stopping bleeding, and is an important herb to treat nose bleeding, after recovery from which it will not have led to stasis of blood in the vessels and collaterals....It transforms blood stasis without damaging new blood, and is a miraculous blood-regulating substance."

San Qi and Ren Shen both belong to the araliaceae family, and like Ren Shen, San Qi can improve cardiovascular system function, quicken recovery from exercise fatigue, and strengthen and tonify the body's constitution. Therefore, it is particularly suitable to treat dyslipidemia with weak constitution and/or blood stagnation. It is however, on the warm side, and most suitable when cold and deficiency are the underlying causes of bleeding and stasis.

Reports on the use of San Qi in the treatment of coronary artery disease and angina pectoris are numerous. In one study, San Qi was combined with Quan Gua Lou and Xie Bai. Another study combined San Qi with ginseng root and Hu Po (amber). Both reported good results.

#### Cautions:

Contraindicated in pregnancy. A small number of patients may experience nausea, vomiting, or skin rash.

#### 3. Shui Zhi 水蛭 Hirudo seu Whitmania

Nature: salty, bitter, neutral, toxic.

Channels entered: Liver.

#### Functions:

Breaks blood and expels blood stasis, unblocks the vessels and dissolves masses.

#### Indications:

Dyslipidemia with blood stagnation deep in the organs and collaterals.

#### Modern research:

Shown to reduce serum cholesterol and triglycerides, prevent and treat atherosclerosis, and reduce arterial plaque. Shui Zhi also inhibits blood coagulation, more strongly than Mang Chong, Zhe Chong, or Tao Ren.

#### Clinical application:

Shui Zhi is a type of leech, and as animal products are said to have an affinity for the human body (xue rou you qing/血肉有情), it is very penetrating and goes to deep spaces in the body to strongly invigorate the blood, remove blood stasis, and dissolve accumulations. Modern research shows its anti-coagulation function is relatively strong, and it has therefore been used in cases of dyslipidemia with significant blood stagnation

and phlegm turbidity with symptoms such as dizziness, chest-obstruction, angina pectoris, hemiplegia, etc.

Regarding Shui Zhi's toxicity, the majority of modern materia medica state that Shui Zhi is toxic. However, Shen Nong Ben Cao Jing does not mention toxicity, and the famous  $20^{th}$  century physician Zhang Xi-Chun stated, "All medicinals which break blood also damage the qi level. Only Shui Zhi, which is salty and travels to the blood level, causes no damage at all to the qi level." Therefore, it is said that Shui Zhi breaks blood but does not damage new blood.

The "People's Republic of China Materia Medica" recommends a dosage of 10 grams for decoctions, and 3-5 grams for pills and powders, but there are many reports of using larger doses, often 15-20 grams per day, and even up to 30 grams per day, without significant side effects. However, there is one report of death after an individual consumed 200 grams of Shui Zhi powder in one day. That said, according to this author's teachers' and personal experience, this is a fairly strong substance and 1.5 to 6 grams per day is generally sufficient. Most sources agree that it should only be used for brief periods of time to drive out relatively severe blood stagnation, and that it is not suitable to be taken for long periods of time.

#### Cautions:

Shui Zhi is contraindicated during pregnancy and in cases of blood deficiency with no signs of qi and blood stagnation.

#### 4. Jiang Huang 姜黄 Rhizoma Curcumae Longae

Nature: spicy, bitter, warm. Channels entered: Liver, Spleen.

#### Functions:

Invigorates the blood and moves qi, unblocks the vessels and stops pain.

#### Indications:

Dyslipidemia with phlegm turbidity and qi and blood stagnation.

#### Modern research:

Jiang Huang has been shown to reduce serum cholesterol and triglycerides, and inhibit platelet aggregation. Jiang Huang benefits the Gall Bladder, and can increase production and excretion of bile, and thus can reduce cholesterol levels.

#### Clinical application:

Jiang Huang goes mostly to the channels and the upper body, where it removes cold, damp, and blood stagnation in the collaterals, and is used primarily for muscle and joint pain. It is also useful in cases of dyslipidemia with phlegm turbidity and qi and blood stagnation.

#### Cautions:

Jiang Huang's qi regulating, blood moving, and stasis dispersing functions are quite strong, and it should not be used in cases of blood deficiency where qi and blood stagnation are not present.

Contraindicated during pregnancy.

#### 5. Yu Jin 郁金 Tuber Curcumae

Nature: spicy, bitter, cold.

Channels entered: Liver, Gall Bladder, Heart.

#### Functions:

Invigorates the blood, regulates the qi, stops pain, resolves stagnation, clears the Heart, and benefits the Gall Bladder and reduces jaundice.

#### Indications:

Dyslipidemia with qi and blood stagnation affecting the Heart, Liver, and Gallbladder.

#### Modern research:

Has been shown to reduce serum cholesterol, \( \beta \)-lipoprotein, and triglyceride levels.

#### Clinical application:

Yu Jin is spicy, bitter and cold, and goes to the vessels to move qi in the blood level. It is useful to treat dyslipidemia in cases of qi and blood stagnation with heat in the Liver, Gall Bladder, or Heart.

It is often combined with Bai Fan (白矾 *Alumen*), as in the formula Bai Jin Wan, to treat dyslipidemia in cases of qi and blood stagnation with phlegm dampness. One study of 344 participants taking 6 grams Bai Jin Wan three times per day showed significant reductions in serum cholesterol, triglycerides, and β-lipoproteins. The same study showed significant weight loss in obese patients, and reduction in blood pressure in participants with concurrent hypertension.

For treatment of coronary artery disease and angina pectoris, Yu Jin is often combined with Hong Hua, Gua Lou, Xie Bai, etc.

#### Cautions:

Contraindicated during pregnancy.

#### Note:

Jiang Huang and Yu Jin both belong to the zingiberaceae family. Both regulate qi, invigorate the blood and disperse blood stagnation, but Jiang Huang is stronger. Jiang Huang is more directed at the channels, so is good for muscle and joint pain. Yu Jin moves qi in the blood, goes mainly to the Heart and Liver, and can also be used for mental health problems.

#### 6. Dan Shen 丹参 Radix Salviae Miltiorrizae

Nature: bitter, slightly cold.

Channels entered: Heart, Pericardium, Liver.

#### Functions:

Invigorates the blood and expels blood stasis, regulates the menses and stops pain, nourishes the blood and calms the spirit, cools the blood and reduces boils.

#### **Indications:**

Dyslipidemia with blood stagnation, blood deficiency, and blood heat.

#### Modern research:

Shown to reduce serum cholesterol and prevent atherosclerosis. Can dilate the coronary arteries, increase coronary artery perfusion, inhibit platelet aggregation, and increase fibrinolysis.

#### Clinical application:

Dan Shen is classified as a "superior" medicinal in the "Shen Nong Ben Cao Jing", which notes its ability to boost qi. "Ming Yi Bie Lu" also notes its ability to nourish blood. Li Shi-Zhen stated, "Dan Shen, a single herb, has the same function as Si Wu Tang." Zhang Bing-Cheng said that "Dan Shen's blood supplementing function is weak, but its blood invigorating function is strong, and it is the primary herb to regulate the blood level." Its nature is slightly cold, and it can clear heat and cool the blood. Therefore it is similar to Si Wu Tang, but cooling, less tonifying, and more invigorating.

Modern research confirms Dan Shen's ability to reduce serum lipids, prevent atherosclerosis, inhibit platelet aggregation, increase fibrinolysis, and prevent liver fibrosis. It is commonly used to treat coronary artery disease, arteriosclerosis, chronic liver disease, etc. It can invigorate the blood and transform blood stasis, but is relatively mild, and while it effectively removes blood stasis it does not damage the Zheng qi or interfere with the production of new blood.

Dan Shen was traditionally combined with Tan Xiang and Sha Ren to treat "Heart pain". Recently it is combined with other blood moving herbs such as Chuan Xiong, Jiang Xiang, Hong Hua, and Chi Shao to treat coronary artery disease and angina pectoris. It is also commonly combined with San Qi and Bing Pian (to make Fu Fang Dan Shen Pian) for the treatment of coronary artery disease with angina pectoris.

It is well suited to treat dyslipidemia presenting with blood stagnation, in which case it is often combined with herbs such as Ge Gen, Ze Xie, Kun Bu, Shan Zha, Jue Ming Zi, etc.

#### Cautions:

Dan Shen's toxicity is very, very low, and side effects are rare. However, some patients may experience gastrointestinal reactions, increased menstrual flow, dizziness, or rash, but these symptoms disappear quickly after discontinuation of the herb. There are no recorded adverse effects on liver and kidney function. Finally, Dan Shen has blood-thinning properties, and must be used with extreme caution with coumadin.

#### 7. Pu Huang 蒲黄 Pollen Typhae

Nature: sweet, neutral.

Channels entered: Liver, Heart.

#### Functions:

Invigorates the blood, stops bleeding, expels blood stasis and stops pain, unblocks the collaterals, reduces serum lipids.

#### Indications:

Dyslipidemia with blood stagnation in the collaterals.

#### Modern research:

Shown to reduce serum lipids and prevent atherosclerosis. Can reduce serum cholesterol, decrease serum ß-lipoprotein levels and increase alpha-lipoprotein levels. Also can inhibit platelet aggregation and thrombogenesis, increase coronary artery perfusion, dilate peripheral vasculature, and reduce blood pressure.

#### Clinical application:

Pu Huang is well suited to treat dyslipidemia in cases of phlegm and blood stagnation. It is often a component in prepared medicines for the treatment of dyslipidemia, atherosclerosis, coronary artery disease, and angina pectoris.

#### Cautions:

Contraindicated during pregnancy.

#### 8. Yi Mu Cao 益母草 Herba Leonuri Heterophylli

Nature: spicy, bitter, slightly cold.

Channels entered: Liver, Urinary Bladder.

#### Functions:

Invigorates the blood and dispels blood stasis, promotes urination and resolves toxins.

#### Indications:

Dyslipidemia with mild blood stagnation in the Liver, and the Chong and Ren vessels.

#### Modern research:

Shown to strengthen the heart, increase coronary artery perfusion, decrease heart rate, dilate arteries, decrease arterial occlusion, and inhibit platelet aggregation.

#### Clinical application:

Yi Mu Cao goes mainly to the Liver and the Chong and Ren vessels where it gently removes blood stagnation. Because it is mild it is well suited for sensitive individuals and for gynecological conditions as during ovulation and menstruation many women are quite sensitive.

It can be used to treat dyslipidemia, in which case combination with Shan Zha, Ze Xie, and Jue Ming Zi increases its effectiveness.

Dosage is usually 6-9 grams, but it is not uncommon for sources to suggest 10-30 grams, and even up to 60 grams.

#### Cautions:

Use with caution during pregnancy and during the menstruation.

#### 9. Hong Hua 红花 Stigma Croci Sativi

Nature: spicy, warm.

Channels entered: Heart, Liver.

#### Functions:

Invigorates the blood and unblocks the vessels, expels blood stasis and stops pain.

#### Indications:

Dyslipidemia with blood stagnation in the vessels.

#### Modern research:

Animal studies have shown Hong Hua can reduce serum cholesterol, triglycerides, and total cholesterol. It has also been shown to reduce arterial plaque, lower blood pressure, and dilate the blood vessels, although this last function is relatively mild.

#### Clinical application:

Hong Hua is spicy and dispersing, warm and penetrating, can invigorate the blood and unblock the menstruation, and transform blood stasis and stop pain. Its action is primarily on the vessels. It is an important herb to move and harmonize the blood, mainly used for blood stagnation causing amenorrhea, dysmenorrhea, post-partum blood-stagnation abdominal pain, chest-obstruction with angina pectoris, joint pain and bi-pain, etc. It is often combined with Dan Shen, Chuan Xiong, Jiang Xiang, Chi Shao, etc, to treat coronary artery disease and angina pectoris.

Hong Hua is useful to treat blood stagnation type hyperlipidemia, but on its own is not very effective. It is therefore best to combine with other herbs according to the differential diagnosis.

#### Cautions:

Contraindicated in cases of excessively heavy menstruation, easy bleeding, and during pregnancy. Some patients may experience an allergic reaction to Hong Hua. Mild reactions include itchy skin rash, severe reactions include edema, lumbar pain, and difficulty breathing.

#### 10. Mo Yao 没药 Resina Myrrhae

Nature: bitter, neutral.

Channels entered: Heart, Liver, Spleen.

Functions:

Invigorates the blood and stops pain, reduces swelling and generates flesh.

#### Indications:

Dyslipidemia with relatively severe qi and blood stagnation causing pain.

#### Modern research:

Can improve microcirculation and blood rheology, decrease blood viscosity, and is therefore effective in treating coronary artery disease with blood stagnation. Inhibits platelet aggregation and is particularly useful for myocardial infarction and other thrombotic diseases. Can also reduce serum lipids and inhibit thrombogenesis.

#### Clinical application:

Mo Yao has been shown to significantly reduce serum cholesterol, triglycerides, and fibrinogen, as well as reduce angina pectoris and chest oppression. It is sometimes combined with Ru Xiang, Xue Jie, and Tan Xiang to treat angina pectoris with blood stagnation.

Ru Xiang and Mo Yao are often used as a pair. Ru Xiang acts more on the qi level, moving qi stagnation to stop pain, and goes more to the channels. Mo Yao acts more on the blood level, moving blood to stop pain. They are often combined since qi and blood stagnation often exist together.

#### Cautions:

Mo Yao easily irritates the stomach and can cause nausea and abdominal discomfort, and should not be dosed heavily. 3-6 grams is sufficient, and generally won't cause stomach problems. Should be used with caution in cases of Spleen and Stomach deficiency. Contraindicated during pregnancy.

#### 11. Jiang Xiang 降香 Lignum Dalbergiae Odoriferae

Nature: spicy, warm.

Channels entered: Liver, Spleen, Heart.

#### Functions:

Invigorates the blood and disperses blood stagnation, stops bleeding and arrests pain, and down bears qi.

#### Indications:

Dyslipidemia with qi and blood stagnation in the chest.

#### Modern research:

Jiang Xiang has been shown to reduce serum lipids, and this function may be related to HMG-CoA reductase inhibition.

#### Clinical application:

Jiang Xiang is aromatic and spicy, and thus dispersing; warm and unblocking and thus moves stagnation. It primarily acts on the upper-jiao and chest, moving the qi within the

blood to treat qi and blood stagnation chest obstruction. It invigorates the blood and transforms blood stasis, and moves the qi within the blood to stop pain. It is commonly used in cases of qi and blood stagnation causing pain in the chest, flanks, epigastrum, or abdomen, as well as for trauma-pain, and cold-hernial abdominal pain. It is often combined with herbs such as Dan Shen, Chuan Xiong, Chi Shao, Hong Hua, Pu Huang, and Wu Ling Zhi to treat qi and blood stagnation syndromes such as chest obstruction (xiong bi), coronary artery disease, and dyslipidemia.

Jiang Xiang is a component of Fu Fang Dan Shen Pian, a well-known patent medicine used to treat coronary artery disease and angina pectoris. In this case, Dan Shen moves the blood, and Jiang Xiang inhibits thrombogenesis and prevents myocardial infarction.

#### 3.3.1.4 Supplement the Liver and Direct Turbidity Downward Medicinals

#### 1. Zhi He Shou Wu 制首乌 Processed Radix Polygoni Multiflori

Nature: sweet, astringent, slightly warm.

Channels entered: Liver, Kidney.

Note: Raw He Shou Wu is sweet, bitter, and neutral, and enters the Heart, Liver, and

Large Intestine.

#### Functions:

Zhi/Processed He Shou Wu supplements and boosts the essence and blood, astringes the Kidney, and blackens the hair. Raw He Shou Wu treats malaria and resolves toxins, moistens the intestines and unblocks the bowels.

#### Indications:

Dyslipidemia with deficiency of Liver, Kidney, blood, and essence.

#### Modern research:

He Shou Wu can increase intestinal peristalsis, inhibit intestinal absorption of cholesterol and fats, increase cholesterol metabolism, inhibit platelet aggregation, and increase fibrinolysis. Therefore, its usefulness in preventing and treating dyslipidemia and arteriosclerosis is multi-faceted.

#### Clinical application:

Li Shi-Zhen in his "Ben Cao Gang Mu" states, "This substance is warm, bitter, and astringent. Bitter supplements the Kidney, warm supplements the Liver, and astringent can hold the essence. Therefore, it can nourish blood and boost the Liver, secure the essence and boost the Kidney, fortify the tendons and bones, and blacken the hair. It is an excellent tonic herb, neither cold nor drying, and its function is superior to that of Di Huang or Tian Men Dong."

He Shou Wu has a moderate nature and is not sticky or cloying. Processed Shou Wu is a commonly used tonic used to supplement the Liver and Kidney, and raw Shou Wu can drain downward and free the bowels. Both processed and raw Shou Wu can be used to

treat hyperlipidemia, hypertension, and coronary artery disease in cases of Liver and Kidney deficiency, and can simultaneously bolster the root and treat the branch.

#### Cautions:

He Shou Wu is nourishing, moistening, and makes the intestines slippery. Therefore, it should be used with caution in cases of loose stool and/or dampness. While He Shou Wu's toxicity is very low and it is commonly taken for extended periods of time without any side effects, a small number of people may experience gastrointestinal symptoms such as diarrhea, mild abdominal pain, nausea, etc. A very small number of patients may experience numbness, rash or herb-induced fever, especially if taking large doses of the herb.

#### 2. Sang Ji Sheng 桑寄生 Ramulus Loranthi Seu Visci

Nature: bitter, sweet, neutral. Channels entered: Liver, Kidney.

#### Functions:

Supplements the Liver and Kidney, strengthens the tendons and bones, expels wind damp, calms the fetus.

#### Indications:

Dyslipidemia with deficiency of Liver and Kidney, weakness of tendons and bones, wind and damp obstructing the channels, and soreness in lumbar and knees.

#### Modern research:

Sang Ji Sheng has been shown to lower blood pressure, prevent cardiac arrhythmia, inhibit platelet aggregation, and prevent thrombogenesis.

#### Clinical application:

Sang Ji Sheng is mostly used in cases of Liver and Kidney deficiency with soreness and pain of the lumbar region and knees and weakness of the tendons and bones with accompanying wind-cold-damp-obstruction.

Sang Ji Sheng has been used to treat hyperlipidemia in many studies. One study combined Sang Ji Sheng with Ge Gen and Dan Shen ("Sang Ge Dan") with good result. Another study used pills made from Sang Ji Sheng, Jue Ming Zi, Shan Zha, and Ge Gen ("Sang Jue Pian"), and also claimed good results lowering serum lipids.

Sang Ji Sheng has also been used to treat hypertension in many studies. One source claims 60 grams of Sang Ji Sheng made into a tea to be taken over the course of the day is effective. Another claims good results using Sang Ji Sheng, Xia Ku Cao, Jue Ming Zi, and Du Zhong.

#### Dosage and Cautions:

Many sources suggest 10-30 grams, but 6-12 grams is generally sufficient. If Sang Ji Sheng is grown on toxic plants it should not be used medicinally for fear of toxicity.

#### 3. Du Zhong 杜仲 Cortex Eucommiae Ulmoidis

Nature: sweet, slightly spicy, warm. Channels entered: Liver, Kidney.

#### Functions:

Supplements the Liver and Kidney, strengthens the tendons and bones, secures the Penetrating vessel and calms the fetus.

#### **Indications:**

Dyslipidemia with deficiency of Liver and Kidney.

#### Modern research:

Du Zhong has been shown to reduce serum cholesterol, possibly via inhibition of intestinal absorption, and to reduce blood pressure. According to one source, fried Du Zhong is stronger to reduce blood pressure than raw Du Zhong.

#### Clinical application:

Du Zhong is often used to treat dyslipidemia, in which case is can be combined with herbs such as Sang Ji Sheng, Ze Xie, Shan Zha, etc, for superior results.

Fried Du Zhong may be used alone to treat hypertension, in which case 30 grams can be boiled as a tea to be taken over the course of the day. Sugar may be added for flavor. There are also several countryside-doctor recipes for hypertension using Du Zhong. These can be boiled to make a tea and sipped throughout the day:

- Du Zhong 20 grams, red-skinned peanut skins 20 grams;
- Du Zhong, Sang Ji Sheng, Ju Hua, Mu Li, and Gou Qi Zi;
- Du Zhong 20 grams, Tian Ma 10 grams.

Du Zhong's anti-hypertensive function is substantial and relatively sustained. However, Du Zhong is warm and supplementing, and therefore some doctors are afraid to use it in cases of hypertension due to Liver fire rising. In fact, Du Zhong supplements the Liver and Kidney, boosts the Liver yin, and according to Li Shi-Zhen's "Ben Cao Gang Mu", "moistens Liver dryness". Therefore, when appropriately combined with other medicinals it can be used to treat hypertension and dyslipidemia of diverse etiology, including Liver and Kidney yin deficiency with Liver yang rising.

#### Comments:

Many sources suggest using between 9-15 grams in decoction, and even up to 30 grams in large doses. However, 6-9 grams is generally sufficient. Fried Du Zhong is easier to decoct and assimilate, and yields better anti-hypertensive results. There are reports that traditionally decocted Du Zhong is superior to Du Zhong tincture for treating hypertension.

#### 4. Gou Qi Zi 枸杞子 Fructus Lycii Chinensis

Nature: sweet, neutral.

Channels entered: Liver, Kidney, Lung.

#### Functions:

Nourishes the Liver and Kidney, brightens the eyes, moistens the Lung and stops thirst.

#### **Indications:**

Dyslipidemia with deficiency of Liver blood and Kidney essence.

#### Modern research:

Gou Qi Zi has been shown to reduce serum cholesterol and triglycerides, inhibit blood coagulation, prevent acute pulmonary thrombosis, strengthen immune system function, and decrease blood sugar.

#### Clinical application:

Gou Qi Zi is sweet, moist, and moderate. It excels at nourishing the yin, boosting the essence, nourishing the blood, brightening the eyes, and nourishing the Liver and Kidney to fortify the tendons and bones. It can strengthen the body, and long-term consumption can prevent senility and promote longevity. Traditionally is has been praised for these functions, and modern research has verified many of them.

Gou Qi Zi is effective at treating dyslipidemia when deficiency of Liver, Kidney, blood, and essence are present. With this presentation it can also help with diabetes and poor liver function, as well as regulate immune system function and prevent cancer. Gou Qi Zi has also been used in weight loss, and one study using 30 grams of Gou Qi Zi made into a tea to be taken over the course of the day, showed good results.

#### Dose:

6-9 grams per day is generally sufficient, although some sources suggest taking as much as 10-30 grams per day.

#### Cautions:

Should be avoided in cases of Spleen deficiency with loose stools, or copious phlegm. There are reports of allergic reactions to Gou Qi Zi.

#### 5. Nu Zhen Zi 女贞子 Fructus Ligustri Lucidi

Nature: sweet, bitter, cool. Channels entered: Liver, Kidney.

#### Functions:

Nourishes the Liver and Kidney, blackens the hair, brightens the eyes.

#### **Indications:**

Dyslipidemia with deficiency of Liver and Kidney vin with deficient heat.

#### Modern research:

Nu Zhen Zi has been shown to reduce serum lipids, prevent atherosclerosis, and reduce the thickness of atherosclerotic plaque.

#### Clinical application:

Nu Zhen Zi supplements the Liver and Kidney yin and clears deficient heat. It is very mild and not at all sticky or cloying, so can be used in the presence of stagnation of blood, phlegm, heat, food, etc. Since dyslipidemia often presents with deficiency of zheng qi as the root, with overlying excess in the form of phlegm and blood stagnation as the branch, supplementing the Liver and Kidney is often an important part of treatment strategy. Nu Zhen Zi effectively reduces serum lipids in these cases, and is especially suitable with Liver and Kidney yin deficiency when deficient heat and stagnation are present.

It can be combined with Han Lian Cao (to make Er Zhi Wan), and reports show this combination can effectively reduce triglycerides. Other formulations include "Qing Gong Chang Chun Dan", made from Nu Zhen Zi, Ren Shen, Gou Qi Zi, Du Zhong, and Shan Zhu Yu; and "Jiang Zhi Jiao Nang", made from Nu Zhen Zi, Sang Ji Sheng, Ze Xie, and Xian Ling Pi. Both of these are designed treat dyslipidemia in cases of underlying Liver and Kidney deficiency. There are also reports of using Nu Zhen Zi on its own to treat dyslipidemia, in which case it can be ground to powder and mixed with honey to make honey-pills, each pill containing 5-6 grams of raw herb. One pill can be taken each time, two times per day. However, there are also reports of diarrhea in some patients taking this preparation.

Nu Zhen Zi can also be used to treat hypertension due to Liver and Kidney yin deficiency with liver yang rising, with symptoms such as dizziness, blurry vision, tinnitus, etc. In this case it can be combined with raw Bai Shao, Zhen Zhu Mu, etc.

Because Nu Zhen Zi is cold and slippery, it may cause decreased appetite and loose stools in patients with Spleen and Stomach deficiency and weakness. It is not suitable in cases of Spleen and Stomach deficiency and cold with diarrhea, or yang deficiency.

#### 6. Dong Chong Xia Cao 冬虫夏草 Cordyceps Chinensis

Nature: sweet, neutral.

Channels entered: Lung, Kidney.

#### Functions:

Boosts the Kidney and assists the yang, supplements the Lung and calms wheezing, stops bleeding and transforms phlegm.

#### Indications:

Dyslipidemia with deficiency of Lung yin and Kidney essence.

#### Modern research:

Cordyceps has been shown to reduce serum cholesterol, triglycerides, and β-lipoproteins.

#### Clinical application:

Cordyceps is considered one of the "major three tonic herbs", along with ginseng and Lu Rong. Its principle function is to supplement and boost the Lung yin and Kidney essence, for which it is used to treat conditions such as phlegm-rheum cough, deficiency asthma, consumption cough, cough with blood, spontaneous sweating, night sweating, impotence, spermatorrhea, soreness and pain of the lumbar region and knees, post-illness deficiency with inability to recuperate. It is very mild, neither sticky nor cloying, does not cause stagnation or impair digestion, and can be taken long-term.

In recent years there are reports that cordyceps can reduce serum lipids and prevent and treat atherosclerosis. This may be due to the fact that after middle age the Kidneys are gradually weakening, and the qi, blood, and essence of the five viscera and six bowels are declining and their function weakening. This gives rise to phlegm and blood stagnation and can lead to dyslipidemia and arteriosclerosis. Cordyceps excels at supplementing the Kidney and Lung, and therefore is especially well suited to treat dyslipidemia of this etiology in middle aged and elderly patients.

There are also reports of cordyceps being used to successfully treat coronary artery disease and cardiac arrhythmia.

Wild cordyceps is exceedingly expensive, and due to the variation in quality and the huge potential for fraud (especially in China), purchasing wild cordyceps is somewhat hazardous. However, cultivated cordyceps is considerably less expensive and readily available. Furthermore, if the quality is good, the function is comparable to the wild herb.

#### Cautions:

Contraindicated in cases of exterior conditions or internal heat.

#### 7. Ling Zhi 灵芝 Ganoderma Japonicum

Nature: sweet, neutral.

Channels entered: Lung, Heart, Spleen.

#### Functions:

Boosts the qi and blood, calms the spirit, strengthens the Spleen and Stomach, stops cough and wheezing, strengthens the brain and boosts intelligence.

#### Indications:

Dyslipidemia with deficiency of qi and blood.

#### Modern research:

Ling Zhi has been shown to strengthen immune system function, stop cough and calm asthma, strengthen the heart, improve cardiac function, increase coronary artery perfusion, and calm the mind. Ling Zhi has also been shown to reduce serum cholesterol and reduce atherosclerotic plaque in the coronary arteries. Animal studies using Ling Zhi have shown good results in slowing the development of early stage atherosclerotic plaques, however the long-term effect was not as pronounced.

#### Clinical application:

Ling Zhi was first mentioned in "Shen Nong Ben Cao Jing", where it is classified as a "superior" medicinal. It is a classical tonic herb which nourishes and strengthens the body, and supplements the zheng qi and secures the root. "Shen Nong Ben Cao Jing" lists six types based on color (blue-green, red, yellow, white, black, and purple), however there are approximately 150 varieties. While there are differences between their actions and indications, there are also many similarities, and for each of them "Shen Nong Ben Cao Jing" states that "long-term consumption (makes) the body light and not agelongevity." It is interesting to note that from the time of being recorded in "Shen Nong Ben Cao Jing" until now, Ling Zhi has appeared in the literature much less than commonly used herbs such as ginseng, dang gui, etc. This may be due to a scant supply historically, and therefore less possibility for use in the clinic. However, with improvements in technology there is now a large and affordable supply of cultivated Ling Zhi, although wild Ling Zhi is generally considered to be superior in function.

Ling Zhi is quite effective at treating a wide variety of cardiovascular disease in cases of underlying deficiency. It has been used to treat coronary artery disease with symptoms such as angina pectoris, chest oppression, palpitations, and shortness of breath. It can prevent cardiac arrhythmias and improve ECG results, lower serum cholesterol, triglyceride, and β-lipoprotein levels, and inhibit formation of atherosclerotic plaque.

#### Dose:

Typical dose is 3-15 grams per day. Note that the highest concentration of active ingredients is found in the spores. When purchasing Ling Zhi, one should check to make sure the underside of the cap has not opened and released the spores, or the effectiveness is much less.

Ling Zhi spores (Ling Zhi Bao Zi Fen 灵芝孢子粉) can be purchased separately, and are very potent and effective. For best results the spores' hard casing should be broken (this is done by the manufacturer). Dose is 0.5 to 1 gram per day.

#### 8. Hei Mu Er 黑木耳 Auricularia polytricha

Nature: sweet, neutral.

Channels entered: Stomach, Large Intestine.

#### Functions:

Clears the Lung and moistens dryness, nourishes the blood and strengthens the Stomach, boosts the qi and strengthens the body, invigorates blood.

#### Indications:

Qi and blood deficiency with symptoms such as shortness of breath, weakness, palpitations, spontaneous sweating, aversion to cold, sallow complexion, etc.

#### Modern research:

Animal studies have shown Hei Mu Er can reduce serum cholesterol, triglyceride, and β-lipoprotein levels, as well as inhibit the development of atherosclerosis.

#### Clinical application:

Hei Mu Er and Bai Mu Er (白木耳 *Fructificatio Tremellae Fuciformis*) are both edible mushrooms, the former being black in color, the latter white. Both can boost qi and nourish yin, and nourish the Stomach and generate fluids. However, Bai Mu Er is stronger to nourish the yin and moisten the Lung, and Hei Mu Er is stronger to nourish and invigorate the blood. Modern research shows that both can reduce serum cholesterol, dilate the coronary arteries, and improve myocardial microcirculation. They both have antioxidant properties, and have been shown to prevent senility, improve immune system function, and inhibit thrombogenesis.

Hei Mu Er is an important substance for assisting in the treatment of dyslipidemia, hypertension, coronary artery disease, and atherosclerosis. It is usually taken as a food, and can be prepared in many ways: added to soups, stir-fried, made into desserts, etc.

Following is a recipe for a sweet dessert: wash and soak 10 grams of dried Hei Mu Er in room temperature water until fully hydrated. Add suitable amount of water and rocksugar and slow-cook for one hour. Take one hour before sleep, several times per week, or as desired. This is a useful supplementary treatment for hypertension, atherosclerosis, and dyslipidemia.

#### 3.3.1.5 Clear, Drain, and Direct Turbidity Downward Medicinals

#### 1. Jue Ming Zi 决明子 Semen Cassiae

Nature: bitter, sweet, salty, slightly cold.

Channels entered: Liver, Kidney, Large Intestine.

#### Functions:

Clears the Liver and brightens the eyes, moistens the intestines and unblocks the bowels.

#### Indications:

Dyslipidemia with Liver heat and fire rising, constipation, red and painful eyes.

#### Modern research:

Jue Ming Zi has a mild purgative action and has been shown to inhibit intestinal absorption of fats. It has been shown to increase serum HDL levels and HDL/TC ratio, as well as inhibit formation of atherosclerotic plaque. It has also been shown to lower blood pressure and inhibit blood coagulation.

#### Clinical application:

Jue Ming Zi is useful to treat dyslipidemia in cases of Liver fire rising, especially with symptoms such as constipation with dry stool, red, tearing, and painful eyes, dizziness, headache, cataracts, or concurrent hypertension.

Jue Ming Zi can be used on its own to prevent and treat dyslipidemia and hypertension. Dry-fry until light yellow and grind to powder. Each time place 3 grams in a cup or teapot, add boiling water, steep, and drink as a tea, 3 times per day.

Another preparation calls for fried Jue Ming Zi 250 grams, He Ye 750 grams, Zhi He Shou Wu 250 grams, Shan Zha 5000 grams, and sugar 4000 grams. Grind to coarse powder. Place the powder in teabags, 10 grams of powder per teabag. Steep one bag in boiling water each time, 3 times per day.

Another preparation for treating fatty liver consists of Jue Ming Zi, Ze Xie, raw He Shou Wu, and Hu Zhang.

Jue Ming Zi is also useful in weight-loss. One study claims good results using Jue Ming Zi, Ze Xie, Yu Li Ren, Huo Ma Ren, and Shan Zha. Another study used Jue Ming Zi, Cang Zhu, He Ye, Lai Fu Zi, and Sheng Da Huang with good effect.

#### 2. Ju Hua 菊花 Flos Chrysanthemi Morifolii

Nature: spicy, sweet, bitter, slightly cold.

Channels entered: Liver, Lung.

#### Functions:

Courses and disperses wind heat, clears and benefits the head and eyes, pacifies and controls Liver yang.

#### Indications:

Dyslipidemia with Liver heat and yang rising.

#### Modern research:

Ju Hua has been shown to reduce serum lipids, reduce blood pressure, prevent atherosclerosis, dilate the coronary arteries, and increase coronary artery perfusion.

#### Clinical application:

"Shen Nong Ben Cao Jing" states that Ju Hua can "lighten the body, prevent aging, and (promote) longevity." It is well suited for treating dyslipidemia, hypertension, and atherosclerosis in patients with Liver heat and yang rising characterized by red and painful eyes, headaches, dizziness, irritability, insomnia, etc.

Ju Hua can be taken as a tea either alone or in combination with a variety of other substances to prevent and treat dyslipidemia and hypertension. Some possible combinations include Ju Hua with Gou Qi Zi, Ju Hua with Shan Zha, Ju Hua with Jue Ming Zi, and Ju Hua with Tian Ma, etc. One study showed good results lowering triglycerides with a tea made from Ju Hua, Dan Shen and Shan Zha.

#### Cautions:

Ju Hua is a bit cold, so should be used with caution in cases of Spleen and Stomach deficiency and weakness, or with deficient-cold diarrhea.

#### 3. Jin Yin Hua 金银花 Flos Lonicerae Japonicae

Nature: sweet, cold.

Channels entered: Lung, Heart, Stomach.

#### Functions:

Clears heat and relieves toxin, reduces abscesses and disperses swelling, cools the blood and stops dysentery.

#### Indications:

Dyslipidemia with heat and toxin.

#### Modern research:

Jin Yin Hua has been shown to reduce serum cholesterol, and inhibit intestinal absorption of cholesterol in animal studies.

#### Clinical application:

Jin Yin Hua is suitable for use in cases of dyslipidemia with the presence of heat and toxin, with symptoms such as red and painful eyes, headache, dizziness, hot and painful swellings or abscesses, etc.

#### 4. Shui Niu Jiao 水牛角 Cornu Bubali

Nature: bitter, salty, cold. Channels entered: Heart, Liver.

#### Functions:

Clears heat, resolves toxin, cools the blood calms fright.

#### Indications:

Dyslipidemia with blood heat and toxin.

#### Modern research:

Shui Niu Jiao has been shown to reduce serum cholesterol, increase serum HDL, and increase HDL/TC ratio.

#### Clinical application:

Shui Niu Jiao can be used with good effect to treat dyslipidemia, hypertension, and coronary artery disease in cases of blood heat and blood stasis, with symptoms such as nosebleed, bleeding gums, erythema, purpura, red eyes, etc.

The components of Shui Niu Jiao are largely similar to those found in Xi Jiao (rhinoceros horn), and the functions of the two substances are largely the same. However, Shui Niu Jiao is substantially less potent and must be dosed higher. Shui Niu Jiao is best used as a

powder in pills, or in decoctions as either powder or shavings, in which case it should be decocted an additional 45-60 minutes in advance of the other herbs.

#### Dose:

Decoction: typical dose is 9-15 grams of fine shavings or powder, but large doses of 30-60 grams are sometimes used.

Pills: 1.5-3 grams powder per day.

## 3.3.1.6 Boost the Qi, Strengthen the Spleen, and Direct Turbidity Downward Medicinals

#### 1. Ren Shen 人参 Radix Ginseng

Nature: sweet, slightly bitter, neutral.

Channels entered: Lung, Spleen, Heart, Kidney.

#### **Functions:**

Strongly supplements the yuan qi, supplements the Spleen and boosts the Lung, generates fluids and stops thirst, calms the spirit and boosts intelligence.

#### Indications:

Dyslipidemia with deficiency of Lung, Spleen, and yuan qi.

#### Modern research:

Copious amounts of research have been done on ginseng, including a large amount related to cardiovascular disease. Ginsenosides have been shown to significantly reduce serum lipid levels and prevent atherosclerosis. A study giving ginsenosides to rabbits showed significant reduction in serum cholesterol and triglyceride levels, marked increase of serum HDL levels, and significant reduction in arteriosclerotic markers. One study in humans tracking long-term consumption (approximately four years) of ginseng showed marked reduction in total cholesterol, elevation of HDL-C, and reduction in lipid oxidation. These effects began to be noticeable after 2-3 months of ginseng consumption.

Ginseng has also been shown to strengthen the heart and prevent cardiac arrhythmias. In regards to its effects on blood pressure, small doses tend to slightly elevate blood pressure and have similar effects to that of epinephrine. Larger doses have a cholinergic effect.

#### Clinical application:

As previously discussed, the Spleen and Lung play significant roles in fluid metabolism, and weakness and dysfunction of these two organs can lead to accumulation of pathogenic fluids. When the Spleen is weak it cannot disperse the essence from liquid and food, resulting in generation of pathogenic fluids. When the Lung is weak it cannot regulate the waterways, affecting water transportation and metabolism. Ginseng strongly supplements the yuan/source qi, and is the first choice for this function. When yuan qi is sufficient, the functions of the Lung, Spleen, and other viscera benefit. "Shen Nong Ben

Cao Jing" states, "(ginseng) commands supplementation of the five viscera, calms the spirit, sedates the Hun and Po, arrests fright and palpitations, expels pathogenic qi, brightens the eyes, opens the Heart and benefits intelligence, and long term consumption can lighten the body and (promote) longevity."

Therefore, ginseng can be used with good results treating dyslipidemia in cases of Lung and Spleen qi deficiency with symptoms such as weakness, fatigue, shortness of breath, spontaneous sweating, poor appetite, loose stools, etc.

Ginseng is often used as a single herb to treat dyslipidemia, in which case results begin to appear approximately 2-3 months after beginning consumption. When indicated, it can be taken for several years in this manner with good results.

#### Notes:

There are several forms of ginseng: red ginseng (hong shen, gao li shen), white ginseng (bai ren shen), American ginseng (xi yang shen), and even Tai Zi Shen and Dang Shen can be placed in this group. Red ginseng is warm and better to tonify the pectoral qi and yang qi, but caution must be used in cases of heat and/or Liver yang rising for fear of causing MI or CVA. White ginseng is more neutral and better when the deficiency of yang and/or yin is less pronounced. Xi Yang Shen is cooler, and better to tonify qi and yin. Tai Zi Shen is very mild and best for mild cases of qi, yin, and yang deficiency, or in children or people with poor digestion. Dang Shen is warm and primarily tonifies Spleen qi.

#### Dose:

Hong Ren Shen, Bai Ren Shen, Xi Yang Shen, 3-5 grams per day, sometimes up to 10 grams per day. Tai Zi Shen, Dang Shen, 9-12 grams per day.

#### Cautions:

Ginseng has very low toxicity, and side effects are rare. However, long-term consumption may cause headaches, insomnia, palpitations, and increased blood pressure, all of which subside gradually after ceasing administration of the herb. Alcohol extractions of ginseng may produce toxic reactions, and large doses of extracts (single dose of  $\geq$ 200 ml of 3% ginseng tincture) have lead to death in some cases. Use in children should be with caution. If abdominal distention results from ginseng consumption, Lai Fu Zi 莱菔子 Semen Raphani Sativi decoction is the antidote.

#### 2. Huang Jing 黄精 Rhizoma Polygonati

Nature: sweet, neutral.

Channels entered: Spleen, Lung, Kidney.

#### Functions:

Nourishes the yin and moistens the Lung, supplements the Spleen and boosts the qi, nourishes the Kidney and bolsters the essence.

#### **Indications:**

Dyslipidemia with deficiency of Spleen qi and yin, and Kidney yin and essence.

#### Modern research:

Huang Jing has been shown to reduce serum cholesterol and triglyceride levels, dilate the coronary arteries, increase coronary artery perfusion, and prevent atherosclerosis. It can also increase immune system function, prevent senility, prevent fatigue, reduce blood sugar, and strengthen the heart.

#### Clinical application:

Huang Jing is sweet, neutral, and moderate. Its focus is on tonifying the Spleen qi and yin, and supplementing the Kidney yin and essence, but it is not overly sticky or cloying. Due to its moderate nourishing and strengthening functions, Huang Jing is especially well suited for patients with decline of zang-fu function who present with dyslipidemia, hypertension, coronary artery disease, diabetes, etc.

For treatment of dyslipidemia, Huang Jing can be combined with He Shou Wu and Sang Ji Sheng when Liver and Kidney deficiency are more pronounced, or with Shan Zha, Sang Ji Sheng, Ge Gen, Dan Shen, and Chi Shao when deficiency is mixed with blood stagnation in conditions such as coronary artery disease, angina pectoris, and diabetes.

For treatment of hypertension due to deficiency of Liver and Kidney yin with Liver yang rising, Huang Jing can be combined with herbs such as Huai Niu Xi, Xia Ku Cao, Sheng Di Huang, Yi Mu Cao, Che Qian Zi, Xi Xian Cao, and Huang Qin.

#### Dose:

6-12 grams is sufficient in most cases. Some sources state up to 30 grams may be used.

#### Cautions:

Huang Jing is a moist tonic and is therefore somewhat sticky and cloying, and its use may result in formation of dampness. It is therefore not suited for conditions of Spleen deficiency with dampness, cough with copious sputum, cold in the middle-burner with diarrhea, or abdominal distention with qi stagnation.

#### 3. Ge Gen 葛根 Radix Puerariae

Nature: sweet, spicy, neutral.

Channels entered: Spleen, Stomach.

#### Functions:

Releases the muscle layer and removes heat, releases the exterior and promotes surfacing of rashes, generates fluids and stops thirst, up-bears the yang and stops diarrhea.

#### **Indications:**

Dyslipidemia.

Modern research:

Ge Gen has been shown to reduce serum cholesterol and triglyceride levels. It also can dilate cardiac and cerebral vasculature, and increase coronary and cerebral blood flow. Ge Gen has significant vasodilatory effects and can reduce blood pressure.

#### Clinical application:

Ge Gen is sweet, spicy, neutral and non-toxic. It can raise up the clear yang, release the muscles, and remove heat, and is commonly used for externally contracted illness with fever, headache, and stiff upper back and neck. In recent years, clinicians have expanded on its ability to relax the upper back and neck, and used it to treat hypertensive headache, migraine headache, deafness and tinnitus, coronary artery disease, angina pectoris, dyslipidemia, etc.

Ge Gen has been combined with herbs such as Shan Zha, Zhi He Shou Wu, and Zhen Zhu Mu to treat coronary artery disease, and Sang Ji Sheng and Dan Shen to treat dyslipidemia. To treat hypertension a tea can be made from Ge Gen and Ju Hua. Also, a decoction with Ge Gen, Huai Hua Mi, and Chong Wei Zi was reported to treat hypertension with good results.

#### Dose:

6-12 grams is generally sufficient, but some sources cite doses up to 30 grams.

#### 4. He Ye 荷叶 Folium Nelumbinis Nuciferae

Nature: bitter, neutral.

Channels entered: Liver, Spleen, Stomach.

#### Functions:

Clears heat and relieves summer-heat, up-bears the clear yang, cools the blood and stops bleeding.

#### **Indications:**

Dyslipidemia with turbid dampness obstructing the arisal of clear yang.

#### Modern research:

He Ye has been shown to reduce serum cholesterol, have vasodilatory and hypotensive functions, and help with weight loss.

#### Clinical application:

He Ye is commonly used to clear summer-heat and drain dampness. It very effectively raises the clear yang and helps send turbidity downward. This latter function is particularly useful in treating dyslipidemia and obesity, as phlegm turbidity and weakness of Spleen circulation may inhibit the arisal of the clear yang and obstruct the downward flow of turbidity.

There are records of countryside doctors in China using dried or fresh He Ye as a tea for weight-loss with good results. Make a tea from dried He Ye 10-15 grams, or one fresh leaf, and sip throughout the day.

One study used a decoction of He Ye, Gou Qi Zi, and Liu Ji Nu to treat hyperlipidemia with good results.

Finally, He Ye goes to the deep channels to expel dampness and is therefore good to remove dampness and toxins in alcoholics, drug-users, smokers, and in the obese and overweight.

#### Dose:

3-10 grams, dried.

#### 5. Chen Pi 陈皮 Pericarpium Citri Reticulatae

Nature: spicy, bitter, warm.

Channels entered: Spleen, Stomach, Lung.

#### Functions:

Regulates qi and down-bears counterflow, harmonizes the middle and opens the Stomach, dries dampness and transforms phlegm.

#### Indications:

Dyslipidemia with stagnation of qi and damp in the middle-jiao.

#### Modern research:

Chen Pi has been shown to reduce serum lipids and prevent atherosclerosis.

#### Clinical application:

Chen Pi is spicy and dispersing, bitter and drying, warm and penetrating, and is very effective to regulate the qi, harmonize the middle jiao, and dry dampness and transform phlegm. It is used to treat dyslipidemia in cases where qi stagnation and damp obstruction impair the function of the middle jiao with symptoms such as abdominal and epigastric distention and bloating, belching, nausea, etc.

Chen Pi is an exceedingly flexible substance, and Li Shi-Zhen stated in "Ben Cao Gang Mu" that "combined with tonics it tonifies, with draining herbs it drains, with up-bearing herbs it up-bears, with down-bearing herbs it down-bears." "Ben Cao Jing Shu" states, "with qi supplementing herbs it boosts qi, with qi-draining herbs it breaks qi, with phlegm-dissolving herbs is expels phlegm, with food-dissolving herbs it transforms food stasis, it mimics the function of the herbs (it is combined with)."

Through various combinations of herbs, Chen Pi can boost qi, move stagnation, transform phlegm, downbear turbidity, and transform blood stasis, and is therefore very useful to treat dyslipidemia due to a variety of etiologies including qi deficiency, phlegm and damp obstruction, qi stagnation, or blood stagnation.

If qi stagnation is more pronounced it can be combined with Zhi Ke and Mu Xiang. If more damp obstruction, combine with Cang Zhu and Hou Po to strengthen qi regulating

and damp drying functions. To dry dampness and transform phlegm, combine with Ban Xia and Fu Ling. With Spleen qi deficiency and weakness, combine with Si Jun Zi Tang.

### Dose:

3-10 grams.

### 6. Jiao Gu Lan 绞股蓝 Gynostemma Pentaphyllum

Nature: sweet, bitter, cold.

Channels entered: Spleen, Lung, Heart, Kidney.

#### Functions:

Strengthens the Spleen and boosts the qi, clears heat and resolves toxin, stops cough and expels phlegm.

### **Indications:**

Dyslipidemia with Spleen qi deficiency and stagnation of heat and phlegm.

### Modern research:

Jiao Gu Lan has been shown to significantly reduce serum total cholesterol, LDL, and VLDL levels, increase serum HDL levels, elevate HDL/TC ratio, and inhibit the deposit of cholesterol and oxidized lipids in the arterial lumen.

### Clinical application:

Jiao Gu Lan, also known as Qi Ye Dan (七叶胆), has only in modern times come to be widely known. Even though it belongs to a different family of plant, it is sometimes called the "ginseng of the south" because it contains a variety of ginsenosides. In recent years it has undergone extensive clinical and laboratory research, and its ability to reduce serum lipids is well documented. Aside from this function, it also can improve metabolism, strengthen immune system function, and prevent senility. Its clinical application is very broad, it has no significant side effects, and it is very inexpensive.

Jiao Gu Lan is indicated in cases of Spleen qi deficiency with stagnation of heat and phlegm, and effectively prevents and treats dyslipidemia when it presents as such. It can be added to raw-herb decoctions, or taken as a single herb in tea or granular form, in which case there are many over-the-counter preparations readily available in Chinese shops and online in North America.

### Dose:

6-12 grams is sufficient in decoction, although some sources cite up to 30 grams. 2-6 grams as a powder, taken as a draft.

### Cautions:

A very small umber of patients report adverse reactions including nausea, vomiting, abdominal distention, constipation, dizziness, blurry vision, and tinnitus after taking this substance

### 7. Yu Zhu 玉竹 Rhizoma Polygonati Odorati

Nature: sweet, neutral.

Channels entered: Lung, Stomach.

Functions:

Nourishes the yin and moistens the Lung, nourishes the Stomach and generates fluids.

### Indications:

Dyslipidemia with Lung and Stomach yin deficiency.

#### Modern research:

Yu Zhu has been shown to reduce serum lipid and blood sugar levels, inhibit formation of atherosclerotic plaque, and promote vasodilation in the peripheral vasculature.

### Clinical application:

Yu Zhu is sweet and neutral to slightly cool, and moist but not too sticky and cloying, so relatively easy to digest. It is a major herb for treating Lung and Stomach yin deficiency with thirst and dry mouth, and can be used with good effect to treat dyslipidemia with this etiology.

Due to its efficacy, in recent years there are many patent formulas based on Yu Zhu that prevent and treat dyslipidemia, and some of them can be replicated in the clinic. One preparation calls for equal amounts of Yu Zhu and Dang Shen to be ground into powder and mixed with honey to form pills. Each time take 3 grams, two times per day. Several others use Yu Zhu on its own, either as granules or made into honey pills. Another uses Yu Zhu and Shan Zha, and another Yu Zhu and Dan Shen. Finally, one study reported good results with weight loss and lowering serum lipids from a preparation of Yu Zhu, Dan Shen, Shan Zha, and Ze Xie.

### Dose:

6-9 grams in decoction.

### 3.3.2 Treatment Strategies and Formulas

### 3.3.2.1 Treatment of the Spleen

### I. Strengthen the Spleen and Transform Damp

Strengthen the Spleen and transform damp is a fundamental method used in the treatment of dyslipidemia presenting with Spleen deficiency and phlegm dampness. Symptoms include obesity, dizziness, fatigue, sluggishness, poor appetite, abdominal distention after eating, loose stool, puffy, pale tongue with tooth-marks and a white and greasy tongue coating, and a soggy and weak pulse, especially in the guan/middle position.

Depending on the clinical presentation, strengthening the Spleen may be primary, with transforming dampness assisting; or transforming dampness may be primary with

strengthening the Spleen assisting. But because Spleen deficiency and damp accumulation are mutually engendering, it is important that these two methods be combined. It is also important to remember that these patients have weak digestion, and that large doses of herbs can be counterproductive as they may overburden the Spleen.

The primary base formula for this method is Shen Ling Bai Zhu San, from which many formulas can be derived. Also, many single herbs in this category have been shown to reduce serum lipids, including:

Ren Shen 人参 Radix Ginseng

Huang Qi 黄芪 Radix Astragali Membranacei

He Ye 荷叶 Folium Nelumbinis Nuciferae

Chen Pi 陈皮 Pericarpium Citri Reticulatae

Jiao Gu Lan 绞股蓝 Gynostemma Pentaphyllum

## 1. Shen Ling Bai Zhu San (参苓白术散) from Tai Ping Hui Min He Ji Ju Fang Ingredients:

Lian Zi 莲子肉 Semen Nelumbinis Nuciferae 500g

Yi Yi Ren 薏苡仁 Semen Coicis Lachyrma-jobi 500g

Sha Ren 砂仁 Fructus Amomi 500g

Jie Geng 桔梗 Platycodi Radix 500g, dry-fried

Bai Bian Dou 白扁豆 Semen Dolichoris Lablab 750g, lightly fried

Fu Ling 茯苓 Sclerotium Poriae Cocos 1000g

Ren Shen 人参 Radix Ginseng 1000g

Zhi Gan Cao 炒甘草 Radix Glycyrrhizae 1000g

Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 1000g

Shan Yao 山药 Radix Dioscoreae Oppositae 1000g

Instructions: Grind all herbs into powder. Each time take 6 grams powder as a draft with jujube tea. Can also be made into a decoction, dosing according to the original ratio, or with appropriate amounts of each herb according to need.

### Functions:

Supplements the qi and strengthens the Spleen, leaches out dampness and harmonizes the Stomach.

### **Indications:**

Spleen and Stomach qi deficiency with dampness characterized by poor digestion, nausea, diarrhea, weakness of the body and limbs, abdominal and chest fullness and oppression, moderate and weak pulse.

### Discussion:

Ren Shen, Bai Zhu, Fu Ling and Gan Cao are sweet and warm, boost the qi, strengthen the Spleen, and nourish the Stomach. Shan Yao, Bai Bian Dou, and Lian Zi supplement the Spleen. Sha Ren harmonizes the Stomach and regulates qi. Yi Yi Ren regulates the

Spleen and leaches out dampness. Jie Geng guides the formula upwards, diffuses the Lung and regulates the qi, assisting the Lung's dissemination of the essence to nourish the entire body. Together the herbs in this formula supplement deficiency, eliminate dampness, move stagnation, regulate the qi, and harmonize the Spleen and Stomach.

The source text mentions processing of three herbs, Jie Geng, Gan Cao, and Bai Bian Dou, while the rest are to be used unprocessed/raw. However, there are a number of herbs which can be processed to fine tune the formula. Shan Yao, Bai Bian Dou, Bai Zhu, and Yi Yi Ren can be used raw or dry fried. If Spleen yin deficiency is more significant, they can be used raw. If dampness is more prevalent, the can be dry-fried. Bai Zhu can also be scorch-fried to further strengthen its ability to dry dampness, whereas dry-fried emphasizes its Spleen tonifying function.

### 2. Zi Sheng Wan 资生丸 (aka: Bao Tai Zi Sheng Wan 保胎资生丸) - from Lan Tai Gui Fan

Ingredients:

Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 90g

Ren Shen 人参 Radix Ginseng 90g

Yi Yi Ren 薏苡仁 Semen Coicis Lachyrma-jobi 45g

Fu Ling 茯苓 Sclerotium Poriae Cocos 45g

Shan Zha 山楂 Fructus Crataegi 60g

Ju Hong 橘红 Pars Rubra Epicarpii Citri Erythrocarpae 60g

Huang Lian 黄连 Rhizoma Coptidis 9g

Bai Dou Kou 白豆蔻 Fructus Amomi Kravanh 10g

Ze Xie 泽泻 Rhizoma Alismatis 10g

Jie Geng 桔梗 Platycodi Radix 15

Huo Xiang 藿香 Herba Agastaches seu Pogostemonis 15g

Zhi Gan Cao 炙甘草 Radix Glycyrrhizae 15g

Bai Bian Dou 白扁豆 Semen Dolichoris Lablab 45g

Lian Zi 莲子肉 Semen Nelumbinis Nuciferae 45g

Huai Shan Yao 淮山药 Radix Dioscoreae Oppositae 45g, dry-fried

Qian Shi 芡实 Semen Euryalis Ferocis 45g, dry-fried

Chao Mai Ya 炒麦芽, Fried Fructus Germinatus Hordei Vulgaris 30g

### Instructions:

The source text instructs to grind the herbs to powder and mix with honey to make pills 6g in weight. Each time take one pill. Some versions omit Ze Xie and add Sha Ren 砂仁 *Fructus Amomi*. Another adds Shen Qu 神曲 *Massa Medica Fermentata*. A decoction can also be made by appropriately reducing the dose of each herb.

### Functions:

Strengthens the Spleen and opens the Stomach, dissolves food and stops diarrhea.

### Indications:

Spleen deficiency with impaired Spleen circulation/transportation, and accumulation of dampness and heat characterized by poor appetite, nausea, and diarrhea.

### Discussion:

This formula is similar to Shen Ling Bai Zhu San but is stronger to transform dampness, remove food stagnation, and also adds Huang Lian to clear heat in the Yang Ming, which develops from the stagnation of dampness and food. It is useful as a base formula, and since it is a relatively large formula when writing an herbal formula for decoction it is common to pick and choose only the parts of the formula that are best suited to the patient's condition.

As with Shen Ling Bai Zhu San, processing of certain herbs can change the nature of the formula. If dampness is more pronounced, herbs such as Shan Yao, Bai Zhu, Bai Bian Dou, Mai Ya, and Qian Shi can be dry-fried to increase their ability to absorb and dry dampness. If yin deficiency is present, these herbs can be used unprocessed. Huang Lian is often dry-fried here to ameliorate its cold and bitter nature, as the unprocessed herb can damage the Spleen and cause further stagnation. Shan Zha can be blast-fried to increase its ability to remove food stagnation, or unprocessed to promote blood circulation.

### II. Regulate the Spleen and Transform Damp

This method is utilized when damp turbidity obstructs the Spleen mechanism. The typical patient is overweight and presents with dizziness, copious phlegm, stuffy chest and abdomen, a thick and greasy tongue coating, and a slippery or soggy pulse.

Damp turbidity is sticky and difficult to remove, and easily obstructs the qi mechanism. There is a saying, "To effectively treat phlegm, do not treat the phlegm, but rather treat the qi. When the qi is rectified the fluids of the entire body will follow the qi and be rectified." Therefore, this method pairs transformation of dampness with regulation of qi to more effectively remove the damp turbidity. The representative formula is Xiang Sha Liu Jun Zi Tang.

### 1. Xiang Sha Liu Jun Zi Tang 香砂六君子汤

Ingredients:

Xiang Fu 香附 Rhizoma Cyperi Rotundi 6-9g

(or, Mu Xiang 木香 *Radix Auklandiae Lappae* 6-9g, instead of Xiang Fu)

Sha Ren 砂仁 Fructus Amomi 3-5g

Fa Ban Xia 法半夏 Rhizoma Pinelliae Tematae 6-9g

Chen Pi 陈皮 Pericarpium Citri Reticulatae 4-6g

Dang Shen 党参 Radix Codonopsitis Pilosulae 6-9g

Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 6-9g

Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g

Zhi Gan Cao 炙甘草 Radix Glycyrrhizae 3-5g

### Functions:

Strengthens the Spleen and harmonizes the Stomach, regulates qi and stops pain.

### **Indications:**

Spleen and Stomach Qi deficiency with cold damp obstructing the middle jiao, characterized by poor appetite, belching, abdominal distention and fullness or pain, nausea, diarrhea, etc.

### Discussion:

Xiang Sha Liu Jun Zi combines Si Jun Zi Tang, Er Chen Tang, Sha Ren, and either Xiang Fu or Mu Xiang. Si Jun Zi Tang tonifies the middle jiao qi, Er Chen Tang transforms damp turbidity, and Sha Ren goes to the Stomach to aromatically transform dampness and regulate the qi. Xiang Fu regulates the qi of the Liver and Stomach, but primarily acts upon the Liver and is most suitable when Liver qi stagnation gives rise to epigastric discomfort, etc. Mu Xiang goes to the middle jiao where it regulates qi and relaxes spasms in the Stomach and Intestines.

# 2. Li Pi Hua Tan Jiang Zhi Pian (理脾化痰降脂片- Regulate the Spleen, Transform Phlegm and Reduce Lipids Tablet) - modern formula Ingredients:

Fa Ban Xia 法半夏 Rhizoma Pinelliae Tematae 6-9g

Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 6-9g

Tian Ma 天麻 Rhizoma Gastrodiae 4-6g

Ju Hong 橘红 Pars Rubra Epicarpii Citri Erythrocarpae 4-6g

Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g

Jue Ming Zi 决明子 Semen Cassiae 6-9g

Lai Fu Zi 莱菔子 Semen Raphani Sativi 6-9g

Ze Xie 泽泻 Rhizoma Alismatis 6-9g

Lü Cha 绿茶 Camellia Sinensis 2-3g

Tai Zi Shen 太子参 Radix Pseudostellariae 6-9g

Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g

### **Functions:**

Regulates the Spleen, transforms phlegm and reduces lipids.

### **Indications:**

Dyslipidemia due to Spleen deficiency with mild stagnation of qi, damp, and blood.

### Discussion:

Tai Zi Shen, Bai Zhu, and Fu Ling strengthen the Spleen and transform dampness. Ban Xia, Ju Hong, and Lai Fu Zi transform dampness, expel phlegm, and regulate qi. Tian Ma and Jue Ming Zi pacify the Liver, transform phlegm, and drain dampness. Together they strengthen the Spleen, drain dampness, and transform phlegm. If Spleen weakness is pronounced, use dry-fried Bai Zhu. If dampness is more pronounced, use blast-fried Bai Zhu. If food stagnation is greater, use dry-fried Lai Fu Zi. If phlegm and qi stagnation are prevalent, use raw Lai Fu Zi.

### 3.3.2.2 Treatment of the Liver

### I. Course the Liver and Strengthen the Spleen Method

The Liver is in charge of free-coursing, and when the Liver qi stagnates this function is disrupted and can lead to impaired circulation of fluids and blood, as well as damage to the Spleen. This method is designed to address Liver qi stagnation with concurrent Spleen qi deficiency and phlegm and blood stagnation characterized by dizziness, flank distention, shortness of breath, weakness, numbness in the limbs, a pale or dim tongue body with blood stagnation spots and a greasy white coating, and a wiry and slippery pulse.

Commonly used herbs include vinegar-fried Chai Hu, Xiang Fu, and Chuan Xiong to course the Liver and release constraint, and Ren Shen, Bai Zhu, Fu Ling to strengthen the Spleen.

### 1. Jiang Zhi Bao Gan Tang (降脂保肝汤 Reduce Lipids and Protect the Liver Decoction) – modern formula

Ingredients:

Chai Hu 柴胡 Radix Bupleuri 3-5g

Chen Pi 陈皮 Pericarpium Citri Reticulatae 3-5g

Zhi Ke 枳壳 Fructus Citri Aurantii 6-9g

Dang Gui 当归 Radix Angelicae Sinensis 4-6g

Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g

Yu Jin 郁金 *Tuber Curcumae* 6-9g

Chi Shao 赤芍 Radix Rubrus Paeoniae Lactiflorae 6-9g

Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 6-9g

Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g

Ze Xie 泽泻 Rhizoma Alismatis 6-9g

Jue Ming Zi 决明子 Semen Cassiae 6-9g

Fa Ban Xia 法半夏 Rhizoma Pinelliae Tematae 6-9g

Shan Zha 山楂 Fructus Crataegi 6-9g

### Functions:

Courses the Liver and strengthens the Spleen, transforms phlegm and expels dampness, regulates the qi and invigorates the blood.

### **Indications:**

Dyslipidemia and/or fatty liver presenting with Liver qi stagnation, Spleen qi deficiency, and phlegm and blood stagnation.

### Discussion:

Chai Hu, Chen Pi and Zhi Ke course the Liver and release constraint, move the qi and guide out stagnation. Dang Gui, Yu Jin, Dan Shen, and Chi Shao invigorate the blood, transform blood stasis, and soften hardness. Bai Zhu, Fu Ling, Ze Xie, and Ban Xia

strengthen the Spleen, expel dampness, transform phlegm, and disperse binding. Jue Ming Zi clears and drains constrained heat in the Liver channel. Shan Zha dissolves meat stagnation, and because it is sour it can enter and remove fats from the Liver.

Modern research shows Chai Hu and Bai Zhu can protect the liver, Ze Xie, Shan Zha, Jue Ming Zi, and Ban Xia can reduce serum lipids, and Dan Shen and Chi Shao can promote hepatic microcirculation. Therefore, this formula is well suited for treating fatty liver.

### II. Clear the Liver and Transform Phlegm Method

Damp heat is a commonly seen factor in dyslipidemia, and this method is used to clear heat and dampness in the Liver. Commonly used herbs include Yin Chen Hao, Huang Qin, Lian Qiao, Bo He, Bai Dou Kou, Shi Chang Pu, Mu Tong, Huo Xiang, Da Huang, Che Qian Zi, Hua Shi, Ze Xie, etc.

## 1. Hu Gan Tang (护肝汤 Protect the Liver Decoction) — modern formula Ingredients:

Sheng Da Huang 生大黄 *Unprocessed Radix Et Rhizoma Rhei* 4-6g Sheng Shan Zha 生山楂 *Unprocessed Fructus Crataegi* 6-9g Jiang Huang 姜黄 *Rhizoma Curcumae Longae* 6-9g Dan Shen 丹参 *Radix Salviae Miltiorrizae* 6-9g Ze Xie 泽泻 *Rhizoma Alismatis* 6-9g Hong Hua 红花 *Stigma Croci Sativi* 3-5g

### Functions:

Drains turbidity and reduces lipids, invigorates the blood and protects the liver.

### Indications:

Fatty liver presenting with heat, phlegm, and blood stagnation.

### Discussion:

Unprocessed Da Huang drains turbidity and reduces lipids, invigorates the blood and transforms blood stasis, and unblocks the vessels and stops pain. Shan Zha is sour and enters and removes lipids from the Liver. Jiang Huang, Dan Shen, and Hong Hua invigorate the blood, remove stasis, and soften binding. Ze Xie drains dampness without damaging the yin. This is a concise and well-crafted formula, which effectively reduces serum lipids and fatty liver with the above presentation.

Note that while unprocessed Da Huang is called for in the original prescription, this may be inappropriate for some patients and for long-term use, especially if added to the decoction in the last several minutes of cooking, in which case it retains all of its purgative function. Shu Da Huang 熟大黄 Steamed Radix Et Rhizoma Rhei Radix Et Rhizoma Rhei is similar in function, but milder, and Da Huang Tan 大黄炭 Char-Fried Radix Et Rhizoma Rhei can go to the blood level to dry dampness, and can be taken for long periods of time even in cases of Spleen deficiency.

## 2. Jiang Qin Jiang Zhi Pian (姜芩降脂片 Curcumae and Scutellariae Lipid Reducing Tablet) – modern formula

### Ingredients:

Jiang Huang 姜黄 *Rhizoma Curcumae Longae* 6-9g Huang Qin 黄芩 *Radix Scutellariae Baicalensis* 4-6g Ze Xie 泽泻 *Rhizoma Alismatis* 6-9g Chuan Xiong 川芎 *Rhizoma Ligustici Chuanxiong* 3-6g

### Functions:

Invigorates the blood and transforms blood stasis, clears heat and removes dampness.

### **Indications:**

Dyslipidemia presenting with Liver heat, and phlegm and blood stagnation.

### Discussion:

Jiang Huang invigorates the blood and expels blood stasis, moves the qi and unblocks the collaterals. Huang Qin clears heat and dries dampness, drains fire and resolves toxins, especially in the Liver. Ze Xie drains water and dampness. Chuang Xiong invigorates the blood and transforms stasis. This formula has been used to lower serum TC and LDL, and elevate HDL levels with good results.

### III. Course the Liver and Nourish the Blood Method

Coursing the Liver regulates the qi mechanism, and nourishing the blood can help course and soften the Liver. When the qi mechanism is unobstructed the blood flow is normal, and phlegm and blood stasis are without a source.

## 1. Dang Gui Shao Yao San (当归芍药散) – from Jin Gui Yao Lue Ingredients:

Dang Gui 当归 Radix Angelicae Sinensis 4-6g Chi Shao 赤芍 Radix Rubrus Paeoniae Lactiflorae 6-9g Chuan Xiong 川芎 Rhizoma Ligustici Chuanxiong 3-5g Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 6-9g Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g Ze Xie 泽泻 Rhizoma Alismatis 6-9g

### Functions:

Courses the Liver and nourishes the blood, strengthens the Spleen and expels dampness, invigorates the blood and reduces pain.

### Indications:

Mixed phlegm and blood stagnation obstructing the vessels characterized by dizziness, chest oppression, shortness of breath, palpitations, angina pectoris, numbness of the extremities, purple tongue body, and a choppy, soggy, or wiry pulse.

### Discussion:

This formula is used when Liver blood deficiency gives rise to Liver qi stagnation and impairment of Liver coursing. Impaired qi circulation and Liver coursing impacts Spleen function, impairing Spleen transportation and transformation, and causing the formation of dampness. This results in accumulation of phlegm and blood stagnation, and nicely illustrates the saying, "phlegm and blood stasis are of the same source."

Dang Gui, Chuan Xiong, and Chi Shao nourish the blood and free the constrained and stagnant qi and blood. Bai Zhu and Fu Ling strengthen the Spleen and promote the circulation and transformation of water and dampness. Ze Xie leaches dampness. Together they boost the qi and nourish the blood, invigorate the blood and unblock the collaterals, and expel turbidity.

If phlegm and blood stagnation are more severe, the addition of Dan Shen to nourish and invigorate the blood, and Shan Zha to invigorate the blood and transform phlegm, can be considered.

### IV. Pacify the Liver, Extinguish Wind, Invigorate the Blood, and Transform Blood Stasis Method

### 1. Jiang Ya San (降压散 Reduce Pressure Powder) – modern formula Ingredients:

Dang Gui 当归 Radix Angelicae Sinensis 4-6g

Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g

Hong Hua 红花 Stigma Croci Sativi 3-5g

Di Long 地龙 Lumbricus 4-6g

Jiang Xiang 降香 *Lignum Dalbergiae Odoriferae* 2-3g powder as a draft

Sheng Shan Zha 生山楂 *Unprocessed Fructus Crataegi* 6-9g

Sheng He Shou Wu 生首乌 *Unprocessed Radix Polygoni Multiflori* 6-9g

Ze Xie 泽泻 Rhizoma Alismatis 6-9g

### Functions:

Pacifies the Liver and extinguishes wind, invigorates the blood and transforms blood stasis.

### Indications:

Hypertension and dyslipidemia presenting with Liver yin and blood deficiency with Liver yang rising, and stagnation of phlegm and blood.

### Discussion:

This formula is based on the principles, "In chronic illness there is copious phlegm and blood stasis", and "In treating wind, first treat the blood. When blood moves wind will extinguish spontaneously." Dang Gui, Dan Shen, and Hong Hua invigorate the blood and unblock the vessels. Di Long, Jiang Xiang, and Sheng Shan Zha pacify the Liver and extinguish wind. Sheng He Shou Wu and Ze Xie nourish the Liver and Kidney, and assist Di Long and Jiang Xiang to pacify the Liver and extinguish wind.

### V. Harmonize Shaoyang Method

## 1. Xiao Chai Hu Tang (小柴胡汤) – from Shang Han Lun Ingredients:

Chai Hu 柴胡 Radix Bupleuri 24g Huang Qin 黄芩 Radix Scutellariae Baicalensis 9g Ban Xia 半夏 Rhizoma Pinelliae Tematae 24g Sheng Jiang 生姜 Uncooked Rhizoma Zingiberis 9g Ren Shen 人参 Radix Ginseng 9g Zhi Gan Cao 炙甘草 Radix Glycyrrhizae 9g Da Zao 大枣 Fructus Zizyphi Jujubae 12 pieces

### Functions:

Harmonizes and releases Shaoyang-stage disorders.

### Indications:

Dyslipidemia presenting with Shaoyang-stage disorder, characterized by alternating fever and chills, fullness of the chest and ribs/flanks, loss of appetite, bitter taste in the mouth, dry throat, irritability, nausea, blurry vision, a thin white tongue coating, and a wiry pulse.

Xiao Chai Hu Tang is the principle formula used to address Shaoyang-stage disorders as characterized above. However, Shan Han Lun states that it is only necessary to see one of these symptoms in order to use this prescription. In cases when Shaoyang-stage disorder is present, this formula has been used with good results to treat dyslipidemia.

The doses given above are those from the source text. However, most modern clinicians use Chai Hu to 3-15 grams, Ban Xia to 6-9 grams, and Da Zao 3-5 pieces.

## 2. Da Chai Hu Tang (大柴胡汤) – from Shang Han Lun Ingredients:

Chai Hu 柴胡 Radix Bupleuri 24g Huang Qin 黄芩 Radix Scutellariae Baicalensis 9g Shao Yao 芍药 Radix Paeoniae Lactiflorae 9g Ban Xia 半夏 Rhizoma Pinelliae Tematae 24g Sheng Jiang 生姜 Uncooked Rhizoma Zingiberis 15g Zhi Shi 枳实 Fructus Immaturus Citri Aurantii 4 pieces (6-9g)

### Da Zao 大枣 Fructus Zizyphi Jujubae 12 pieces

#### Functions:

Harmonizes and releases Shaoyang, drains internal heat and clumping.

### **Indications:**

Concurrent Shaoyang and Yangming disorder characterized by alternating fever and chills, fullness in the chest and ribs, nausea, vomiting, bitter taste in the mouth, depression and irritability, epigastric fullness, firmness, and pain, constipation, a yellow tongue coating, and a wiry pulse.

### Discussion:

Da Chai Hu Tang has been used successfully to treat dyslipidemia presenting with Shaoyang-disorder (characterized above in discussion of Xiao Chai Hu Tang) with concurrent Yangming disorder (characterized by epigastric fullness, firmness, and pain, constipation, and yellow tongue coating).

The doses given above are those from the source text. However, most modern clinicians use Chai Hu to 3-15 grams, Ban Xia to 6-9 grams, Sheng Jiang 3 slices, and Da Zao 3-5 pieces.

### 3.3.2.3 Treatment of the Kidney

The Kidney stores the source yin and yang, and is the root of yin and yang for the entire body. Insufficiency of Kidney yin and/or yang can impair metabolism and give rise to turbid accumulation. In late-stage dyslipidemia it is common to see varying degrees of Kidney deficiency, and supplementation of the Kidney becomes an important part of treatment strategy.

### I. Boost the Kidney, Drain Turbidity, and Transform Blood Stasis Method

This method addresses Kidney yin deficiency with phlegm and blood stagnation characterized by dizziness, tinnitus, soreness of the lumbar region and weakness of the knees, five-palm heat, spermatorrhea, a dim red tongue with scant coating, and a thin pulse. Useful herbs include Gou Qi Zi, Shan Yao, He Shou Wu, Sang Ji Sheng, Huai Niu Xi, Du Zhong, Dong Chong Xia Cao, etc.

### 1. Yi Shen Qu Zhi Tang (益肾祛脂汤 Boost the Kidney and Expel Lipids

**Decoction**) – modern formula

Ingredients:

Zhi He Shou Wu 制首乌 Processed Radix Polygoni Multiflori 6-9g Huang Jing 黄精 Rhizoma Polygonati 6-9g

Sheng Di Huang 生地黄 Radix Rehmanniae Glutinosae 6-9g

Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g

Ze Lan 泽兰 Herba Lycopi Lucidi 4-6g

Bai Jiang Can 白僵蚕 Bombyx Batryticatus 3-6g

Ze Xie 泽泻 *Rhizoma Alismatis* 6-9g Sheng Shan Zha 生山楂 *Unprocessed Fructus Crataegi* 6-9g Tian Hua Fen 天花粉 *Trichosanthis Kirlowii Radix* 6-9g

### Functions:

Boosts the Kidney, invigorates the blood, and transforms turbidity.

### **Indications:**

Dyslipidemia with concurrent diabetes, presenting with Kidney yin deficiency, and accumulation of phlegm and blood stagnation.

### Discussion:

He Shou Wu and Huang Jing supplement the Liver and Kidney, boost the essence and blood, working on the principle that when the blood and essence are sufficient they assist in the elimination of phlegm and blood stagnation. Sheng Di Huang and Tian Hua Fen nourish the yin, clear heat, and generate fluids. Dan Shen and Ze Lan invigorate the blood, transform blood stasis, and open the collaterals. Jiang Can, Ze Xie, and Shan Zha transform phlegm, expel lipids, and harmonize the collaterals.

### II. Warm the Kidney, Drain Turbidity, and Transform Blood Stasis Method

The Kidney is the commander of the five body fluids and the root energy source of the body. When Kidney yang deficiency weakens the Kidney's steam transformation function, the Spleen yang is inevitably affected and Spleen transformation and transportation suffer. This combination gives rise to pathogenic fluids and is often a component in chronic dyslipidemia, especially in the elderly. Deficiency of Spleen and Kidney is characterized by pale complexion, lumbar soreness and aversion to cold, impotence and/or spermatorrhea, nocturia, edema of the face or limbs, a pale puffy tongue, and a deep and thin pulse.

### 1. Jin Gui Shen Qi Wan 金匮肾气丸 – from Jin Gui Yao Lue Ingredients:

Zhi Fu Zi 制附子 Blast-Fried Radix Lateralis Praeparatus Aconiti Carmichaeli 4-6g

Rou Gui 肉桂 Cortex Cinnamomi Cassiae 2-3g Shu Di Huang 熟地黄 Processed Radix Rehmanniae 6-9g Shan Zhu Yu 山茱萸 Fructus Corni Officinalis 6-9g Shan Yao 山药 Radix Dioscoreae Oppositae 6-9g Mu Dan Pi 牡丹皮 Cortex Radicis Moutan 6-9g Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g Ze Xie 泽泻 Rhizoma Alismatis 6-9g

### Functions:

Warms the Kidney and bolsters Earth, moves qi and drains turbidity.

### Indications:

Dyslipidemia presenting with Kidney yang deficiency.

### Discussion:

Zhi Fu Zi and Rou Gui warm the Kidney yang. Shu Di Huang, Shan Yao, and Shan Zhu Yu nourish Liver and Kidney yin. Mu Dan Pi clears Liver heat. Fu Ling and Ze Xie strengthen the Spleen and transform dampness.

### III. Boost the Qi, Nourish the Yin, and Transform Blood Stasis Method

In recent years there have been many studies using this method to address dyslipidemia, often with concurrent diabetes. Ye Tian-Shi explains in "Lin Zheng Zhi Nan Yi An", "Three-Wastings syndrome<sup>1</sup>, even though it can be divided in to Upper, Middle, and Lower, does not go beyond deficiency of yin and rising of yang, the fluids are dry and heat is excessive." When there is deficiency of yin with dry-heat, there is consumption of the qi and scorching of the fluids. Because fluids and blood are of the same source, depletion of fluids leads to deficiency of blood. The more deficient the blood becomes, the more the blood becomes stagnant, and the more the blood stagnates the more deficient it becomes. This eventually leads to impaired dissemination of yang qi, and thus the fluids and blood are fettered and unable to nourish the body. Therefore, boosting the qi and nourishing the yin is often combined with invigorating the blood and unblocking the collaterals. Depending on the presentation, boosting qi may be primary, nourishing yin may be primary, or the two may combined equally.

## 1. Xiao Ke Ling Jiao Nang (消渴灵胶囊 Miraculous Wasting and Thirsting Capsule) – modern formula

Ingredients:

Ren Shen 人参 Radix Ginseng 3-5g
Shu Di Huang 熟地黄 Processed Radix Rehmanniae 6-9g
Huang Qi 黄芪 Radix Astragali Membranacei 6-9g
Shan Zhu Yu 山茱萸 Fructus Corni Officinalis 6-9g
Mai Men Dong 麦门冬 Tuber Ophiopogonis Japonici 6-9g
Yu Zhu 玉竹 Rhizoma Polygonati Odorati 6-9g
Huang Jing 黄精 Rhizoma Polygonati 6-9g
Rou Cong Rong 肉苁蓉 Herba Cistanchis Deserticolae 6-9g
Shan Yao 山药 Radix Dioscoreae Oppositae 6-9g
Ge Gen 葛根 Radix Puerariae 6-9g
Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g
Shui Zhi 水蛭 Hirudo seu Whitmania 1-3g

### **Functions:**

Boosts the qi and nourishes the yin, invigorates the blood and transforms blood stasis.

### **Indications:**

1

<sup>&</sup>lt;sup>1</sup> Three-Wastings is a reference to "wasting and thirsting" syndrome (somewhat akin to diabetes), of which there are three types, upper-jiao, middle-jiao, and lower-jiao.

Dyslipidemia with deficiency of qi and yin leading to blood stagnation.

### Discussion:

Ren Shen and Shu Di Huang strongly supplement the source qi, nourish the true yin, bolster the source and secure the root. Huang Qi boosts the source qi and supplements the Lung, Spleen, and Kidney, while Shan Zhu Yu, Yu Zhu, and Mai Men Dong boost the yin and generate fluids, nourish the Kidney and Stomach, and moisten the Lung. These four assist Ren Shen and Shu Di to boost the qi and generate fluids. Huang Jing and Rou Cong Rong supplement the Kidney, boost the essence, and generate fluids. Shan Yao and Ge Gen strengthen the Spleen, boost qi, raise and disseminate the fluids, and help prevent the yin tonics from cloying and obstructing transportation and transformation. Dan Shen and Shui Zhi invigorate the blood and dispel blood stasis, removing stasis to allow for generation of new healthy blood.

### IV. Nourish the Yin and Clear Heat

## 1. Zhi Bai Di Huang Wan (知柏地黄丸) – from Zheng Yin Mai Zhi Ingredients:

Zhi Mu 知母 Rhizoma Anemarrhenae Aspheloidis 6-9g Huang Bai 黄柏 Cortex Phellodendri 3-5g Shu Di Huang 熟地黄 Processed Radix Rehmanniae 6-9g Shan Yao 山药 Radix Dioscoreae Oppositae 6-9g Shan Zhu Yu 山茱萸 Fructus Corni Officinalis 6-9g Mu Dan Pi 牡丹皮 Cortex Radicis Moutan 6-9g Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g Ze Xie 泽泻 Rhizoma Alismatis 6-9g

### **Functions:**

Nourishes the yin and clears heat from deficiency.

### **Indications:**

Dyslipidemia with Liver and Kidney vin deficiency and flaring of deficiency heat.

### Discussion:

Zhi Bai Di Huang has been shown to effectively reduce serum LDL and triglycerides, as well as raise HDL levels in cases of Liver and Kidney yin deficiency with deficiency heat. If heat is more severe, unprocessed Zhi Mu and Huang Bai can be used. But in most cases, in order to better nourish the Kidney yin and clear heat from deficiency these two herbs should be salt-fried.

#### 3.3.2.4 Treatment of the Heart

The Heart commands the vessels and the Heart qi pushes the blood through the vessels. Therefore, when there is deficiency of Heart qi or yang, blood movement is impaired. When Heart yang qi is insufficient, the Heart's warming push of blood through the vessels in weakened, and blood circulation is not smooth; the yang qi of the chest cannot

rise and there are spasms of the Heart vessels; and finally, fluid transformation is impaired, giving rise to phlegm. In this situation, boost the qi, invigorate the blood, free the yang, and drain turbidity methods are employed.

### I. Boost the Qi and Invigorate the Blood Method

Deficiency of Heart qi leads to impaired blood circulation and accumulation of blood stagnation and phlegm characterized by dizziness, fatigue, weakness, pale-white or sallow facial complexion, shortness of breath, weak voice, spontaneous sweating with exertion, sharp pains in the chest, weakness of the limbs, a pale, dim, purple tongue, and a thin and choppy pulse. Treatment is aimed at boosting the Heart qi, invigorating the blood, and expanding the chest and transforming phlegm.

### 1. Jiang Zhi Tong Mai Fang (降脂通脉方 Reduce Lipids and Free the Vessels

**Formula**) – modern formula

Ingredients:

Ren Shen 人参 Radix Ginseng 3-5g Hai Zao 海藻 Herba Sargassii 6-9g Shan Zha 山楂 Fructus Crataegi 6-9g

### Functions:

Boosts the qi and invigorates the blood.

### **Indications:**

Dyslipidemia and atherosclerosis presenting with deficiency of Heart qi and stagnation of phlegm and blood.

### Discussion:

Ren Shen is sweet and warm and tonifies the qi of the Heart, Lung, and Spleen. Shan Zha aids Spleen transportation and transformation, dissolves food accumulation, disperses blood stagnation and transforms phlegm. Hai Zao is bitter, salty and cold, softens hardness, dissolves phlegm, promotes water, drains heat, and assists Shan Zha to expel phlegm and drain damp.

### 2. Bao Xin Wan (保心丸 Protect the Heart Pill) – modern formula Ingredients:

Ren Shen 人参 Radix Ginseng 3-5g Huang Qi 黄芪 Radix Astragali Membranacei 6-9g Mai Men Dong 麦门冬 Tuber Ophiopogonis Japonici 6-9g Wu Wei Zi 五味子 Fructus Schisandrae Chinensis 3-5g Dan Shen 丹参 Radix Salviae Miltiorrizae 6-9g Chuan Xiong 川芎 Rhizoma Ligustici Chuanxiong 3-5g Shi Chang Pu 石菖蒲 Rhizoma Acori Graminei 6-9g

### Functions:

Supplements the qi, inhibits sweating, nourishes the yin, generates fluids, invigorates the blood, and transforms blood stasis.

### **Indications:**

Dyslipidemia with concurrent coronary artery disease presenting with deficiency of ancestral/gathering qi (zong qi, the qi of the chest), and blood stagnation in the chest characterized by weakness, fatigue, shortness of breath, thirst, spontaneous sweating, chest pains, and a thin, weak, and choppy pulse.

### Discussion:

This formula is based on Huang Qi Sheng Mai Yin, with the addition of Dan Shen, Chuan Xiong, and Shi Chang Pu to remove stagnation of blood and phlegm from the chest. Ren Shen and Huang Qi supplement the qi of the Heart, Lung, and Spleen, and generate fluids. Mai Men Dong nourishes the yin, clears the Lung, and generates fluids, and Wu Wei Zi astringes the Lung, stops sweating, and generates fluids, and together they help increase coronary artery circulation. Dan Shen and Chuang Xiong invigorate the blood and transform blood stasis, especially in the chest. Shi Chang Pu transforms phlegm and clears and opens the Heart orifices.

### II. Free the Yang, Drain Turbidity, and Invigorate the Blood Method

Deficiency of Heart yang can lead to accumulation phlegm in the chest and subsequent obstruction of the chest yang by phlegm turbidity and blood stagnation. This is a common presentation in dyslipidemia with coronary artery disease and is characterized by pain, fullness, distention, or oppression of the chest, which may radiate through to the back, copious phlegm and saliva, numbness of the limbs, a greasy tongue coating, and a thin and slippery pulse. Treatment is aimed at freeing the obstructed yang qi of the chest, draining turbidity, and transforming blood stasis. Common medicinals include Quan Gua Lou, Xie Bai, Ban Xia, Zhe Bei Mu, Ju Luo, Cang Zhu, Bai Zhu, Tao Ren, Shan Zha, Hong Hua, Ze Xie, Hai Zao, Che Qian Zi, etc.

### 1. Gua Lou Xie Bai Bai Jiu Tang (栝楼薤白白汤) – from Jin Gui Yao Lue Ingredients:

Quan Gua Lou 全栝楼 Fructus Trichosanthis Kirlowii 6-9g Xie Bai 薤白 Bulbus Allii 4-6g Bai Jiu 白酒 White wine

### Functions:

Warms and unblocks Heart yang.

### **Indications:**

Cold, damp painful obstruction of the chest.

### Discussion:

Quan Gua Lou expels phlegm and unbinds the chest. Xie Bai warms and unblocks the Heart yang. Bai Jiu assists by warming and helping to unblock the yang.

If cold is more severe, characterized by pain which penetrates from the chest to the back and from the back to the chest and which is worse with exposure to cold, sallow facial complexion, cold limbs, a pale puffy tongue with tooth marks and a slippery white coating, add Pao Fu Zi (炮附子, Blast-Fried Radix Lateralis Praeparatus Aconiti Carmichaeli), and Gan Jiang 干姜 *Dry Rhizoma Zingiberis*.

If angina pectoris with blood stagnation, add Dan Shen 丹参 *Radix Salviae Miltiorrizae*, Chuan Xiong 川芎 *Rhizoma Ligustici Chuanxiong*, Jiang Xiang 降香 *Lignum Dalbergiae Odoriferae*, etc.

If phlegm is more severe, add Fa Ban Xia 法半夏 Rhizoma Pinelliae Tematae.

### 3.3.2.5 Treating Phlegm and Blood Stasis

Phlegm and blood stasis are common components of dyslipidemia and its related disorders. Symptoms include chest oppression, chest pain, fatigue, obesity, cough with sputum, phlegm in the throat, shortness of breath or wheezing, weakness, dim tongue body with blood stasis points and a greasy coating, and a choppy, soggy and irregular pulse.

### I. Invigorate the Blood and Transform Blood Stasis Method

According to modern research, invigorating blood and transforming blood stasis can improve blood viscosity and blood rheology, strengthen the heart, cause vasodilation, increase blood flow, promote fibrinolysis, inhibit platelet aggregation, etc.

## 1. Xue Fu Zhu Yu Tang (血府逐瘀汤) – from Yi Lin Gai Cuo Ingredients:

Dang Gui 当归 Radix Angelicae Sinensis 4-6g
Sheng Di Huang 生地黄 Radix Rehmanniae Glutinosae 6-9g
Chi Shao 赤芍 Radix Rubrus Paeoniae Lactiflorae 6-9g
Chuan Xiong 川芎 Rhizoma Ligustici Chuanxiong 3-5g
Tao Ren 桃仁 Semen Pruni Persicae 6-9g
Hong Hua 红花 Stigma Croci Sativi 3-5g
Chai Hu 柴胡 Radix Bupleuri 3-5g
Zhi Ke 枳壳 Fructus Citri Aurantii 6-9g
Chuan Niu Xi 川牛膝 Radix Cyathula Officinalis 6-9g
Jie Geng 桔梗 Platycodi Radix 3-5g
Gan Cao 甘草 Radix Glycyrrhizae 2-3g

#### Functions:

Invigorates the blood and transforms blood stasis, moves the qi and stops pain.

**Indications:** 

Stasis of blood below the diaphragm characterized by a lump in the chest and/or epigastrum that is firm, painful, and immobile, epigastric pain with a distinct location, dysmenorrhea or amenorrhea.

### Discussion:

Chuan Xiong, Chi Shao, Tao Ren, and Hong Hua invigorate the blood and transform stasis. Dang Gui and Sheng Di Huang nourish and invigorate the blood. Zhi Ke and Chai Hu move the qi to move the blood. Jie Geng and Niu Xi guide the herbs to the upper and lower parts of the body, circulating the entire formula. Gan Cao harmonizes the other herbs.

This formula is comprised of Tao Hong Si Wu Tang and Si Ni San with the addition of Jie Geng and Niu Xi. By moving both qi and blood, and guiding both upwards and downwards, this formula rather strongly invigorates the blood and transforms stasis, although its function is focused largely on the upper-half of the trunk. It, or components of it, can be used as a base from which to build a formula requiring a blood-moving component.

### 2. Bu Yang Huan Wu Tang (补阳还五汤) – from Yi Lin Gao Cuo Ingredients:

Sheng Huang Qi 生黄芪 *Unprocessed Radix Astragali Membranacei* 6-9g Tao Ren 桃仁 *Semen Pruni Persicae* 6-9g Hong Hua 红花 *Stigma Croci Sativi* 3-5g Dang Gui Wei 当归尾 *Radix (Branch) Angelicae Sinensis* 4-6g Chi Shao 赤芍 *Radix Rubrus Paeoniae Lactiflorae* 6-9g Chuan Xiong 川芎 *Rhizoma Ligustici Chuanxiong* 3-5g Di Long 地龙 *Lumbricus* 3-5g

#### Functions:

Supplements the qi and invigorates the blood, unblocks the collaterals and expels blood stasis.

### **Indications:**

Dyslipidemia presenting with qi deficiency and stasis of blood obstructing the collaterals.

### Discussion:

Huang Qi supplements the qi, and when the qi is sufficient it can push the blood. Dang Gui Wei, Chi Shao, and Chuan Xiong invigorate the blood and transform blood stasis. Tao Ren, Hong Hua, and Di Long invigorate the blood, expel blood stasis and unblock the collaterals.

Note that the source text calls for a very large dose, 120 grams, of unprocessed Huang Qi. While this may be appropriate for the original indications of the formula (hemiplegia due to deficiency of qi with blood stasis obstructing the channels), in most cases it is not

necessary, and may in fact be contraindicated. In general, 6-9 grams is sufficient, although many clinicians like to use larger doses ranging from 9-30 grams.

## 3. Di Dang Tang (抵挡汤) – from Shang Han Lun Ingredients:

Da Huang 大黄 *Radix Et Rhizoma Rhei* 6-9g Tao Ren 桃仁 *Semen Pruni Persicae* 6-9g Shui Zhi 水蛭 *Hirudo seu Whitmania* 1-3g Meng Chong 虻虫 *Tabanus* 1-3g

### Functions:

Breaks the blood and expels blood stasis.

### **Indications:**

Dyslipidemia presenting with blood stagnation and qi and blood disharmony characterized by mania, lower abdominal firmness and fullness, incontinence, black stool, and deep and irregular pulse.

### Discussion:

Originally indicated for severe blood stasis in the lower jiao requiring breaking and downward purgation. Zhang Xi-Chun stated, "All blood-breaking herbs damage the qi level. Only salty Shui Zhi can go strictly to the blood level and not damage the qi level. Meng Chong expels blood stasis and unblocks the channels." The combination of Shui Zhi and Meng Chong is of interest. One is a water animal, the other a land animal. One flies, the other dives. One rises, the other descends. This combination removes blood stasis above, below, and in the deep collaterals. Da Huang invigorates the blood and purges downward. Tao Ren invigorates the blood, transforms blood stasis, and moistens the intestines, assisting in the downward purgation of static blood.

Note that the doses given are the typical modern doses.

## **4. Da Huang Zhe Chong Wan (**大黄䗪虫丸) – from *Jin Gui Yao Lue* Ingredients:

Shu Da Huang 熟大黄 Processed Radix Et Rhizoma Rhei 300g (6-9g)

Tu Bie Chong 土鳖虫 Eupolyphaga seu Opisthoplatia 30g (3-5g)

Tao Ren 桃仁 Semen Pruni Persicae 60g (6-9g)

Gan Qi 干漆 *Lacca Sinica Exsiccatae* 30g (1-2g)

Qi Cao 蛴螬 *Holotrichia* 60g (2-3g)

Shui Zhi 水蛭 *Hirudo seu Whitmania* 60g (1-3g)

Meng Chong 蛀虫 *Tabanus* 60g (2-3g)

Huang Qin 黄芩 *Radix Scutellariae Baicalensis* 60g (6-9g)

Ku Xing Ren 苦杏仁 Semen Pruni Armeniacae 60g (6-9g)

Sheng Di Huang 生地黄 *Radix Rehmanniae Glutinosae* 300g (9-12g)

Bai Shao 白芍 Radix Albus Paeoniae Lactiflorae 120g (6-12g)

### Gan Cao 甘草 Radix Glycyrrhizae 90g (4-6g)

Note the dosages outside parenthesis are from the source text, which instructs for the herbs to be ground to powder and mixed with honey to form soybean-sized pills. Each time take 5 pills with alcohol, three times per day. The doses in parenthesis are suggested doses for decoction. However, it is recommended that this formula be used in patent form, or if in decoction then only parts of the formula are used- Gan Qi, Qi Cao, and Meng Chong are extremely difficult to obtain, and all the animal herbs in the formula have strong and unpleasant smell and taste.

#### Functions:

Invigorates the blood and breaks blood stasis, unblocks the vessels and dissolves accumulations.

### Indications:

Dyslipidemia with taxation, extreme deficiency, and stagnation of dry blood characterized by emaciation, abdominal fullness, loss of appetite, dry skin and nails, and darkness around the eyes.

### Discussion:

Da Huang Zhe Chong Wan is from Jin Gui Yao Lue chapter 6, which discusses deficiency taxation. The source text explains that the five taxations and seven damages (food damage, emotional damage, drink damage, bedroom damage, hunger damage, taxation damage, and damage of the channels, collaterals, ying, wei, and qi) lead to deficiency taxation with stagnation of dry blood. Because the dry stagnant blood prevents new blood from being generated and thus inhibits recovery from taxation, the source text recommends use of this formula to gently purge the dry stagnant blood, thus allowing for generation of new blood and bringing about supplementation of the deficiency.

Da Huang invigorates the blood and drains downward. Zhe Chong, Meng Chong, Gan Qi and Qi Cao invigorate the blood and break blood stasis. Bai Shao and Sheng Di Huang nourish and harmonize the blood. Huang Qin and Gan Cao clear heat and reduce fullness.

This formula has been shown to effectively treat dyslipidemia in cases of long-term blood stasis and deficiency. It is generally taken as a pill, for two reasons. First, many of the herbs are strong, and since this is ultimately a deficiency condition the moderate nature of a pill is needed. Second, many of the herbs are difficult to obtain, and the pills are readily available, at least in China. The pills can be taken alone, but are also frequently added to decoctions.

### **Comparison of Blood Invigorating Formulas:**

Xue Fu Zhu Yu Tang is composed of Tao Hong Si Wu Tang and Si Ni San with the addition of Jie Geng and Niu Xi. It invigorates the qi and blood and transforms stasis while guiding this function to both the upper and lower parts of the body through the use of Jie Geng and Niu Xi. However, its function is focused largely on the chest and upper

body. It is suitable for blood stagnation in which qi stagnation is a component, and in which there is no concurrent deficiency.

Bu Yang Huan Wu Tang is composed of Tao Hong Si Wu Tang minus Shu Di Huang, and with the addition of Huang Qi and Di Long. It is suitable in cases of blood stasis in the channels and collaterals with concurrent qi deficiency. Its actions are focused mainly on the channels

Di Dang Tang is for relatively severe blood stagnation, especially in the lower jiao, and for long-term stagnation that has settled in the organs and collaterals. The use of animal herbs, which have an affinity for the body and can therefore penetrate to the grandson channels, allows this formula to remove blood stagnation from the deep collaterals.

Da Huang Zhe Chong Wan is composed of Di Dang Tang with the addition of a number of herbs. While at first glance this formula looks rather harsh, because it is to be taken in pill form it is actually milder than Di Dang Tang. It is indicated for long-term blood stagnation that has led to accumulation of dry blood stagnating in the deep collaterals, thus inhibiting recovery from deficiency taxation. It can be used when long-term blood stagnation is paired with deficiency of qi, blood, yin, or yang, and is often added to decoctions addressing other aspects of pathology.

### I. Draining Dampness, Transforming and Expelling Phlegm, Guiding Out Accumulation Methods

## 1. Yin Chen Wu Ling San (茵陈五苓散) – from Jin Gui Yao Lue Ingredients:

Yin Chen Hao 茵陈蒿 Herba Artemisiae Yinchenhao 6-9g Fu Ling 茯苓 Sclerotium Poriae Cocos 6-9g Gui Zhi 桂枝 Ramulus Cinnamomi Cassiae 3-5g Ze Xie 泽泻 Rhizoma Alismatis 6-9g Zhu Ling 猪苓 Sclerotium Polypori Umbellati 6-9g Bai Zhu 白术 Rhizoma Atractylodis Macrocephalae 6-9g

### Functions:

Clears heat and drains dampness, descends turbidity and expels jaundice.

### **Indications:**

Dyslipidemia presenting with Spleen qi deficiency and stagnation of damp and heat, but with dampness more severe than heat.

### Discussion:

Yin Chen Hao goes to the blood level where it removes damp and heat. Ze Xie, Fu Ling, and Zhu Ling transform qi and drain water. Bai Zhu strengthens the Spleen and dries dampness. Gui Zhi is warm and spicy, unblocks the yang, and promotes triple burner water metabolism.

## 2. Tiao Zhong Si Xiao Wan (调中四消丸) – from Beijing Tong Ren Tang Ingredients:

Shu Da Huang 熟大黄 *Processed Radix Et Rhizoma Rhei* 6-9g Zao Jiao Ci 皂角刺 *Gleditschiae Sinensis Spina* 6-9g Wu Ling Zhi 五灵脂 *Feces Trogopterori Seu Pteromi* 6-9g Zhi Xiang Fu 制香附 *Processed Rhizoma Cyperi Rotundi* 6-9g Chao Qian Niu Zi 炒牵牛子 *Semen Pharbiditis* 6-9g

### Functions:

Dissolves accumulation of food and transforms stasis of qi, blood, and phlegm, promotes urination and frees the bowels, stops abdominal pain.

### **Indications:**

Dyslipidemia presenting with stagnation of food, phlegm, qi, and blood in the middle jiao characterized by abdominal bloating and distention, pain when press on Ren 8, sticky stool, red tongue with greasy yellow coating, soggy and jumpy pulse.

### Discussion:

This is a formula from Beijing's famous apothecary, Beijing Tong Ren Tang. It is used in cases of stagnation of food, phlegm, qi, and blood in the middle jiao, particularly when due to over consumption of rich, greasy, fatty foods. This formula is very well suited for westerners since many of them consume large amounts of meat and dairy products and have sticky, greasy food stagnation that requires the use of herbs such as Zao Jiao Ci, Chao Qian Niu Zi, etc.

Note, Qian Niu Zi is a harsh cathartic that is toxic in large doses. However, when fried its action is much more mild, and its toxicity is reduced. Therefore, short-term use (several weeks) at a small dose (3-5 grams per day in decoction) is generally safe.

If food stagnation is more severe, add Jiao Shen Qu 焦神曲 *Charred Massa Medica Fermentata*.

If abdominal pain is more severe, and Ren 8 is more tender upon palpation, add Cu E Zhu 醋莪术 *Vinegar-fried Rhizoma Curcumae Zedoariae*.

## 3. Mu Xiang Bing Lang Wan (木香槟榔丸): from Ru Men Shi Qing Ingredients:

Mu Xiang 木香 Radix Auklandiae Lappae 6-9g
Jiao Bing Lang 焦槟榔 Semen Arecae Catechu 6-9g
Qing Pi 青皮 Pericarpium Citri Reticulatae Viride 4-6g
Chen Pi 陈皮 Pericarpium Citri Reticulatae 3-5g
Cu E Zhu 醋莪术 Vinegar-fried Rhizoma Curcumae Zedoariae 4-6g
Chao Huang Lian 炒黄连 Fried Rhizoma Coptidis 2-3g
Huang Bai 黄柏 Cortex Phellodendri 3-5g

Shu Da Huang 熟大黄 *Processed Radix Et Rhizoma Rhei* 6-9g Zhi Xiang Fu 制香附 *Processed Rhizoma Cyperi Rotundi* 6-9g Chao Qian Niu Zi 炒牵牛子 *Semen Pharbiditis* 6-9g

### Functions:

Regulates the qi and guides out stagnation, purges accumulations and drains heat.

### **Indications:**

For dyslipidemia presenting with internal accumulation and stagnation characterized by epigastric and abdominal fullness, distention, and pain, constipation, sticky stool, and tenesmus

#### Discussion:

Mu Xiang and Xiang Fu unblock stagnation of qi in the triple burner. Qing Pi and Chen Pi regulate the qi of the Liver and Stomach. Huang Lian and Huang Bai clear heat and dry dampness. Bing Lang and Qian Niu Zi move the qi downward and guide out accumulation. E Zhu breaks stagnant qi in the blood. Da Huang purges accumulation and unblocks the bowels.

Mu Xiang Bing Lang Wan and Tiao Zhong Si Xiao Wan are both for stagnation of food, phlegm, dampness, and qi in the middle and lower burners with abdominal distention and pain, constipation, sticky stool, and tenesmus. The former more strongly regulates qi in the lower abdomen also clear heat from the intestines and lower burner and is stronger to treat distention and tenesmus, while the later is better at removing particularly sticky, greasy stagnation from the intestines.

### 3.3.2.5 Concluding Remarks

Regarding the formulas presented above, these are just a handful of possibilities, and ultimately each clinician must carefully diagnose and tailor herbal prescriptions to fit their patients' presenting syndromes. There may be cases when one of these formulas fits a patient perfectly. More often though, this is not the case, and bits and pieces from a number of formulas can be used to better address patients' conditions.

Finally, while the modern research presented above is of interest and may prove useful in the clinic, the success of Chinese medicine ultimately rests in harmonizing the overall function of the body, and not so much in going after one particular item which is deemed to be bad, such as cholesterol. Therefore, addressing each individual's condition according to Chinese medicine syndrome differentiation is the best route to successful prevention and treatment of dyslipidemia and its associated diseases. That means that any herb or any formula could be useful, and one should steer away from thinking that what has been presented above is in some way superior to a flexible approach to clinical practice.

### **Conclusion**

Dyslipidemia is considered problematic due to its being deemed a risk factor for cardiovascular and other diseases. However, there is controversy over the role of dyslipidemia in the etiology of those diseases. Therefore, while the biomedical understanding of dyslipidemia, and the debate surrounding it, is of interest and important in that it may provide clues for prevention and treatment, ultimately Chinese medicine practitioners will do best by relying on Chinese Medicine syndrome differentiation to treat these disorders. While we may be unsure of the actual role dyslipidemia plays in the development of cardiovascular disease, etc, we can be quite sure that factors such as deficiency of qi, blood, yin, yang, viscera, and bowel, and stagnation of qi, blood, phlegm, heat, and cold, etc, are most definitely involved in these disorders, and by treating these we can indeed help prevent and treat such conditions as atherosclerosis, coronary artery disease, MI, CVA, etc, etc. This course has provided detailed analysis of such pathology and its treatment, and has strived give the practitioner ample tools for understanding and addressing these conditions.

### **Review Exercises for Personal Enrichment**

## Answers on the Next Page (This is <u>not</u> the course quiz)

High Cholesterol & Dietetics, #3

### 1. Kun Bu is...

- A. toxic
- B. salty, cold and enter the Liver and Kidney channels.
- C. Dissolves phlegm and softens hardness.
- D. Both A and B

### 2. Lai Fu Zi has been shown to....

- a. reduce serum cholesterol
- b. prevent atherosclerosis
- c. treat coronary artery disease
- d. All of the above

### 3. The Shen Nong Ben Cao Jing states that...

- a. Ze Xie can not only "dissolve water, but can also nourish the five viscera"
- b. Ze Xie can boost qi
- c. Long term consumption of Ze Xie can benefit the eyes and ears, increase longevity and make the body lighter.
- d. All of the above

### 4. Hu Zhang enters which channels?

- a. Liver and Gallbladder
- b. Lung and Heart
- c. UB and Small Intestine
- d. all of the above

### **Answers to Review Exercises**

- 1. Kun Bu is...
- A. toxic
- B. salty, cold and enter the Liver and Kidney channels.
- C. Dissolves phlegm and softens hardness.
- D. Both A and B

answer: D

- 2. Lai Fu Zi has been shown to....
- a. reduce serum cholesterol
- b. prevent atherosclerosis
- c. treat coronary artery disease
- d. All of the above

answer: d

- 3. The Shen Nong Ben Cao Jing states that...
- a. Ze Xie can not only "dissolve water, but can also nourish the five viscera"
- b. Ze Xie can boost qi
- c. Long term consumption of Ze Xie can benefit the eyes and ears, increase longevity and make the body lighter.
- d. All of the above

answer: d

- 4. Hu Zhang enters which channels?
- a. Liver and Gallbladder
- b. Lung and Heart
- c. UB and Small Intestine
- d. all of the above

answer: a

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