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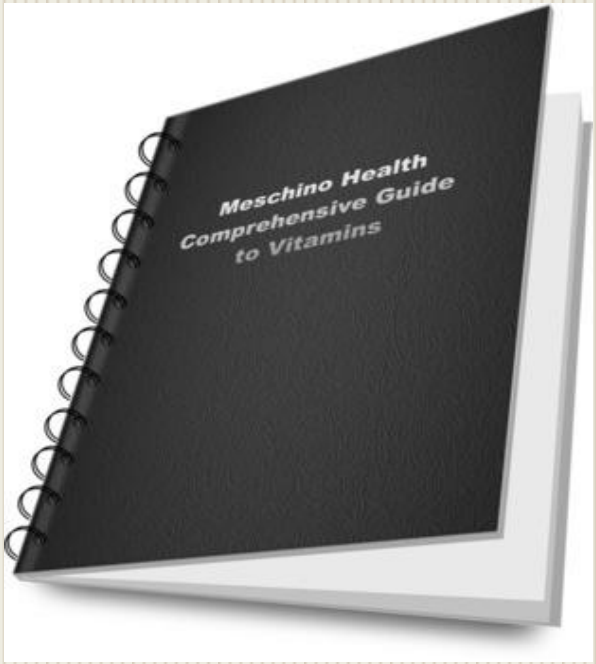
Meschino Health Comprehensive Guide to Herbs



Authored by: Dr. James Meschino

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About the Meschino Health Comprehensive Guide to Herbs

The Meschino Health Comprehensive Guide to Vitamins is one of four eBooks on nutrients written by Dr. James Meschino:

1. Meschino Health Comprehensive Guide to Vitamins
2. Meschino Health Comprehensive Guide to Herbs
3. Meschino Health Comprehensive Guide to Minerals
4. Meschino Health Comprehensive Guide to Accessory Nutrients and Essential Oils

All four books were written to both educate and provide an easy to use quick reference to answer important questions regarding nutrients. Users of the guide can quickly find which health conditions the nutrient can impact, proper dosage, possible effects of a deficiency or the effect any potential toxicity associated with the nutrient. Finally any drug-nutrient Interactions associated with the nutrient.

More eBook and eQuick Guides

Meschino Health is excited to be able to provide tools and resources to help you achieve your healthy living objectives. Sharing the Healthy Living message and helping anyone who is interested in living a healthy happy life is what Meschino Health is all about. Visit www.MeschinoHealth.com to learn the latest a science based research on diet and supplementation that can prevent and treat health conditions often associated with aging. New eBooks and eGuides are added every month and can be downloaded free of charge.

Meschino Health Natural Health Assessment

Welcome to the Nutrition, Lifestyle and Anti-aging Assessment.

The most powerful health assessment on the internet

- Easy to Complete Online Questionnaire
- Your Personal Health Assessment is generated Instantly and can be downloaded to your computer
- The Meschino Health Assessment is a 15 to 20 page comprehensive report complete with diet, lifestyle and supplement considerations that are specific to your profile.

The Meschino Health Assessment is a free service created by Dr. James Meschino. The feedback in your report is based on your answers to the questions in the Health Assessment, and highlights the dietary, lifestyle and supplementation practices that are best suited to your circumstances, according to currently available scientific studies

The Meschino Health Assessment is a Free Service

Why take it?

We all know that we should eat better, exercise more and change some of our less then desirable lifestyle habits. Did you know that 7 out of 10 North Americans are taking some form of nutritional supplements to augment their diet? While that might sound like good news, the downside is that many people are guessing at what supplements to take! So which one should you take? Better yet, what does eating better look like?

You need a plan.

But where would you even begin to find a health assessment that takes into account your personal health status, diet, lifestyle activities and family health history-before recommending a plan of action?

Where? Right here.

Aloe Vera

General Features

Aloe Vera is a perennial plant with yellow flowers. The leaves contain active ingredients, including the polysaccharide acemannan and anthraquinones.[1] Aloe Vera gel and juice has been used therapeutically for the treatment of peptic ulcers and other intestinal disturbances, including its use as a natural laxative. Aloe Vera gel can also be applied topically to aid in the healing of burns, wounds, and other skin conditions.[4]

Principle Active Constituents

Acemannan and Other Polysaccharides – Acemannan, in particular, has shown impressive immune-stimulating and anti-viral effects.

Anthraquinones – these agents have been shown to account for the natural laxative effect induced by Aloe Vera ingestion.[1]

Clinical Application and Mechanism of Action

1. **Peptic Ulcer and Gastritis**
   Aloe Vera gel inactivates pepsin release when the stomach is empty. The gel also inhibits the release of hydrochloric acid by interfering with the binding of histamine to parietal cells. Clinical studies on humans have shown that Aloe Vera gel can be effective in healing peptic ulcers in a percentage of patients.[2] (Author's Note: More substantial evidence exists for the use of DGL-licorice chewable tablets in regards to the natural treatment of peptic ulcers, although both interventions can be used concurrently (see Licorice in this document).
2. **Improved Protein Digestion**
   Aloe Vera Juice (50% Aloe gel plus 50% other fluids) has been shown to improve protein absorption and reduces the degree to which intestinal bacteria are engaged in putrefactive processes. This may be of benefit in cases of poor protein digestion.[1] (also consider the use of Digestive Enzymes and/or Betaine Hydrochloride supplementation).
3. **Laxative Effect**
   The latex form of Aloe Vera is reported to have a natural laxative effect.[4]

Oral Dosage Range

1. General Intestinal Tract Support (e.g., improved digestion, laxation)

   Up to 1 quart per day of Aloe Vera juice can be consumed. No formal dosages are established.

2. Peptic Ulcers

   For Aloe gel, a tablespoon of the gel in mineral oil was taken once daily for the treatment of peptic ulcers.[2]

Topical Application of Aloe Gel

1. Burns: Aloe Vera Gel has been used successfully to treat sunburn, radiation burn, and chemical burns. In 1935 a group of physicians first documented improvement in the treatment of facial burns due to X-rays, using topically applied fresh Aloe Vera juice.[3,4,5] Scientists think Aloe enhances the body's natural-healing systems while stimulating the activity of collagen and elastin synthesis, which are responsible for regenerating and maintaining connective tissue structure and integrity.[6] As such, Aloe Vera is a common ingredient in many topical creams and lotions intended to heal the skin from sunburn, as well as other burns and wounds.[4]
2. Diabetic and Chronic Pressure Ulcers (leg ulcers and deeper wounds) - in more severe cases including, leg ulcers, diabetic and pressure ulcers, Aloe gel is applied to ulcers on gauze bandages.[3,4]
3. Genital Herpes – several double-blind, placebo-controlled trials have shown that Aloe cream applied topically reduced the time necessary for lesions to heal (4.9 days versus 12 days) compared to the placebo group.[8]
4. Psoriasis and Seborrhea – double-blind, placebo-controlled studies have also shown that topical Aloe Vera extract (0.5%) has been effective in minimizing the severity of psoriasis and seborrhea. The usual application is three time daily.[9,10]

Topical Dosage

Aloe Vera Gel can be applied liberally for topical applications.[3] The usual application for the skin lesions noted above is three times per day, using a 0.5% Aloe Vera cream.[8,9,10]

Adverse Side Effects, Toxicity, and Contraindications

Although rare, allergic reactions by the skin have been reported with use of Aloe Vera creams and lotions. Aloe Vera gel may also delay wound healing in cases of surgical wounds such as those produced during laparotomy or cesarean delivery, thus it is contraindicated for deep, vertical (surgical) wounds.[3]

Drug-Nutrient Interactions

Laxative Effect – as Aloe Vera is known to act as a laxative it may reduce the absorption of medications, if taken at the same time. Thus, other medications and supplements should not be taken at the same time as Aloe Vera ingestion.[7]

Pregnancy and Lactation

During pregnancy and lactation, the only supplements that are considered safe include standard prenatal vitamin and mineral supplements. All other supplements or dose alterations may pose a threat to the developing fetus and there is generally insufficient evidence at this time to determine an absolute level of safety for most dietary supplements other than a prenatal supplement. Any supplementation practices beyond a prenatal supplement should involve the cooperation of the attending physician (e.g., magnesium and the treatment of preeclampsia.)

References: Pregnancy and Lactation

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Angelica Species (Angelica sinesis, e.g. Dong Quai)

General Features

The Angelica Species is native to China. The plant's active ingredients are found in the roots and rhizomes. Dong Quai has traditionally been used to treat menstrual cramps or dysmenorrhea and PMS, as well as hot flashes and other menopausal symptoms. The scientific evidence to support these applications is not strong compared to the use of other herbal agents such as Black Cohosh, Gamma Oryzanol and Chasteberry, which have been shown to provide consistently reliable outcomes in the management of these cases.[1,3]

Principle Active Constituents

The primary active constituents for menopausal and menstrual symptoms are coumarin and phytoestrogens. Angelica phytoestrogens exhibit 1:400 the biological activity of animal-based estrogens (i.e., Premarin). [1,4,5]

Clinical Application and Mechanism of Action

Menopausal Symptoms and Menstrual Irregularities:

Phytoestrogens are known to provide hormonal support in the regulation of reproductive tissues and organs, although more research is required to evaluate the effects of Dong Quai in this regard. At present there are no well-controlled studies illustrating that Dong Quai is highly effective in the management of PMS, menopausal symptoms and related female conditions. Its use is based primarily upon historical applications and some animal studies.[3]

As a general statement, phytoestrogens (plant-based estrogens) compete with the body's own estrogens for binding sites on estrogen receptors on reproductive and other tissues, helping to guard against estrogen over-stimulation, which can exacerbate or cause PMS and related symptoms. During menopause, when the body's estrogen secretion drops off, phytoestrogens can provide estrogenic support to help reduce hot flashes and other menopausal symptoms.[1,2,4,5] (see Black Cohosh, Soy Isoflavones and Red Clover in this document for a more detailed explanation of phytoestrogens)

Angelica may reduce smooth muscle spasm, easing cramping and related menstrual symptoms.[1,2]

Dosage and Standardized Grade

Management of PMS and Menopausal Symptoms:
Powdered root or as a tea: 1-2 gms, 3 times per day

Tincture (1:5): 4 ml (1 teaspoon), 3 times per day

Fluid extract: 1 ml (1/4 teaspoon), 3 times per day

Solid Extract (capsule) – 200 mg, two times daily, standardized to 0.8-1.1% ligustilide content.

Adverse Side Effects, Toxicity and Contraindications

Angelica contains coumarins that can react with sunlight to cause photo-sensitivity induced skin rash or severe sunburn upon exposure to sunlight. Therefore, women using this supplement should avoid prolonged exposure to direct sunlight.[1] Animal studies reveal Dong Quai is very non toxic. Side effects in humans are rare and consist of mild gastrointestinal distress and occasional allergic reactions (such as rash). [3] However, the use of Dong quai has resulted in several cases of bleeding disorders (in the brain), most likely due to the anti-coagulant effect of Dong Quai's coumarin content.[6]

Drug-Nutrient Interactions

Anticoagulants (warfarin, coumadin, aspirin etc) – animal studies demonstrate that Angelica Species potentiates the anti-clotting effects of warfarin and thereby, may increase the chance of a serious bleeding disorder. Several reports of this consequence in humans have been reported, even in women not taking concurrent anticoagulant therapy. Therefore, women should not take Dong Quai concurrently with any anticoagulant drug.[6,7,8,9] (note that Black Cohosh, Soy Isoflavones, Gamma Oryzanol and Chasteberry are not associated with this risk).

Pregnancy and Lactation

During pregnancy and lactation, the only supplements that are considered safe include standard prenatal vitamin and mineral supplements. All other supplements or dose alterations may pose a threat to the developing fetus and there is generally insufficient evidence at this time to determine an absolute level of safety for most dietary supplements other than a prenatal supplement. Any supplementation practices beyond a prenatal supplement should involve the cooperation of the attending physician (e.g., magnesium and the treatment of preeclampsia.)

References: Pregnancy and Lactation

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Astragalus

General Features

Astragalus has been used for at least 2000 years in China and continues to be widely used as a herb that is known to enhance function of the immune system and facilitates an increase in energy production within the heart muscle, in cases where certain forms of heart disease exist.[1,2,3,4,5] It is one of the most widely used herbs in Fu-zheng therapy − the use of herbs to augment the host defense mechanisms.[1,2,3,6] Astragalus is a herbaceous perennial with the root of the plant used for medicinal purposes.[7]

Active Constituents

These primarily include:

1. Triterpene glycosides (saponins): astragalosides, etc.
2. Polysaccharides: astragalans
3. Flavonoids[7,8,9,10,11]

Clinical Application and Mechanism of Action

Immune Function (The common cold and minimizing the effects of chemotherapy and radiation treatment)

Astragalus is used as an immune stimulant to treat and help prevent the common cold.[4,8] It has also been used to reduce the side effects of chemotherapy and radiation treatment in human studies. A large clinical study of 572 cancer patients demonstrated that Astragalus supplementation was able to protect adrenal cortical function during radiation and chemotherapy treatment. It also helped to greatly minimize bone marrow depression and gastrointestinal side effects, such as nausea, vomiting and intestinal tract ulcerations in these patients.[6]

In patients with very low white blood cell counts, as a side effect of drugs, radiation or chemotherapy, Astragalus supplementation has been shown to help significantly increase the number of circulating white blood cells, helping to restore normal function of the immune system in these severely immune-compromised patients.[12]

The biological activity that can account for these outcomes is related the active constituents in Astragalus, primarily its triperpene glycosides and polysaccharide content, which have been shown to significantly increase the proliferation of lymphocytes,[3,12] enhance interferon and interleukin-2 production and activity- two powerful signalling agents that enhance the effectiveness of immune cells,[13,14,15,16] activate T cell blastogenesis,[17] increase T cell cytotoxicity,[2,17] enhance the secretion of the immune modifying chemical known as tumor necrosis factor (TNF),[9] enhance phagocytosis by immune cells,[18] increase natural killer cell cytotoxicity – the ability of these white blood cells to destroy developing cancer cells, viruses and other pathogens,[17,19] increase the activity of peritoneal macrophages,[18] and provide direct anti-viral effects.[20,21,22,23]

2. Congestive Heart Failure and Angina Pectoris

The active constituents of Astragalus appear to provide an inotropic effect on the heart muscle, in a similar manner to hawthorn. An inotropic effect implies that these active ingredients in some way enhance the ability of the heart muscle to synthesize ATP energy, which is required for heart muscle contraction. In congestive heart failure the heart muscle becomes weak, partly due to insufficient ATP production, and preliminary evidence suggests that Astragalus may help to improve these cases. Thus far, two small clinical trials have shown that patients with

congestive heart failure demonstrate improvement in chest distress, dyspnea (shortness of breath), exercise tolerance and other parameters of cardiac function, when given Astragalus intravenously.[10,24]

Astragalus has also been used effectively in patients suffering from ischemic heart disease [25] and it has been shown to increase cardiac output in 20 patients with angina pectoris.[26]

3. **Anti-Cancer Effects**
   The immune- enhancing effects of Astragalus make this herb an interesting compound in terms of its potential in cancer treatment. A clinical study of 54 patients with small cell lung cancer were treated with regular medical interventions plus Traditional Chinese Medicine (including Astragalus). Increased survival was noted in comparison to the average survival statistics of conventional medicine alone.[27]

   Animal studies demonstrate quite strongly that Astragalus has the potential to prevent some cancers and has curative potential in others (e.g., renal cell carcinome model in mice).[28,29] Intensive research continues in an attempt to establish the true anti-tumor potential of Astragalus.

4. **Male Fertility**
   Astragalus has been shown to significantly increase the motility of human sperm in vitro.[30] This may be of value in the treatment of male infertility where poor sperm motility is a suspected factor. Note that L-carnitine and zinc supplementation have demonstrated similar capabilities (see details in this document under their individual headings.)

Dosage and Standardized Grade (2:1 powdered extract)

1. Common Cold – For general prevention consider 100-200 mg per day.
   During the preliminary stages of a cold consider up to 500 mg, three times daily if used as single agent.[31]
2. Radiation Treatment, Chemotherapy – Consider up to 500 mg, three times per day if taken as a single agent. (Consider combining Astragalus with reishi mushroom extract to minimize side effects of these treatments.) (Requires attending physician's approval)
3. Congestive Heart Failure, Angina Pectoris and Ischemic Heart Disease – No oral dose values have been established.
4. Decreased Sperm Motility Causing Infertilty – Dosage not established, however taking up to 500 mg, three times daily is considered to be safe.

Toxicity and Adverse Side Effects

There are no reported side effects or toxicity associated with the use of Astragalus at recommended doses.[31]

Drug-Nutrient Interactions

Immunosuppressive Medications – As Astragalus has been shown to enhance immune function, it may counter the efficacy of immnosuppressive drugs.[32,33]

Pregnancy and Lactation

During pregnancy and lactation, the only supplements that are considered safe include standard prenatal vitamin and mineral supplements. All other supplements or dose alterations may pose a threat to the developing fetus and there is generally insufficient evidence at this time to determine an absolute level of safety for most dietary supplements other than a prenatal supplement. Any supplementation practices beyond a prenatal supplement should involve the cooperation of the attending physician (e.g., magnesium and the treatment of preeclampsia.)

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Bacopa (Bacopa monnieri)

General Features

The leaf of Bacopa, or water hyssop, has been used in the Indian medical system of Ayurveda since the 6th century A.D. to help improve mental performance. Its active ingredients (bacosides A and B) have been shown to enhance nerve transmission and are potent antioxidants, which may help to protect brain cells and other lipid-rich tissues in the body from free radical damage (including LDL-cholesterol). Under experimental conditions 100 mcgs of Bacopa monnieri extract was equivalent to 247 micrograms of EDTA and 58 micrograms of Vitamin E in regards to its antioxidant potency. Bacopa is presently being used and studied as a natural substance to strengthen memory and general cognition and to help control epilepsy.1,.2 It has been used as a mild sedative in cases of insomnia.2

Active Constituents

The primary active constituents include Bacosides A and B.1 The alcohol fraction of Bacopa extract has been shown to provide its strong antioxidant properties.2

Clinical Application and Mechanism of Action

1. **Enhancement of Memory, Learning Ability and Intellectual Activity**
   Studies demonstrate that Bacopa supplementation can increase learning ability in laboratory animals. Human studies have also provided evidence that Bacopa may improve intellectual activity in children as well as improve memory and mental performance in adults. As such, it may be of value in the preservation of cognitive function and memory as we age and in the treatment of dementia and other severe cognitive dysfunction states (e.g., Alzheimer's disease).3,4 In the study by C Stough et al, healthy volunteers were given Bacopa monnieri supplementation (300 mg per day) or a placebo, with follow-up neuropsychological testing performed at weeks 5 and 12. Compared to the placebo group, the subjects given the Bacopa significantly improved speed of visual information processing, learning rate, memory consolidation and demonstrated a reduced state of anxiety. The researchers concluded that these findings suggest that Bacopa monnieri may improve higher order cognitive processes that are critically dependent on the input of information from our environment such as learning and memory.4 Ayurvedic practitioners have routinely recommended Bacopa supplementaion for impaired memory or cognitive dysfunction for many centuries with reported good results.1

2. **Epilepsy**
   Some preliminary evidence indicates that Bacopa may be useful in improving the symptoms and occurrence of epileptic seizures.5 A study published in 2000 by D Vohora et al, has strengthened this argument and provided evidence that Bacopa supplementation can also correct much of the cognitive impairment induced by anti-epileptic drugs such as Phenytoin, which is known to adversely affect cognitive function. Thus, the concurrent use of anti-epileptic drugs and Bacopa supplementation may effectively reduce epileptic seizures and significantly reverse Phenytoin-induced cognitive impairment.6

Dosage and Standardized Grade

Bacopa monnieri extract should be standardized to 20% bacosides A and B content.

1. General Support of Mental Acuity - Consider 100 mg, one to two times per day (if used as a single agent).
2. Early to Moderate Memory Loss or Cognitive Impairment - Consider 50-150 mg, up to three times per day (if used as a single agent).
3. Epilepsy - Consider 100 mg, one or two times per day.1

Adverse Side Effects and Toxicity

There are no well known side effects from the use of Bacopa monnieri at recommended doses. It has demonstrated a long and safe history of use in Ayurvedic medicine.1,2

Drug-Nutrient Interaction

Calcium Channel Blocker Antihypertensive Drugs - Bacopa may increase the effects of these medications and thus, the dose of these drugs required for treatment may need to be reduced.7

Pregnancy and Lactation

During pregnancy and lactation, the only supplements that are considered safe include standard prenatal vitamin and mineral supplements. All other supplements or dose alterations may pose a threat to the developing fetus and there is generally insufficient evidence at this time to determine an absolute level of safety for most dietary supplements other than a prenatal supplement. Any supplementation practices beyond a prenatal supplement should involve the cooperation of the attending physician (e.g., magnesium and the treatment of preeclampsia.)

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Beta Sitosterol

General Features

Phytosterols or plant sterols are structurally similar to cholesterol. The most common plant sterols are beta-sitosterol, campesterol and stigmasterol. Epidemiological and experimental studies suggest that dietary phytosterols may offer protection from the most common cancers in Western societies, such as colon, breast and prostate cancer. Phytosterols have been shown to behave as protective nutrients via a number of physiological effects, including their effect on cell membrane structure and function of tumor and host tissue, signal transduction pathways that regulate tumor growth and apoptosis (programmed cell death), immune function and cholesterol metabolism.

Primary Active Constituents

Phytosterols are the counterpart of cholesterol in animal products. Found only in plant foods, phytosterol consumption averages 345-400 mg per day on a vegetarian or Japanese diet, whereas the Western diet provides only 80 mg per day of plant sterols, on average.[1]

Of the phytosterols, beta-sitosterol has been studied most extensively. Alone, or in combination with other plant sterols, beta-sitosterol supplementation has been shown to be effective in the treatment of benign prostatic hyperplasia, high cholesterol and as a means to enhance immune system function.[2,3,4,5,6]

Studies with lab animals and human cancer cell lines indicate that beta-sitosterol reduces colon cancer incidence in animals exposed to known carcinogens and inhibits the growth of LNCaP, human prostate cancer cells, under experimental conditions. In conjunction with epidemiological evidence, these findings have prompted the further study of beta-sitosterol as a potential chemopreventive or therapeutic agent for colon, prostate, and breast cancers.[1]

Clinical Application and Mechanism of Action

1. **Benign Prostatic Hyperplasia**
   A number of randomized, placebo-controlled, double-blind clinical trials and other intervention studies have demonstrated that beta-sitosterol supplementation is an effective therapy in cases of benign prostatic hyperplasia. The usual dose is 20 mg, three times daily or 65 mg, twice daily.
   Plant sterols are known to inhibit hepatic and prostatic 5-alpha reductase enzyme, which is the enzyme responsible for the coversion of testosterone to dihydrotestosterone (DHT). DHT increases prostate cell growth and division and is strongly linked to prostate enlargement.
   Plant sterols are also known to inhibit prostatic aromatase enzyme, which synthesizes estrone hormone. This enzyme inhibition action of beta-sitosterol is thought to be one of its primary means by which it reverses benign prostatic hyperplasia.[1,4,5,7,8]

2. **Cholesterol-Lowering**
   Beta-sitosterol supplementation has been shown to lower blood cholesterol. However, the daily dosage to achieve this effect is several times greater than that for the treatment of benign prostatic hyperplasia. Daily dosages of 500 mg to 10,000 mg per day of beta-sitosterol are necessary to produce a cholesterol-lowering effect.[1,2,3] An LDL-cholesterol lowering effect of 7% to 33% has been reported in a review of 8 clinical phytosterol trials.[1,5]