

Herbs and Nutrition For Cardiovascular Health and Disease

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Cardiovascular diseases (CVD) are the leading cause of death in the U.S. and developed countries. The CDC reports that in 2007 there were 616,067 deaths caused by heart problems and that many, if not most, were preventable. According to the WHO, the major CVDs are myocardial infarction/MI (heart attack), hypertension, stroke (cerebrovascular disease), congestive heart failure and rheumatic heart disease. The majority of these diseases (rheumatic heart disease is the exception) are caused by obesity, insulin resistance, lack of exercise, diabetes, nutritional deficiencies, hypertension, smoking, and chronic stress. Certain risk factors (age, being male, family history, ethnic group) are beyond our control. Many other risk factors, as seen below, can be favorably altered to reduce CVD risk.

The following chart lists major risk factors for CVD.

| RISK FACTOR | CAN CAUSE OR EXACERBATE |
|--|--|
| Obesity (especially abdominal obesity) Insulin resistance Type 2 Diabetes | Hypertension Elevated cortisol levels Increased inflammation Atherosclerosis Low HDL cholesterol High LDL cholesterol High triglycerides Elevated Hemoglobin A1c (HbA1c) Elevated C-reactive protein (CRP) Elevated Homocysteine levels |
|  these are closely related |  these are related |
| Sedentary lifestyle | Obesity |
| Smoking | Erectile dysfunction Impaired circulation Decreased vitamin C levels Buerger's Disease |
| Chronic Stress | Elevated cortisol levels Decreased sleep Hypertension Increased inflammation |
| Negative emotions (chronic anxiety, rage, fear, anger) | Increased cortisol and adrenaline levels Impaired sleep Hypertension Decreased digestion/absorption Decreased libido |
| Low HDL cholesterol High LDL cholesterol High triglycerides Elevated Hemoglobin A1c Elevated CRP Elevated Homocysteine levels | Atherosclerosis Increased blood viscosity Elevated blood sugar levels (insulin resistance/diabetes) Increased inflammation |
|  these are related | |

| RISK FACTOR | CAN CAUSE OR EXACERBATE |
|---|--|
| Nutritional Deficiencies Omega 3 fatty acids | Increased inflammation, blood viscosity and risk of atherogenesis |
| Magnesium Vitamin D Vitamin C | Increased risk of muscle spasm and arrhythmia Increased risk of inflammation and atherogenesis Increased risk of inflammation and atherogenesis, unstable plaque |
| B-12 | Increased risk of inflammation and atherogenesis |
| Recreational Drug Use [Cocaine, amphetamines, methadone, ephedrine, MDMA) Alcohol (in excess of 1-2 drinks per day) | Increased risk of stroke, cardiomyopathy, MI, hypertension, cardiotoxicity Hypertension, increased triglycerides, liver disease |
| Pharmaceuticals Doxorubicin, 5-Flourouracil, Adriamycin Cisplatin, Cyclophosphamide Novantrone (antileukemic), antihistamines Anti-retroviral drugs, NSAIDs (Vioxx) Tricyclic antidepressants Vinorebine and other fluoropyrimidine drugs | Cardiotoxic – can cause heart damage Cardiotoxic – can cause heart damage |
| Other diseases Kidney disease Thalassemia major (iron excess) | Congestive heart failure Increased risk of MI or stroke |
| Environmental pollutants Smog/air pollution (aldehydes) Lead Mercury Cadmium | Increased risk of MI Increased CV mortality, hypertension Endothelial dysfunction, hypertension Hypertension, kidney damage |
| Diet High intake of trans fats Excess iron | Increased atherosclerosis Increased risk of MI |

Prevention of CV disease is obviously the clinicians' primary goal, but even simple changes in diet (low glycemic load diet, sodium reduction, 1 glass of red wine per day, regular use of olive oil and increased soluble fiber), improved nutritional status (add fish oils, L-carnitine, magnesium, vitamins C and E, Co-Q-10), lifestyle changes (increased exercise, moderate weight loss, quitting smoking, stress reduction techniques) and the use of herbal CV tonics (Hawthorn, Tienqi Ginseng, Dan Shen, and antioxidant-rich herbs/foods) can reduce risk of disease and help to reverse many mild to moderate CV conditions.

A Short List of Major Cardiotoxic Herbs

Arjuna (*Terminalia arjuna*)
Part Used: Bark
Active Constituents: Triterpenoids, Tannins

Taste: Bitter
Energy: Cool and Dry

Activity: Cardioprotective, lowers LDL cholesterol levels and triglycerides, elevates HDL cholesterol levels
Cardiovascular uses: Increases O₂ to the heart, strengthens contractions, and slows the heart rate (it is negatively chronotropic and positively inotropic). It is used for stable angina pectoris (it is not effective for unstable angina), especially with ectopic beats (Bharani, et al, 2002), mild congestive heart failure, palpitations, and mild to moderate mitral valve prolapse with regurgitation (Dwivedi, et al, 2005). Use it with Hawthorn, Night Blooming Cerus, and Collinsonia for MVP.

Dosage: Fresh tincture (1:5) 2-4 ml TID

Tea (Decoction) 1 tsp. dried, powdered, bark, 10 oz. water, decoct 15 minutes, steep 40 minutes take 4 oz. 3x/day

CI/Drug Interactions: Unstable angina, patients with recent myocardial infarctions. Dry constipation, pregnancy.

Astragalus (*Astragalus membranaceus*)

Taste: Sweet

Part Used: Root

Energy: Warm and Moist

Active Constituents: Astragalosides, flavonoids

Activity: Cardiovascular tonic, it mildly lowers blood pressure, dilates the coronary arteries and stimulates peripheral circulation. It can be used with Dan Shen, Dang Gui and Tienqi for angina and mild congestive heart failure. There are a multitude of Chinese studies using this herb and isolated constituents for treating CV conditions. Animal studies show it improves impaired endothelial function (Deng and Yu, 2009) and can ameliorate abnormal cardiac function, especially diastolic function in heart failure (Su, et al, 2009). Other studies show it can protect the heart against Coxsackie B virus, a major cause of myocarditis and that if taken orally it prevented diabetic rats from developing cardiomyopathy by down-regulating angiotensin II type 2 (AT 2) receptors (Li, et al, 2004).

Dosage: Tincture (1:5, cook 4-6 hours) 2-4 ml TID

Tea (Decoction) 2 tsp. dried root, 12 oz. water, decoct 20 minutes, reduce to 6 oz., steep 30 minutes, take 3 cups/day

Dan Shen (*Salvia miltiorrhiza*)

Taste: Bitter

Part Used: Root

Energy: Cool and Dry

Active Constituents: Diterpene quinones, Salvenolic acids

Activity: Cardioprotective, Analgesic, Peripheral vasodilator

Cardiovascular uses: It increases circulation to the heart and reduces blood viscosity. Dan Shen is used for angina pain, hypertension, and palpitations. It also lowers cholesterol and triglyceride levels.

Dosage: Tincture (1:4 or 1:5) 1.5-3 ml TID/QID

Tea (Decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep 1 hour, take 2-3 cups/day

CI/Drug Interactions: Pregnancy or heavy blood flow. It can potentiate Warfarin and other anticoagulant medications, avoid concurrent use.

Dang Gui (*Angelica sinensis*)

Taste: Pungent and Sweet

Part Used: Root

Energy: Warm and Moist

Active Constituents: Z-Ligustilide, Ferulic acid

Activity: In TCM Dang Gui is used to nourish the blood and enhance circulation. It improves cardiac circulation and can be used with Dan Shen, Tienqi, Astragalus and Corydalis for angina pain. It can also be useful for intermittent claudication and Buerger's disease. In animal studies, Dang Gui prevented doxorubicin-induced cardiotoxicity (Xin, et al, 2007) and it inhibited atherogenesis (Zhui, et al, 2000).

Dosage: Tincture (1:4 or 1:5) 2-4 ml TID

Tea (Decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep covered 45 minutes, take up to 3 cups/day

CI / Drug Interactions: Use carefully with blood thinning medication.

Hawthorn (*Crataegus monogyna*, *C. oxycanthoides*)

Taste: Sweet, Sour, Bland

Part Used: Fruit, Flowers and Leaf

Energy: Warm and Slightly Moist

Active Constituents: Flavonoids

Activity: Cardiotonic (trophorestorative), nervine, antiinflammatory, mild diuretic.

Cardio-vascular uses: Hawthorn is a "Food for the Heart". It can be used for nourishing, strengthening and repairing the heart. Functional and organic heart conditions benefit from Hawthorn. (angina, mild congestive heart failure, hypertension, mitral valve weakness). It is also a tonic for the veins, capillaries, and arteries and is useful for atherosclerosis and intermittent claudication.

Dosage: Tincture (1:4): 4-5 ml QID

Tea (Infusion): 1-2 tsp. dried berries, 8 oz. hot water, steep for 1 hour, take 3 cups/day

Solid extract: 1/4 teaspoon BID

CI / Drug Interactions: Crataegus may potentiate Beta blockers

⊗ **Lily of the Valley** (*Convallaria majalis*)

Taste: Bitter

Part Used: Leaves and Flowers

Energy: Neutral, Moist, Toxic

Active Constituents: Cardiac Glycosides (convallatoxin, convallamarin), flavonoids.

Activity: Cardiac stimulant, diuretic.

Cardiovascular uses: *Convallaria* is used with *Crataegus* and *Night Blooming Cereus* for congestive heart failure (CHF), mitral insufficiency with dyspnea, cardiac edema, bradycardic forms of heart failure and cardiac arrhythmias with a rapid, feeble pulse.

Dosage: Tincture (1:10) 2-5 gtt every 2-4 hours.

CI / Drug Interactions: It will potentiate *Digitalis* glycosides (*Digoxin*, *Lanoxin*, *Digitoxin*).

Night Blooming Cereus (*Selenicereus grandiflorus*)

Taste: Bitter and Slightly Sweet

Part Used: Stem and Flower

Energy: Neutral and Moist

Active Constituents: Cactine, Flavonoid Glycosides (*Cacticin*, *Grandiflorin*, *Rutin*).

Activity: Cardiotonic, antidepressant, demulcent.

Cardio-vascular uses: Palpitations with shortness of breath, the patient is irritable, with tightness in the chest and a feeble, irregular pulse. It can be used (along with Hawthorn and *Arjuna*) for angina and "Tobacco Heart". For mitral and aortic regurgitation use it with Hawthorn, *Collinsonia* and *Gotu Kola*.

Dosage: Fresh tincture (1:2), 5-15 gtt TID

CI / Drug Interactions: Hypertension, may interact with prescription cardiac medications

Tienqi Ginseng (*Panax notoginseng*)

Taste: Sweet, Slightly Bitter

Part Used: Root

Energy: Warm and Dry

Active Constituents: Arasaponins, Ginsenosides, Notoginsenosides

Cardiovascular uses: *Tienqi* is used in TCM for angina pectoris and congestive heart failure. It increases oxygen flow to the coronary artery and heart while decreasing oxygen consumption by the heart. It is used with *Dang Gui*, *Astragalus*, and *Salvia miltiorrhiza* for fatty degeneration of the heart.

Dosage: Tincture (1:5), 1.5-2.5 ml QID

Tea (Decoction) 1 tsp. dried, powdered, root, 12 oz. water, decoct 15-20 minutes, steep 45 minutes to 1 hour, take 4 oz. 4x/day

CI/Drug Interactions: Anticoagulant medications, pregnancy.

HYPERTENSION

Hypertension, or high blood pressure (>140/90 mm/Hg) is a condition where the blood pressure in the arteries is elevated. This may be acute, caused by pain, anxiety or exertion, or a chronic condition. Chronic hypertension is a major risk factor for heart disease, peripheral vascular disease and stroke. Hypertension is usually classified as either primary (essential) hypertension or secondary hypertension. Approximately 90-95% of all hypertension is primary hypertension, which has no obvious medical cause. Secondary hypertension is caused by cardiac, kidney or endocrine/thyroid problems. Even though there is no identifiable cause of primary hypertension, many factors can influence this condition including genetics, stress (white coat hypertension), diet (excess salt and carbohydrates, low potassium and magnesium intake), insulin resistance, obesity, chronic insomnia or poor quality sleep, a sedentary lifestyle, vitamin D deficiency, excessive alcohol consumption, use of stimulants (ephedrine, cocaine, amphetamines), and some medications (NSAIDs, decongestants).

⊗ **Toxic: Should be used only with directions from a trained practitioner!**

Herbs and Supplements for Hypertension

Chrysanthemum flower (*Chrysanthemum morifolium*)

Is used in China as a beverage tea and medicine. It mildly reduces blood pressure and a tea made of Chrysanthemum flower, Hibiscus flower, Linden flower, Olive leaf and Lemon Balm can be effective for relieving pre-hypertension and mild cases of high blood pressure.

Dosage: Tincture (1:5) 2-4 ml TID/QID

Tea 1-2 tsp. dried flowers, 8 oz. hot water, steep covered for 20-40 minutes, take 1-3 cups/day

Coenzyme Q-10

Co-Q-10, or its more active form, ubiquinone, has been shown in human trials to lower blood pressure in patients with type II diabetes (Hodgson, et al, 2002).

Dosage: 60-100 mg BID

Dan Shen root (*Salvia miltiorrhiza*)

This herb has a long history of use in TCM for relieving blood stasis and blood heat (infection). It is used for gynecological, liver and cardiac problems. Much of the research on this herb for cardiovascular issues has used injectable isolated constituents, so it is not applicable to herbal usage. Even though clinical data on oral use is limited (Kang, et al, 2002), this herb can be useful as part of a protocol for hypertension as well as angina, palpitations, and to inhibit atherosclerosis.

Dosage: Tincture (1:4 or 1:5), 1.5-3 ml TID/QID

Tea (decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep 1 hour, take 2-3 cups/day

Du Zhong bark (*Eucommia ulmoides*)

Is used in TCM to strengthen the bones, tendons and the Chinese liver and kidney. It is also used for hypertension. The decoction (the tincture is not effective for this) can be combined with Chrysanthemum flower, Gambir vine, Dan Shen and Huang Qin. Animal studies have also confirmed this herb's ability to lower blood pressure (Lang, et al, 2005).

Dosage: Tea (decoction) 2 tsp. dried bark, 16 oz. water, decoct 1 hour, take 2-3 cups/day

Gou Teng spines (*Uncaria sinensis*)

The hooks or "cat's claws" of this Asian species of *Uncaria*, are used in TCM to calm the spirit (sedative) and extinguish wind (antispasmodic). It is useful for treating liver fire rising symptoms such as headaches, hypertension with dizziness, red, painful eyes and anxiety (Wu, et al, 1980).

Dosage: Tincture (1:4 or 1:5) 1-2 ml TID

Tea (decoction) 1-2 tsp. dried stems, 8 oz. water, decoct 5 minutes, steep ½ hour, take 4 oz. QID

Hibiscus flower (*Hibiscus sabdariffa*)

This lovely red flower is used to make a sour tasting tea that is rich in anti-inflammatory and antioxidant polyphenols. In a clinical trial, Hibiscus tea was more effective than Lisinopril for lowering blood pressure, decreasing sodium levels (without affecting potassium) and inhibiting angiotensin-converting enzyme/ACL activity (Herrera-Arellano, et al, 2007).

Dosage: Tincture (1:2 or 1:5), 2-4 ml TID

Tea 1-2 tsp. dried flowers, 8 oz. hot water, steep for 20 minutes, take 2-3 cups/day

Kudzu root (*Pueraria lobata*)

Is commonly used in TCM for clearing wind heat (spasms) and headaches. It can also be used for hypertension with a stiff neck, headache, tinnitus or dizziness. It has only a mild effect on blood pressure (combine it with stronger herbs) but is very effective for the secondary symptoms.

Dosage: Tincture (1:5), 3-5 ml TID/QID

Tea (decoction) 1-2 tsp. dried root, 10 oz. water, decoct 10-15 minutes, steep 1 hour, take 2-3 cups/day

Linden flower (*Tilia platyphyllos*)

Has been used in Europe as a delicious beverage tea as well as a nervine, mild hypotensive agent and pectoral. The tea gently reduces blood pressure and, when combined with Hibiscus flowers, Lemon Balm, Chrysanthemum flower, Hawthorn, and Olive leaf, makes a pleasant tasting tea for mild to moderate hypertension.

Dosage: Tincture (1:5), 2-3 ml TID/QID

Tea 2 tsp. dried flowers, 8 oz. hot water, steep covered for 30-40 minutes, take 2-3 cups/day

Mistletoe herb (*Viscum album*)

Is an effective medicine for hypertension. It may cause a slight elevation in blood pressure for a few days, but this is usually followed by a drop with sustained use. Do not use it with pharmaceutical medications for hypertension (beta blockers, ACE inhibitors, calcium channel blockers) as it seems to increase blood pressure without the reduction in blood pressure seen when used by itself.

Dosage: Tincture (1:5), 1-2 ml TID

Motherwort herb (*Leonurus cardiaca*)

Has a long history of use for anxiety, stress-induced hypertension (white coat hypertension) and hyperthyroid-induced palpitations. It works best when combined with other stronger hypotensive herbs.

Dosage: Tincture (1:2.5 or 1:5), 2.5-4 ml TID/QID

Tea 1 tsp. dried herb, 8 oz. hot water, steep for 20-30 minutes, take 4 oz. up to 4x/day

Olive leaf (*Olea europaea*)

Has been used for centuries in Europe for treating high blood pressure and diabetes. Animal and human studies (Cherf, et al, 1996; Perrinjaquet-Onoceato, et al, 2005) confirm that the leaf does lower blood pressure. It has strong antioxidant activity and mild ACE (angiotensin converting enzyme) inhibiting effects.

Dosage: Tincture (1:5), 2-4 ml TID

Tea 1-2 tsp. dried leaf, 8 oz. water, decoct 10 minutes, steep 40 minutes, take 4 oz. TID

Rauwolfia herb (*Rauwolfia serpentina*)

This herb has been used for millennia in India to treat epilepsy, insanity, high blood pressure and insomnia. In the 1950's reserpine, derived from this plant, was a popular medication for hypertension. Its use was discontinued due to side effects including depression and fears that it might cause breast cancer (it does not). The whole herb is much less problematic than the isolated alkaloid and in small doses is a highly effective short-term treatment for moderate to severe hypertension. In an animal study, green tea was able to ameliorate oxidative liver damage caused by the isolated reserpine (Alibloushi, et al, 2009). It might be a good idea to take antioxidants such as Milk Thistle, Turmeric or Schisandra when taking Rauwolfia.

Dosage: Tincture (standardized to 1% total alkaloids) 2-12 gtt TID combined with other milder herbs

PREVENTION AND TREATMENT OF ATHEROSCLEROSIS (ARTERIOSCLEROTIC VASCULAR DISEASE – ASVD) AND CORONARY ARTERY DISEASE (CAD)

Atherosclerosis, or arteriosclerotic vascular disease/ASVD is a common degenerative condition associated with aging and the western diet /lifestyle. Over decades (evidence shows atherosclerosis often begins by the age of 14-15), the artery walls thicken due to buildup of oxidative LDL/VLDL cholesterol. These inflammatory proteins stimulate an immune response (macrophages) which provokes an autoimmune response. As this process progresses the artery walls form plaques that narrow the arteries, decreasing blood flow. Plaques can be stable or unstable. Unstable plaques can and often do rupture, causing arterial stenosis, blood clots, and ischaemic damage to the heart.

Herbs and Supplements for the Prevention and Treatment of Atherosclerosis (Arteriosclerotic Vascular Disease – ASVD) and Coronary Artery Disease (CAD)

Amla fruit (*Emblica officinalis*)

This Ayurvedic rasayana strengthens the veins, arteries and capillaries, reducing capillary fragility. It is of benefit for vasculitis, varicose veins, spider veins and inhibiting atherogenesis. Amla also enhances hemoglobin levels, prevents excessive bruising and helps lower LDL/VLDL cholesterol levels.

Dosage: Tincture (1:4 or 1:5), 3-5 ml TID/QID

Tea: ½ to 1 tsp. dried powdered fruit, 8 oz. water, decoct 10 minutes, steep 1 hour, take 2-3 cups/day

Blueberry fruit (*Vaccinium* spp.)

Blueberry and Bilberry are powerful antioxidants and antiinflammatories. They help to stabilize capillaries, veins and arteries and inhibit atherogenesis.

Dosage: Solid extract: ¼ - ½ tsp. BID

Dang Gui root (*Angelica sinensis*)

Is used with *Salvia miltiorrhiza* for constrictive aoritis and impaired circulation. In animal studies, Dang Gui reduced triglyceride levels, mildly thinned the blood and inhibited atherogenesis (Zhul, et al, 2000).

Dosage: Tincture (1:4) 2-4 ml QID

Tea - 2 tsp. dried root to 8 oz. of water, decoct 10-15 minutes steep (covered) 1 hour. 2-3 cups per day

Garlic bulb (*Allium sativum*)

Long-term use of Garlic can inhibit atherosclerosis, modestly lower cholesterol levels and prevent arteriosclerotic changes (Siegal, et al, 2004).

Dosage: Fresh Garlic: to tolerance

Capsule: 2 BID

Ginkgo leaf (*Ginkgo biloba*)

Can be used for cerebral arteriosclerosis with impaired memory, peripheral neuropathies and impotence due to atherosclerosis. In a human study of high risk cardiovascular patients, standardized Ginkgo reduced LDL cholesterol levels, inhibited Lp(a) while increasing cAMP/cGMP (vasodilating effects) and the antioxidant SOD (Rodriguez, et al, 2007).

Dosage: Standardized Extract: 120 mg BID

Green Tea (*Camellia sinensis*)

High doses of green tea catechins (518 mg pd) helped to protect men against oxidative damage caused by smoking (1 pack per day). It improved endothelial dysfunction and inhibited atherogenic factors (Oyama, et al, 2010).

Regular consumption of green tea (4-8 cups per day) has also been found to inhibit atherosclerosis.

Dosage: 2-4 cups per day

Hawthorn fruit/flower (*Crataegus oxycanthoides*, *C. monogyna*)

Reduces plaque formation in the arterial walls. It also strengthens arteries, capillaries and veins, reducing endothelial dysfunctions.

Dosage: Tincture 4-6 ml QID

Tea 1-2 tsp. dried herbs, 8 oz. hot water, steep for 1 hour, take 3 cups per day

Solid Extract ¼ to ½ tsp. BID

Hibiscus flower (*Hibiscus sabdariffa*)

In animal and human studies the flowers of Hibiscus have been found to have antioxidant, antihyperlipidemic and antiinflammatory effects. In a human trial (Mozaffari-Khosravi, et al, 2009), type II diabetics who took Hibiscus tea had increased HDL cholesterol and decreased total cholesterol, LDL cholesterol, triglycerides, and Apo-B-100 (Apolipoprotein B).

Dosage: Tincture (1:2 or 1:5) 2-4 ml TID

Tea 1-2 tsp. dried flowers, 8 oz. hot water, steep for 20 minutes, take 2-3 cups per day

Horsetail herb (*Equisetum arvense*)

Is a rich source of silicic acid, the organic form of silica. Silica is one of the most common minerals in our bodies and is necessary for strong bones as well as healthy skin, veins and arteries. Horsetail has been used in Europe for preventing and treating atherosclerosis. A Chinese animal study showed that *Equisetum* lowered both cholesterol levels and triglycerides (Xu, et al, 1993).

Dosage: Tincture (1:5) 1-2 ml TID

Tea (Decoction): 1 tsp. dried herb, 8 oz. water, decoct 15 minutes, steep for 1 hour, take 4 oz. 3x/day

Tablets: 1-2 BID

Huang Qin/Baikal Sculcap root (*Scutellaria baicalensis*)

Is used to treat and prevent atherosclerosis. It is anti-inflammatory, antioxidant and antithrombotic and inhibits oxidation of LDL cholesterol and arterial plaque formation.

Dosage: Tincture (1:5) 2-3 ml TID

Tea (Decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep 1 hour, take 2-3 cups/day

Khella seed (*Ammi visnaga*)

Is used in Europe for impaired coronary and vascular circulation with angina. It is a powerful antispasmodic and it relieves venospasm.

Dosage: Tincture (1:5) .5-1.5 ml TID

L-Carnitine

The propionyl form of L-Carnitine has been shown to improve the symptoms of peripheral arterial disease (PAD) including intermittent claudication (Andreozzi, 2009).

Dosage: 500-1500 mg

Periwinkle leaf (*Vinca minor*)

Can be used for mild forms of cerebral atherosclerosis with impaired memory and concentration. (use it with Rosemary, Ginkgo and Bacopa).

Dosage: Tincture (1:2) 5-10 gtt TID.

Tea: 1 tsp. dried leaf, 8 oz. hot water, steep 30 minutes, take 2 oz. TID

Resveratrol

This powerful stilbene is found in Japanese Knotweed, Grape skins and seeds, wine and many berries. Numerous studies (in vitro, animal and human) have shown that it is a strong antioxidant and anti-inflammatory agent. It inhibits atherogenesis by inhibiting hepatic triglyceride synthesis, reducing atherosclerotic plaque formation and preventing oxidation of LDL cholesterol. Other research shows that Resveratrol down-regulates pro-inflammatory cytokines, promotes NO (nitric oxide) release, and inhibits platelet aggregation (Rampraseth and Jones, 2010).

Dosage: 20-100 mg per day

Safflower blossoms (*Carthamus tinctorius*)

Is used in TCM for heart blood stagnation. It is used with Dang Gui, Tienqi, Dan Shen and Astragalus for treating and preventing atherosclerosis, and relieving angina pain and thromboangiitis obliterans (with dark red or purplish feet).

Dosage: Tincture (1:5): 1.5-2 ml QID

Tea: 2 tsp. dried flowers, 8 oz. water, steep covered 30-40 minutes, take 4 oz. 4x/day

Triphala powder (*Terminalia chebula/T. bellerica/Phyllanthus emblica*)

Is one of the great Ayurvedic rasayanas. It is a powerful antioxidant and anti-inflammatory and can help prevent or treat atherosclerosis, improve eye health and bowel function.

Dosage: Powder: 1-2 tsp. in warm water before bedtime

Capsules: 1-2 capsules BID

HYPERCHOLESTEROLEMIA

Elevated total cholesterol levels have been widely promoted as an important and controllable (using statins and diet) risk factor for CVD. In reality, the total cholesterol number (>200) is relatively meaningless. Just because someone has a total cholesterol of 240 is no reason to be alarmed or take potentially dangerous statins. The more important numbers are the total HDL cholesterol (>50 for men and >60 for women are good numbers) and total LDL cholesterol (<130). The HDL/LDL ratio is also important (0-3.6 is normal) and comprehensive cholesterol panels measure VLDL-3 (which should be <10) and LDL-R (which should be <100), both of which are risk factors. In addition, elevated levels of C-Reactive Protein (0-4.9 normal), hemoglobin A1c (4.8 – 5.9 normal), triglycerides (0-149 normal), cortisol levels (3.1-22.4 ug/dL) and serum glucose (65-99 ug/dL) are significant risk factors.

Many people with elevated cholesterol are given statin drugs, which are effective for lowering LDL and total cholesterol. Unfortunately, these medications can have serious side effects including brain fog, muscle weakness and pain, as well as liver damage. If someone is using statin drugs (or Red Yeast rice) they should take Co-Q-10 (200-400 mg per day) to help prevent statin-induced rhabdomyolysis and muscle pain. A number of herbs and supplements have been shown to help reduce LDL cholesterol, elevate HDL cholesterol and lower triglycerides and other pro-inflammatory markers.

Herbs and Supplements for Hypercholesterolemia

Artichoke leaf (*Cynara scolymus*)

Is traditionally used as a cholagogue, antiemetic and bitter tonic. Several clinical trials show that it also modestly lowers cholesterol levels (Wilder, et al, 2004).

Dosage: Tincture (1:2 or 1:4 or 1:5): 1.5-3 ml TID

Tea: 1 tsp. dried herb, 8 oz. hot water, steep for 15-20 minutes, take up to 3 cups per day

Fish Oils

Omega 3 fatty acids, especially fish oils, have been found to lower LDL and triglycerid levels as well as improve HDL levels. Fish oils with plant sterols had a synergistic effect better than either supplement by itself (Micallef and Garg, 2008).

Dose: 4-6 g per day

Gum Guggul gum resin (*Commiphora mukul*)

There are both positive and negative studies on the use of Gum Guggul for lowering cholesterol. One study (Singh, et al, 1994) found that 50 mg of a standardized Guggul product (Guggulipid) reduced total cholesterol 11.7%, LDL cholesterol 12.5%, and triglycerides 12%. A study published in 2003 in JAMA found no cholesterol lowering activity at all. A third study (Nohr, et al, 2009) found Guggul lowered total cholesterol but did not alter LDL levels or triglycerides.

Dosage: Tincture (1:4 or 1:5): 1-2 ml TID

Capsules: 1-2 capsules BID

Niacin

Is also known as B3 or nicotinic acid. It is an essential nutrient and part of the B-complex family of vitamins. Niacin is especially interesting because it not only lowers VLDL cholesterol levels and triglycerides; it increases protective HDL cholesterol levels. In human trials, Niacin also decreased lipoprotein-associated phospholipase A2 and C-reactive protein levels, both of which are pro-inflammatory, suggesting an atheroprotective effect (Kuvin, et al, 2006). There are several issues with Niacin. One is flushing that can occur in sensitive people. Secondly, it has been linked to liver damage in higher doses and can exacerbate gout and diabetes.

Dosage: 2000 mg a day of extended release Niacin. Do not use with pregnant women.

Plant Sterols/Stanoles

Regular intake of plant sterols and/or stanols in fortified foods (yogurt, mayonnaise, butter-like spreads or salad dressings) or as supplements lowers LDL cholesterol levels in people with elevated levels (Abumweis, et al, 2008).

Dosage: 2 g daily

Polyphenols

Are antioxidant and anti-inflammatory and are found in abundance in many plants. Several studies show that plants rich in polyphenols can reduce cholesterol levels. Insoluble carob fiber, rich in polyphenols (4g BID) reduced total cholesterol (17.8%), LDL cholesterol (22.5%), and triglycerides (16.3%) (Ruiz-Roso, et al, 2010). Various human studies utilizing apple polyphenols (Nagasako-Akazome, et al, 2007), tomato polyphenols (Shen, et al, 2007), cocoa powder (Baba, et al, 2007), grape polyphenols (Zern, et al, 2005), dark chocolate (Mursu, et al, 2004), and kiwi fruit (Duttaroy, et al, 2004) were able to reduce total and LDL cholesterol levels. Fresh tomato juice (also rich in lycopene) also lowered triglycerides (as did kiwi fruit) and raised HDL cholesterol.

Cocoa powder inhibited LDL oxidation, decreased ApoB and also increased HDL cholesterol (as did dark chocolate).

Other polyphenol-rich foods and herbs (turmeric, beets, green tea, coffee, rosemary, blueberries, and amla fruit) and supplements (pine bark, grape seed extract) are likely to also have benefits for improving blood lipid profiles, as well as reducing cardiovascular risk factors.

Red Yeast Rice

Is a natural source of statins. In human studies it was comparable to pharmaceutical statins for reducing LDL cholesterol levels (Halbert, et al, 2010) and was better tolerated by people who cannot take statins due to statin-associated myalgia (SAM). In another study (Zhao, et al, 2008), Red Yeast Rice also reduced post-prandial triglyceridemia. Many red yeast rice products are contaminated with a possible mycotoxin, citrinin. Be sure to use products that are tested and guaranteed to be citrinin free.

Dosage: 600 mg BID (when I recommend this I often use lower doses – 600 mg every other day, and in most cases it is still effective)

Soluble fiber

Various soluble fibers including Oats (*Avena sativa*) (Robitaille, et al, 2005), Psyllium seed (*Plantago psyllium*) (Wei, et al, 2009), Chia seed (*Salvia hispanica*), Fenugreek seed (*Trigonella foenum-graecum*), Barley (*Hordeum vulgare*), Guar gum (*Yamopsis tetragonoloba*), flax seed (*Linum usitatissimum*) (Bloeden, et al, 2008), carrots (*Daucus carota*), beans (Bazzano, et al, 2009), lentils, chickpeas, and prune juice have been found to mildly reduce total cholesterol and LDL cholesterol levels.

Walnuts (*Juglans regia*)

In a human trial, 21 men and women with elevated cholesterol levels were placed on either a Mediterranean diet or one in which walnuts replaced 32% of their monosaturated fats for 4 weeks. People on the walnut diet had significantly reduced total and LDL cholesterol levels and improved endothelium-dependent vasodilation (Ros, et al, 2004). A similar study using almonds also found that they reduced cholesterol levels as well as improving glycemic control (Li, et al, 2010). Other nuts such as pistachios, pecans, filberts, and Brazil nuts probably have similar effects.

Yerba Mate leaf (*Ilex paraguariensis*)

Is used daily as a beverage throughout South America and has become more popular in the U.S. as well. In a human trial, people with normal cholesterol, abnormal blood lipids, and those with elevated cholesterol and taking statins were given Mate. All groups had improved lipid parameters including reduced LDL levels, elevated HDL levels and lowered Apolipoprotein B (deMorais, et al, 2009)

Dose: Tea: 2-3 cups per day

MITRAL VALVE PROLAPSE

Mitral valve prolapse (MVP) is often a mild and non-treatable medical condition. According to cardiologists, approximately 10% of the population has mild asymptomatic MVP that is medically irrelevant. The condition occurs when the mitral valve (it separates the left ventricle from the left atrium) becomes thickened and no longer fully closes. This allows blood to backflow (regurgitate) from the left ventricle back into the left atrium. As stated before, many cases are asymptomatic. When symptoms do occur the most common ones include heart palpitations, dyspnea, atrial fibrillation, anxiety, panic attacks and mild to moderate chest pain. These symptoms are not actually caused by the MVP but rather the regurgitation of blood, and studies suggest that in many cases the prevalence of these symptoms occurs no more frequently than in the larger population without MVP.

Herbs for Mitral Valve Prolapse

Aromatic Collinsonia (*Collinsonia canadensis*)

Is a heart tonic. It strengthens the muscle and, with Night Blooming Cereus and Hawthorn, can be useful for mild to moderate MVP.

Dosage: Fresh Tincture (1:2) 1.5 – 2 ml TID

Hawthorn fruit/flower (*Crataegus oxycanthoides*, *C. monogyna*)

Is a trophorestorative to the heart, it strengthens cardiac tonus and relieves valvular insufficiency.

Dosage: Tincture 2-4 ml QID

Solid Extract: ¼ - ½ tsp. BID

Tea: 1-2 tsp. dried berries, 8 oz. hot water, steep for 1 hour, take 3 cups/day

Night Blooming Cereus stem (*Selenicereus grandiflorus*)

Can be of benefit for progressive valvular inefficiency or incompetency with an irregular pulse. There is mitral and aortic regurgitation. Use it with Hawthorn, Gotu Kola and Collinsonia.

Dosage: Tincture (1:2): 5-15 gtt TID

ANGINA PECTORIS

Angina, or angina pectoris, is a condition caused by ischaemic heart disease. The lack of blood and oxygen to the heart causes pain in the chest (although it can also be felt in the neck, back, arm or shoulder). Stable angina refers to angina that is predictable, i.e., with exertion or when experiencing stress. Unstable angina cannot be predicted and can occur at any time, even when resting. Unstable angina is an acute coronary symptom and should be treated as a medical emergency.

Herbs for Angina Pectoris

⊗ **Arnica flower** (*Arnica montana*)

Is used in Germany for acute weakness (senile heart) with angina pain.

Dosage: Tea 1-2 teaspoons of flowers to 8 oz. of water. Sip slowly throughout the day.

Black Cohosh Root/Macrotys (*Actaea racemosa/Cimicifuga racemosa*)

Use it with Lobelia for cardiac neuralgia, an intermittent condition with a feeling of tension and dull aching in the chest, with occasional bouts of paroxysmal, sharp pain.

Dosage: Fresh tincture (1:2) .5 ml of the mixture, every 10 minutes until nausea is induced.

Dang Gui root (*Angelica sinensis*)

Is used to treat atherosclerosis and constrictive aortitis. Combine it with Dan Shen to treat angina, peripheral vascular disorders and stroke.

Dosage: Tincture (1:4 or 1:5) 2-4 ml TID

Tea (decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep covered 45 minutes, take up to 3 cups/day

Dan Shen Root (*Salvia miltiorrhiza*)

Is useful for angina with hyperviscosity of the blood and elevated blood lipids. It is often used with Dang Gui, Astragalus, Tienqi and Corydalis. Flavones from the root also show antiatherosclerotic activity (Broncel, 2007).

Dosage: Tincture (1:4) 2-4 ml QID

Tea (decoction) 1-2 tsp. dried root, 8 oz. water, decoct 10-15 minutes, steep 1 hour, take 2-3 cups/day

Hawthorn fruit/flower (*Crataegus oxycanthoides, C. monogyna*)

Is a trophorestorative to the heart, it increases cardiac tone and helps to relieve ischaemic pain.

Dosage: Tincture 4-6 ml QID

Solid Extract ¼-½ tsp. BID

Tea: 1-2 tsp. dried berries, 8 oz. hot water, steep for 1 hour, take 3 cups/day

Indian Elecampane root (*Inula racemosa*)

Is used extensively with Gum Guggul for Ischaemic Heart Disease in Ayurvedic practice. It is indicated for angina with dyspnea and it improves cardiac function.

Dosage: Tincture (1:4) 1-2 ml TID

Tea (decoction) 1 tsp. dried root, 8 oz. water, decoct 10 minutes, steep covered for 30 minutes, take 4 oz/4x/day

Khella Seed (*Ammi visnaga*)

This Middle Eastern herb is a useful antispasmodic. It can be used for Angina Pectoris with contracted coronary vessels.

Dosage: Tincture (1:5) .5-1.5 TID

L-Carnitine/Acetyl-L-Carnitine/Propionyl-L-Carnitine

This compound, which is related to the B vitamins, has been found to enhance cellular function by helping to transport long chain fatty acids to the mitochondria. Studies have shown L-carnitine can improve angina pain, exercise tolerance and cardiac function. Other preliminary studies suggest it may also be useful for mitral valve prolapse and congestive heart failure.

Dosage: 500-1500 mg per day

Lobelia seed (*Lobelia inflata*)

The Eclectics used Lobelia seed for Angina Pectoris with sharp lancinating pain, radiating from the heart to the neck and arm, that is worse with motion. While it may be useful, I would suggest any patient with these symptoms immediately get to an emergency room.

Dosage: Tincture (1:5) .5-1 ml in 4 oz. of water, mix, 1 teaspoon every 1/2 to 2 hours. Specifically for Angina: 1-1.5 repeated

Night-Blooming Cereus (*Selenicereus grandiflorus*)

Is used for angina with constriction of the chest. The patient feels irritable and anxious and has a feeble irregular pulse.

Dosage: Fresh tincture (1:2) 5 gtt in warm water every 10 min. till symptoms improve.

Reishi fungus (*Ganoderma lucidum*)

Mildly lowers blood pressure, inhibits clumping of platelets, lowers triglyceride and cholesterol levels, and prevents atherosclerosis. In human studies, it reduced angina pain in 84% of patients and 60% of patients with arrhythmia noted improvement when taking Ganoderma.

Dosage: Tincture (1:5) 4-5 ml 4-5x/day

Tea (decoction) 1-2 oz. dried mushroom, 32 oz. water, decoct 2-4 hours, take 3-4 cups/day

Tienqi Ginseng root (*Panax notoginseng*)

Increases coronary blood flow, reduces myocardial oxygen consumption and reduces Angina pain and Myocardial Ischaemia.

Dosage: Tincture (1:4) 2-4 ml QID

Yan Hu Suo root (*Corydalis ambigua*)

Is used in TCM for pain caused by blood stasis, Corydalis improves blood flow to the myocardium and relieves Angina pain. It is usually combined with Dan Shen, Astragalus, Dang Gui and/or Tienqi.

Dosage: Tincture (1:4 or 1:5) 1-2 ml QID

Tea (decoction) 1 tsp. dried rhizome, 10 oz. water, decoct 15 minutes, steep 1 hour, take 2-4 oz. TID/QID

CONGESTIVE HEART FAILURE

Congestive heart failure is a chronic cardiac condition where the heart can no longer adequately pump blood. This can be caused by previous MI, valvular damage, cardiomyopathy, endocarditis, myocarditis, hypertension or coronary artery disease. The weakened heart can no longer keep up with the demands placed on it. Although symptoms can overlap, CHF is often divided into two types:

Left-sided (left ventricle) failure – symptoms include orthopnea (difficulty breathing when laying flat), cardiac asthma and dyspnea, as well as pulmonary edema, fatigue and dizziness.

Right-sided (right ventricle) failure – symptoms include edema of the legs and feet, ascites (edema of the abdomen), nocturia and hepatomegaly.

Orthodox treatment for mild to moderate CHF includes the use of ACE inhibitors, oral loop diuretics, beta-blockers, ARBs (angiotensin receptor blockers) and Lanoxin/Digoxin.

Herbs and Supplements for Congestive Heart Failure

Astragalus root (*Astragalus membranaceus*)

Increases cardiac output and stroke volume in patients with CHF. It also reduces angina pain and it protects the heart from Coxsackie B virus, which is a major cause of myocarditis.

Dosage: Tincture (1:5 cook 4-6 hours) 2-4 ml TID

Tea (decoction) 2 tsp. dried root, 12 oz. water, decoct 20 minutes, reduce to 6 oz., steep 30 minutes

Co-Q-10

Patients with congestive heart failure have reduced levels of Co-Q-10 in the heart muscle cells. Supplementing this nutrient has been found to reduce symptoms such as difficulty breathing and exercise intolerance (Permanetter, et al, 1992; Soongswang, et al, 2005).

Dosage: 60-100 mg BID

⊗Dogbane root (*Apocynum cannabinum*)

Is indicated for a weakened heart with feeble contractions and cardiac edema; the skin is white and shiny.

Dosage: Tincture (1:5) 20 gtt in 4 oz. of water, mix, 1 teaspoon every 3-4 hours

Hawthorn fruit/flower (*Crataegus oxycanthoides*, *C. monogyna*)

Exercises a strengthening influence upon the heart in functional and organic affections of that organ. The patient may also have valvular insufficiency, dyspnea, and a rapid, feeble and irregular pulse. A 2003 clinical trial found that a standardized extract of fresh Hawthorn berries was able to improve dyspnea and fatigue in patients with CHF (Degenring, et al, 2003). Several more recent studies using a different standardized Hawthorn product (WSI442) found no benefit for patients with CHF taking that product.

Dosage: Tincture (1:2): 4-6 ml QID

Solid Extract: ¼ to ½ tsp. BID

Tea: 1-2 tsp. dried berries, 8 oz. hot water, steep for 1 hour, take 3 cups/day

L-Carnitine

Patients with mild diastolic heart failure given L-carnitine showed improvement in multiple parameters of cardiac function and symptoms over a 3-month period (Serati, et al, 2010).

Dose: 1500 mg per day

⊗Lily of the Valley leaves and flowers (*Convallaria majalis*)

Is used for mitral insufficiency with dyspnea, palpitations, arrhythmias, cardiac edema, and bradycardiac forms of heart failure.

Dosage: Tincture (1:10) 2-5 gtt every 2-4 hours

Night Blooming Cereus stem (*Selenicereus grandiflorus*)

The specific indications for this herb are a weakened or overworked heart associated with excessive exercise or tobacco consumption. Weak, feeble but frequent pulse.

Dosage: Tincture (1:2) 5-15 gtt TID

CARDIAC ARRHYTHMIAS AND PALPITATIONS

Cardiac arrhythmias (or dysrhythmia) describe a number of heart conditions where there is abnormal electrical conduction. The heartbeat may be excessively fast, slow or erratic. This can be a minor problem, such as in the case of palpitations, or a life-threatening emergency that can result in a cardiac arrest and death if severe.

Herbs for Cardiac Arrhythmias and Palpitations

Broom herb (*Cytisus scoparius*)

Is indicated for atrial and ventricular fibrillation, arrhythmias and extra-systoles. It can also be used for post-infectious myocarditis with arrhythmia.

Dosage: Tincture (1:5): .5 – 1.5 ml BID/TID

Bugleweed herb (*Lycopus virginicus*)

Is effective for palpitations and arrhythmias due to thyrotoxicosis with irritability and irregularity of the heart, and a mild feeling of oppression.

Dosage: Fresh Tincture (1:2): 1-1.5 ml QID

⊗**Dogbane root** (*Apocynum cannabinum*)

Is used for arrhythmias with a rapid pulse that is soft and weak. The person also may have hypotension, edema, and their skin is white and shiny.

Dosage: Tincture (1:5) 1 ml in 4 oz. water, mix, 1 teaspoon every 2-3 hours.

Hawthorn fruit/flower (*Crataegus oxycanthoides*, *C. monogyna*)

Exercises a strengthening influence upon the heart in functional and organic affections of that organ, with a rapid, feeble, and irregular pulse.

Dosage: Tincture (1:2) 3-5 ml QID. Arrhythmias in elderly patients - solid extract 1/2 teaspoon BID

Solid Extract ¼ - ½ tsp. BID/TID

Tea: 1-2 tsp. dried berries, 8 oz. hot water, steep for 1 hour, take 3 cups/day

⊗**Lily of the Valley leaf** (*Convallaria majalis*)

Is indicated for simple cardiac arrhythmias, with or without hypertrophy of the heart and with a rapid feeble pulse.

Dosage: Tincture (1:10) 2-5 gtt every 2-4 hours

Motherwort herb (*Leonurus cardiaca*)

Can be used for palpitations, extra-systoles and arrhythmias associated with hyperthyroidism, anxiety or menopause.

Dosage: Tincture (1:2 or 1:5): 3-5 ml QID

Tea 1 tsp. dried herb, 8 oz. hot water, steep for 20-30 minutes, take 4 oz. up to 4x/day

Night Blooming Cereus stem (*Selenicereus grandiflorus*)

Was used by the Eclectic physicians for palpitations with shortness of breath with exertion, the person is irritable and anxious with a feeble irregular pulse.

Dosage: Fresh Tincture (1:2) .25 - .75 in water TID

⊗**Pulsatilla herb** (*Anemone patens*, *A. pulsatilla*)

Can be of benefit for palpitations in people who are nervous, fearful of impending danger, restless, or dizzy.

Dosage: Fresh Tincture (1:2): 1/2 - 2 gtt in water every 2-3 hours

Skullcap herb (*Scutellaria laterifolia*)

Controls irregularities of the heart with intermittent pulse that are caused by nervousness.

Dosage: Fresh Tincture (1:2): 4-6 ml QID

Valerian root (*Valeriana officinalis*, *V. sitchensis*)

Is occasionally used for nervous arrhythmias with insomnia, irritability or anxiety.

Dosage: Fresh Tincture (1:2): 3-5 ml QID or as needed

⊗ **Toxic: Should be used only with directions from a trained practitioner!**

A SUMMARY and COMPARISON OF REMEDIES ACTING ON THE HEART

Chart Adapted From Ellingwood's New American Materia Medica and Therapeutics. Additions by David Winston, Herbalist AHG ©2000-12

| ACTION and INDICATION | Hawthorn (Crataegus Spp.) | Night Blooming Cereus (Selenocereus grandiflorus) | Tienchi Ginseng (Panax notoginseng) | Lily Of The Valley (Convallaria majalis) ☒ | Dogbane (Apocynum Spp.) ☒ |
|---|--|--|---|---|---|
| SPECIFIC EFFECT ON THE HEART | Trophorestorative to the heart, can be used for any cardiac ailment to restore strength, tonus and function. | Through the inter-cardiac ganglia it gives actual nourishment to the heart muscle. It has mild negatively chronotropic and positively inotropic effects. | Increases coronary blood flow, decreases myocardial oxygen consumption and protects against myocardial ischaemia. | Acts permanently but mildly as a cardiac tonic for CHF. It has "Digitalis-like" activity and is negatively chronotropic and positively inotropic. | A mild heart tonic, increase muscular power permanently. It acts on the walls of the arteries. It increases arterial tension to a degree. |
| SPECIFIC EFFECT ON THE PULSE | Normalizes the pulse over time with extended use. | Increases the size of the pulse beat, and reduces the number, especially when rapid and feeble (tachycardia). | Strengthens and normalizes the pulse. | Increases the size and strength of the pulse, and slows a rapid, feeble pulse (tachycardia, atrial fibrillation). | Increases the size, strength and force of the beat, regulates the rhythm, slows a feeble pulse, in fevers accompanied with cardiac edema. |
| SPECIFIC EFFECT ON THE NERVOUS SYSTEM | Nervine, calms nervous irritation. Useful for ADD/ADHD. | Is a true nerve tonic, especially to the sympathetic nervous system. It is an antidepressant useful for menopausal or post-coronary depression. | Mild adaptogen and nervine used for disturbed shen. | | Action on nervous system not marked. It seems to increase nerve force to a degree. |
| SPECIFIC EFFECT ON RESPIRATION | Helps relieve cardiac dyspnea and prevents allergic asthma. | It relieves cardiac dyspnea, especially if from endocarditis or from pulmonary congestion, from weak heart. | Stops bleeding from the lungs. (Hemoptysis) | Removes oppression in the chest, causes deep, regular breathing. Overcomes dyspnea from mitral insufficiency. | It relieves dyspnea caused by cardiac and pulmonary edema. |
| SPECIFIC EFFECT ON THE STOMACH/ BOWELS | Helps relieve gas, it soothes the stomach mucosa and lowers cholesterol levels. | It has a soothing influence on the stomach; relieves palpitation from gastric irritation; it does not cause gastric or intestinal irritation. | Stops bleeding of the stomach and bowels. | It is not irritating to the GI tract. | In active doses, it is a violent prostrating emeto-cathartic, inducing extreme hydragogue action and persistent gastro-intestinal irritation. |
| SPECIFIC EFFECT ON THE KIDNEYS | Mild diuretic. Mild renal protective agent. | It has only a minor effect due to strengthened cardiac function. | It controls hematuria. | It is a secondary diuretic, mildly stimulating excretion. It is quite active in cardiac edema. | It is a powerful diuretic; it also acts indirectly via the heart. Induces large quantities of urine; solids are not greatly increased. |

Compare with: Arjuna, Corydalis, Dan Shen, Astragalus, Dang Gui, Coleus forskolli, and Khella

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| ACTION and INDICATION | Hawthorn (<i>Crataegus</i> spp.) | Night Blooming Cereus (<i>Selenicereus grandiflorus</i>) | Tienchi Ginseng (<i>Panax notoginseng</i>) | Lily Of The Valley (<i>Convallaria majalis</i>) ☒ | Dogbane (<i>Apocynum</i> spp.) ☒ |
|------------------------------|---|---|---|--|---|
| THERAPEUTIC USES | Slow acting cardiotonic, useful with other stronger acting herbs for angina, myocarditis, arrhythmias, CHF and in recovery from MI's. | Slow acting heart remedy. Used in prolonged or progressive heart weakness; in overstrained heart; in athlete's and cigarette heart; in sexual and general neurasthenia. Acts best in functional derangements – angina palpitations. | Used for angina, myocardial ischaemia and arrhythmias. Also lowers cholesterol. Prevents fatty degeneration of the heart and atherosclerosis. | Relieves irritable heart action; restores strength to the heart after failure from shock, or protracted disease; used in cardiac edema and CHF | Is not an emergency heart remedy, except in CHF with extreme cardiac edema. Its influence on the heart is slowly induced; is valuable in progressive heart weakness, especially in protracted fevers. It is a most reliable remedy for cardiac arrhythmias. |
| SYNERGISTS | Works well with Night Blooming Cereus and Collinsonia. | Action improved by tonics which improve nutrition, such as <i>Avena sativa</i> and <i>Crataegus</i> . | Traditionally used with Dang Gui, <i>Astragalus</i> and Dan Shen (<i>Salvia miltiorrhiza</i>) | <i>Crataegus</i> , Night Blooming Cereus and <i>Collinsonia</i> increase its influence. | Action enhanced by Night Blooming Cereus. For its influence on cardiac edema it is given usually alone. |

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Additional Remedies to Compare:

| | |
|--|--|
| Amla (<i>Phyllanthus emblica</i>) | Reduces capillary fragility, spider veins, excessive bruising, nosebleeds, varicose veins, vasculitis. Also builds blood (xue), improves hemoglobin levels. |
| Arjuna (<i>Terminalia arjuna</i>) | Used in Ayurvedic Medicine for CHF, angina and hypertension. |
| Arnica ⊗ (<i>Arnica montana</i>) | Acute weakness of the heart (senile heart) with angina. |
| Astragalus (<i>Astragalus membranaceus</i>) | Increases cardiac output and stroke volume in CHF. Reduces angina pain. Protects the heart from Cocksackie B virus. |
| Black Cohosh Root (<i>Cimicifuga racemosa</i>) | Use with Lobelia for cardiac neuralgia, an intermittent condition with a feeling of tension and dull aching, with occasional bouts of paroxysmal, sharp pain. |
| Bugleweed (<i>Lycopus virginica</i>) | Palpitations associated with hyperthyroidism |
| Collinsonia (<i>Collinsonia canadensis</i>) | Mild heart tonic, useful for mitral valve prolapse, and a tonic heart (use with Night Blooming Cereus and Crataegus) |
| Coleus forskolii | Use with Crataegus, Convallaria and Cactus for mild CHF, angina and hypertension. |
| Dan Shen (<i>Salvia miltiorrhiza</i>) | Increases cardiac blood flow, decreases ischaemic damage, prevents excess clotting used for angina and treating Myocardial Infarctions (MI's). |
| Dang Qui (<i>Angelica sinensis</i>) | Used to treat arteriosclerosis, constrictive aortitis, combine with Dan Shen to treat angina, peripheral vascular disorders and stroke. |
| Garlic (<i>Allium sativum</i>) | Helps reduce blood pressure, lowers cholesterol levels, prevents and treats arteriosclerosis, and mildly thins the blood. |
| Ginkgo (<i>Ginkgo biloba</i>) | Cerebral atherosclerosis with impaired memory, peripheral neuropathies, and insufficient circulation (impotence, cold hands/feet). |
| Khella (<i>Ammi visnaga</i>) | Used in Middle Eastern Medicine as an antispasmodic, it is useful for angina pain with contracted coronary vessels. |
| Lobelia Seed (<i>Lobelia inflata</i>) | Indicated for intense palpitations or angina with sharp lancinating pain, radiating from the heart to the neck and arm worse with motion. |
| Motherwort (<i>Leonurus cardiaca</i>) | Used for palpitations and arrhythmias associated with anxiety, menopause or hyperthyroidism. |
| Periwinkle (<i>Vinca minor</i>) | Useful for mild forms of cerebral atherosclerosis with impaired memory and concentration. |
| Reishi (<i>Ganoderma lucidum</i>) | Mildly lowers blood pressure, inhibits clumping or platelets, lowers triglyceride and cholesterol levels, and prevents atherosclerosis. In human studies, it reduced angina pain by 84% and 60% of patients with arrhythmia noted improvement when taking Ganoderma. |
| Scullcap (<i>Scutellaria lateriflora</i>) | Controls mild irregular beat of the heart caused by nervousness. |
| Yan Hu Suo (<i>Corydalis yanhusuo</i>) | Used in TCM for cardiac pain caused by blood stasis – angina. It improves blood flow to the myocardium. |

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A SUMMARY and COMPARISON OF REMEDIES ACTING ON THE HEART

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