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## Herbs: Nature's Secrets

For thousands of years, plants and herbs have been used for their healing properties and to help maintain good health. If you were to go back in history you will discover that herbs have been used for centuries. Here's a quick look back in the history of herbs.



During the fifth century B.C., Hippocrates, the famous Greek physician, listed approximately 400 herbs that were commonly used. Around 65 A.D., Pedanius Dioscorides, a Greek physician serving with the Roman army, wrote the book titled, *De Materia Medica*. His book described the medicinal uses of many herbs. Even today, it is considered one of the most influential herbal books.

In the middle ages, herbs were often used to help preserve meat and to cover the rotting taste of meals that could not be refrigerated. Many of the early settlers grew herbs for seasoning their food as well as for their medicinal properties. American Indians often used herbs for tanning and dyeing leather.

### There are three main medicinal herb traditions derived from herbal use in ancient times: Western, based on Greek and Roman sources, Ayurvedic from India and Traditional Chinese Medicine (TCM).

The Greeks and the Romans theorized that four humors permeated the body and that these fluids and their ratios affected health. Each fluid (blood, black bile, yellow bile and phlegm) were associated with one of the corresponding four elements of nature (air, earth, fire and water). Greco-Roman civilization passed this medical theory on to Europe where it carried on through the middle ages. Back in the days of the Roman Empire, the only medicines available were based on herbs or other natural remedies.

Ayurvedic medicine, or Ayurveda, is a holistic approach to healing that originated in India around 1500 B.C. It stresses that an individual's good health is the result of a natural balance in the body and that illness occurs when there is an imbalance. Herbs, diet and natural remedies were used to restore balance.

Dating back 2,000 to 3,000 years, TCM is based on a belief that health is the result of constant battling between the opposing forces called the 'yin' and 'yang'. When these forces are in balance, the body is healthy but when they're out of balance the body will feel sick. Treatments are designed to stimulate the body's own healing mechanisms and include, among other things, burning herbs near the skin (moxibustion) and herbal medicines. The National Library of Medicine holds approximately 2,000 volumes of Chinese medical classics.

Traditional herbal remedies have led scientists to the development of numerous modern drugs including aspirin and tranquilizers to heart saving digitalis. This established beyond doubt, the efficiency of herbal medicine. However, conventional medications are synthetically manufactured and goes through many chemical processes causing it to have a high chemical content and risk of side effects. Herbs on the other hand, act in miraculous ways because they do not go through the same chemical processing as conventional medications.

### This herbal guide will open your mind to a world of natural botanicals that are known to support and enhance the functions of the human body, thus helping to maintain optimal health and vitality.

"An herb is the friend of physicians and the praise of cooks." - Charlemagne



## Alfalfa

Alfalfa (*Medicago sativa*) is a flowering plant in the pea family cultivated in the US, Canada, Argentina, France, Australia, the Middle East, South Africa and many other countries. Alfalfa has a long history of medicinal and nutritional use. Traditionally, alfalfa has been used to treat arthritis, menstrual irregularities, kidney or bladder disorders and upset stomach.<sup>1</sup> Alfalfa has been used in Chinese medicine to treat coughs and digestive problems and in India to treat boils. Native Americans used alfalfa to alleviate jaundice and to promote blood clotting.<sup>1</sup> Alfalfa herbs are rich in vitamin A, vitamin C, vitamin E and vitamin K.<sup>1</sup>

### **Health Benefits of Alfalfa**

Modern research has documented the health benefits of alfalfa. It is one of the most nutritious foods available. In herbal medicines, alfalfa is used as a tonic herb. It has been found to help in the healing of ulcers and treating arteriosclerosis, pituitary problems, liver toxicity, arthritis, allergies and diabetes.<sup>2</sup> Alfalfa is also used to treat digestive problems.<sup>2</sup> Alfalfa contains antibacterial and antifungal properties which make it a great body cleanser, infection fighter and natural deodorizer. It has also been used to clean stained teeth. The extracts produce antibacterial activity against Gram-positive bacteria.<sup>2</sup> Alfalfa is known to help with milk production in nursing mothers. It has also been researched and found to help lower cholesterol levels and to neutralize cancer.<sup>2</sup>

#### **Other Benefits**

It is considered by herbalists to be beneficial for many problems and some even recommend it for any type of aliment. Alfalfa is also used to remove poisons and is often used to treat recuperative cases of narcotic and alcohol addiction.<sup>3</sup>

#### Safety

Alfalfa appears to be generally well tolerated.<sup>1</sup> Currently, alfalfa is widely used in foods. In the United States, alfalfa is included in the U.S. Food & Drug Administration (FDA) and listed as Generally Recognized as Safe (GRAS). The Council of Europe lists alfalfa as a source of natural food flavouring.<sup>1</sup>

Common name: Alfalfa, Lucerne

**Botanical name:** *Medicago sativa* 

Part of use: Herb top



- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Health Canada NHPD Monograph, Alfalfa - Oral 2008
- 3. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.



## Aloe Vera

Aloe vera is native to Africa but historical records have found evidence that aloe has been used by people around the world to heal a variety of conditions.<sup>1</sup> Aloe vera gel is the latex obtained from the fresh aloe leaves. You can find it as a drinkable aloe vera juice, an ingredient in your moisturizing lotion, a clear and mild burn treatment gel, a spray and as dried powder in capsules. Aloe is widely used in skin care products, foods and natural health products. Aloe is very low in calories but full of vitamins and minerals including vitamin A, C, D, B vitamins and essential minerals. It also contains essential amino acids and antioxidants. These nutrients are very easy for the body to absorb and use.

### **Health Benefits of Aloe Vera**

#### **Skin Care**

Traditionally the aloe plant is used as a moisturizer to aid in wound healing and it relieves pain from burns. Today it can be found in many commercial skin lotions and cosmetics. It is natural, safe, gentle, soothing and moisturizing. When the skin is dry and cracked, the application of aloe can be a soothing relief. Aloe vera has also been shown to offer anti-inflammatory effects.<sup>4</sup> In 2008, a group of researchers found that aloe vera gel may be useful in the topical treatment of inflammatory skin conditions.

#### **Aloe for Internal Use**

Aloe vera juice has more recently become very popular as a drink and for use internally. Aloe vera is recorded in herbal medicine as a stimulant laxative and to support a healthy digestive system as it assists the removal of wastes from the body. In reviews of many scientific literatures, researchers found that aloe naturally encourages bowel movements by direct action on the large intestine.<sup>2</sup> Other researchers have found that aloe vera gel is an antioxidant that helps to destroy the free radicals that damage healthy body cells.<sup>3</sup>

#### Safety

Consult a health care practitioner prior to use if you have a kidney disorder or are taking cardiac medications. Reduce dose or discontinue use if you experience abdominal pain, cramps, spasms and/or diarrhea.<sup>2</sup>

**Common name:** Aloe, Aloe vera

**Botanical name:** *Aloe vera, Aloe Barbadensis* 

Part of use: Leaves gel/ Latex



- 1. Louise Tenney, mh, Today's Herbal health, 6th edition, USA, 2007.
- 2. Health Canada NHPD Monograph, Aloe-Oral, 2008.
- Yagi, A., Kabash, A., Okamura, N., Haraguchi, H., Moustafa, S. M., and Khalifa, T. I. Antioxidant, free radical scavenging and anti-inflammatory effects of aloesin derivatives in Aloe vera. Planta Med 2002; 68(11):957-960.
- Reuter, J., Jocher, A., Stump, J., Grossjohann, B., Franke, G., and Schempp, C. M. Investigation of the antiinflammatory potential of Aloe vera gel (97.5%) in the ultraviolet erythema test. Skin Pharmacol Physiol 2008;21(2):106-110.



## Astragalus Root

Astragalus product is derived from the roots of the plant and is native to China. In China, it is used in soups, teas, extracts and pills. In Traditional Chinese Medicine, astragalus is commonly found in mixtures with other herbs and is used in the treatment of numerous ailments including heart, liver and kidney diseases, cancer, viral infections and immune system disorders.<sup>1</sup> It has been used in western countries since the 1800s.

### **Health Benefits of Astragalus Root**

#### **Maintain a Healthy Immune System**

Astragalus is used to help maintain a healthy immune system. In some reviews of Astragalus, researchers mentioned that increased attention has been given on the plant-derived saponins in the search of Chinese medicinal herbs.<sup>3</sup> Saponins are phytochemicals that are known to help fight infections. When used on humans, saponins seem to help the immune system and protect the body against viruses and bacteria.<sup>4</sup>

#### Astragalus as a Tonic

Astragalus is used in Traditional Chinese Medicine to tonify the spleen and augment the Qi (vital energy) for spleen deficiency, lack of appetite, fatigue and diarrhea.<sup>2</sup> It is also used to tonify the lungs and prevent frequent colds.<sup>2</sup> Western herbalists began using astragalus as an ingredient in various tonics in the 1800s.<sup>1</sup>

#### **Other Benefits and Uses**

Some evidence shows that astragalus may show symptoms of improvement in chronic heart failure.<sup>1</sup> Evidence also suggests that astragalus can improve the effectiveness of conventional diabetes therapy. More research is required in this field before recommendations can be made.<sup>1</sup> The gummy sap (tragacanth) from astragalus is used as a thickener in ice cream.<sup>1</sup>

#### Safety

Astragalus when used alone and in the recommended doses, is traditionally considered to be safe. The most common side effects appear to be mild stomach upset and allergic reactions.

**Common name:** Astragalus, Huang qi, Milk vetch root, Mo jia huang qi

**Botanical name:** Astragalus membranaceus

Part of use: Root



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- Health Canada Compendial Monograph
  Song X, Hu S. (2009). Adjuvant activities of saponins from traditional Chinese medicinal herbs. Vaccine. Aug 6; 27(36):4883-90. Department of Veterinary Medicine, College of Animal Sciences, Zhejiang University, Hangzhou, Zhejiang 310029, China.
- Phytochemicals. http://www.phytochemicals.info/ phytochemicals/saponins.php (13 April, 2011)



## Bee Pollen

Bee pollen is collected by bees from a variety of flowers, plants and weeds near the hive. Pollen comes from various plants including buckwheat, maize, pine (*Songhaufen*), rape (*Brassica napus*) and typha (*Puhuang*).<sup>1</sup> Avoid confusion with bee pollen and royal jelly. Bees use propolis, a resinous substance to construct their hives while royal jelly is secreted from the salivary glands of bees.<sup>1</sup>

### **Health Benefits of Bee Pollen**

#### **Bee Pollen as a Tonic**

Typically, bee pollen is used as a rejuvenator or a tonic. Bee pollen is considered a highly nutritious food because it contains a balance of vitamins, minerals, proteins, carbohydrates, fats, enzymes and essential amino acids.<sup>1</sup>

#### **Bee Pollen as an Antioxidant**

Bee pollen contains polyphenol substances. It is well known that polyphenols are responsible for the antioxidative and radical scavenging activity of plant food. An antioxidant defence system protects cells from the injurious effects of free radicals.<sup>2</sup> A group of researchers found that bee pollen is a natural antioxidant. The research was based on preparation of enzymatic hydrolysates from honeybee collected pollens using plant proteinase and aminopeptidases to investigate the antioxidant activities in these peptide samples. The result found that bee pollen has significant radical-scavenging capacity.<sup>2</sup>

#### **Other Benefits and Uses**

In Chinese medicine, bee pollen is used for building blood and reducing cravings for sweets and alcohol. It is also used as a radiation protectant and a cancer inhibitor. Available research does not adequately support its use for these indications.<sup>1</sup> Bee pollen is used to enhance athletic stamina, strength and to assist in the recovery from illnesses.<sup>1</sup>

#### Safety

Bee pollen is often used as a pollen and spore antidote during allergy season. In atopic individuals, ingestion of bee pollen has resulted in numerous cases of anaphylaxis.<sup>1</sup>

Common name: Bee Pollen

Botanical name: Bee Pollen

**Part of use:** Hive, Pollen from Bee



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Health Canada Compendial Monograph 3. Margarita D. Marinova and Bozhidar P. Tchorbanov (2010) Preparation of Antioxidant Enzymatic Hydrolysates from Honeybee-Collected Pollen Using Plant Enzymes. Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences



## **Capsicum Fruit**

Capsicum fruit was originally cultivated in the tropical Americas but is now grown worldwide. In many countries, capsicum fruit is used in foods to add colour, pungency and aroma. Some mild capsicum fruit is made into paprika which is used for flavouring of less spicy foods such as ketchup, cheese and salads. The spicier chili pepper from the capsicum fruit is used in curry powder, Tabasco<sup>®</sup> sauce and chili powder.<sup>1</sup> In Canada, cayenne pepper is commonly used to treat patients with cardiovascular disease. Overall, clinical evidence reported *Capsicum annuum* is good for treating lower back pain.<sup>1</sup>

### **Health Benefits of Capsicum Fruit**

#### **Pain Relief**

Capsicum is well studied for its action on topical pain relief. The active ingredient found in capsicum has analgesic effects. In a review, it was reported that capsicum depletes a substance stored from sensory neurons. Pain relief may occur due to sensitization of these neurons.<sup>1</sup>

#### **An Antioxidant**

In a study of four cultivars of the pepper fruit, capsicum annuum was studied for its phenolics content and antioxidant activity.<sup>2</sup> All fruits have antioxidant activity. The main compounds of a fraction isolated from red pepper are sinapoyl and feruloyl glycosides. The main compound from the green pepper is quercetin-3-O-L-rhamnoside. Generally, parts of red fruits produce higher activities than those from green fruits. <sup>2</sup>

#### **Other Benefits**

Capsicum is traditionally used to aid digestion and to help support peripheral circulation.<sup>3</sup>

#### Safety

Cayenne and capsicum levels commonly found in foods are considered safe for most people. Capsicum essential oil and cayenne pepper are listed in the U.S. Food and Drug Administration (FDA) and is listed as Generally Recognized as Safe (GRAS) for use as a spice in foods.<sup>1</sup>

#### Common name:

Capsicum fruit, Cayenne, Chili pepper, Paprika, Red pepper, Tabasco pepper

**Botanical name:** *Capsicum annuum* 

Part of use: Fruit



- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- Małgorzata Materska and Irena Perucka (2005) Antioxidant Activity of the Main Phenolic Compounds Isolated from Hot Pepper Fruit (*Capsicum annuum L.*) J. Agric. Food Chem., 2005, 53 (5), pp 1750–1756
- 3. Health Canada NHPD Monograph



## Cascara Bark

Cascara is found in Europe, Western Asia and in North America (from Northern Idaho to the Pacific coast in mountainous areas). The food supplement in cascara is obtained from the dried bark. In foods and beverages, a bitterless extract of cascara is sometimes used as a flavouring agent. In herbal medicine, it is most commonly used as a stimulant laxative and to promote bowel movement by direct action on the large intestine.<sup>2</sup>

Cascara bark belongs to a group of plants that contain a pigment called anthracene. As aloe, cascara bark is used to treat constipation. Cascara works in the same way as aloe, the active ingredients are inert in the upper gastrointestinal tract but when they reach the large bowel they are converted to their active form.<sup>4</sup> Once the active ingredients have been converted, they cause water and electrolytes to accumulate in the large intestine and that causes the intestines to contract, resulting in bowel movements.<sup>4</sup>

### **Health Benefits of Cascara Bark**

#### **Cascara and Constipation**

Cascara is a common laxative in herbal medicine.<sup>2</sup> It is thought to be one of the best herbs for constipation. It enhances the peristaltic action in the intestines and increases secretions of the stomach, liver and pancreas. It is also helpful in relieving hemorrhoids because of its non-irritating nature and its softening action on stool.<sup>3</sup>

#### **Other Benefits**

An active element in the herb known as quinone emodin is being studied for its usefulness in treating lymphocytic leukemia. There is also some combination therapies found in cascara that may be used for bowel cleansing.<sup>1</sup> More research is required before it will be recommended for treatment.<sup>3</sup>

#### Safety

The fresh or dried cascara bark has reported some side effects. It is claimed that the bark of cascara must be aged for one year or heat-treated to remove harsh constituents.<sup>1</sup> Common name: Cascara Bark

**Botanical name:** Frangula purshiana, Rhamnus purshiana

Part of use: Aged Bark



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- Health Canada NHPD Monograph
  Louise Tenney (2000). Today's Herbal Health. 5 th Edition.
- 4. Steven B. Karch. The Consumer's Guide to Herbal Medicine.



## **Celery Seed**

Wild celery can be found throughout Europe, the Mediterranean and parts of Asia. The leaves, stalks, roots and seeds can be consumed.<sup>1</sup> The primary nutrients in celery seeds are calcium, iron, magnesium, phosphorus, potassium, sodium, sulfur, vitamin A, vitamin B and vitamin C.<sup>2</sup> Celery seeds also contain several substances including volatile oils, flavonoids (plant pigments with antioxidant effects that may protect cells from damage), coumarins (chemical compounds that help thin the blood) and linoleic acid (an omega-6 fatty acid).<sup>3</sup> Celery seed is not well-known in western herbal medicine although it has been used medicinally for thousands of years in other parts of the world. Historically, it is used to treat colds, flu, water retention, poor digestion, various types of arthritis, muscle spasms, inflammation and certain diseases of the liver and spleen.<sup>3</sup>

### **Health Benefits of Celery Seed**

#### **Treatment of Kidney Problems**

Celery is often used as a diuretic to increase urine output and help the body get rid of excess water.<sup>3</sup> It has a stimulating effect on the kidneys to promote the flow of urine.<sup>2</sup> In Traditional Chinese Medicine, it is defined as energetic and warm. Due to its diuretic effects and warm property, it is traditionally used to treat chronic kidney and bladder problems.

#### **To Improve Liver Function**

A few animal studies suggest that celery seed extracts may help protect the liver from damaging substances such as the pain reliever acetaminophen (Tylenol).

#### **The Lipid-Lowering Effect**

Celery seed is also used in weight loss formulas because of its lipid-lowering effect. In an animal study, a group of researchers found celery seed significantly reduced the total serum levels in cholesterol. Another study found a reduction of triglyceride concentrations.<sup>1</sup>

#### Safety

Allergy to celery is fairly common.<sup>1</sup>

Common name: Celery seed

**Botanical name:** Apium graveolens

Part of use: Seed



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Louise Tenney (2000). Today's Herbal Health. 5 th Edition. Celery. Page 44
- Steven D. Ehrlich, University of Maryland Medical Center. Complementary Medicine. http://www.umm.edu/altmed/articles/ celery-seed-000231.htm
- 4. David Frawley, ed. Planetary Herbology.



## **Chinese Pearl Barley**

Chinese pearl barley is the common name for *Coix lacryma-jobi* seed according to Chinese medical material. The seeds of *Coix lacryma-jobi* are used as a source of food. Coix has a good protein yield compared to rice. The entire coix plant and its seed pods are commonly called Job's tears; the seed pod often has a tear drop appearance.<sup>1</sup> The active constituents in Chinese barley are mainly comprised of ordinary grain ingredients such as starch, sugar, protein, amino acids and trace amounts of vitamins and minerals.<sup>1</sup> Throughout East Asia, Chinese pearl barley is available in a dried form and is cooked as a grain. In China, it is one the most popular food herbs used in the diet therapy for painful and stiff joints.<sup>2</sup> It can also be used alone or in a soup mix.<sup>2</sup> In Korea, distilled liquors are made from the grain. In Japan, it is used to make aged vinegar.<sup>1</sup>

### **Health Benefits of Chinese Pearl Barley**

#### **Cancer Fighting Properties**

Chinese pearl barley has been studied and found to have anti-neoplasm properties. The two components found in Chinese pearl barley are called coixol and coixenolide. They were researched for inhibiting and preventing the development of neoplasms, explaining its traditional use in the treatment of stiff joint conditions.<sup>1</sup> According to J.L. Hartwell's survey, *Plants Used Against Cancer*, Chinese pearl barley is used in folk remedies for abdominal tumors.<sup>3</sup>

#### **Traditional Uses**

Coix was first mentioned as a herbal medicine in 100 A.D. for treating people with stiff joints and for syndromes due to wind-damp. In 200 A.D., it was used in a formula for the treatment of a syndrome known as thoracic paralysis.<sup>1</sup>

#### **Other Benefits**

Chinese pearl barley is also recognized as a spleen tonification due to its mild diuretic effect.<sup>1</sup> It is also used in some weight loss supplements and lipid lowering teas.<sup>1</sup>

#### **Common name:** Chinese pearl barley, Job's tear, Coix

Botanical name: Coix lachrvma-iobi

Part of use: Seeds



- 1. Dharmananda, S. (2007) COIX: FOOD AND MEDICINE. Institute for Traditional Medicine, Portland, Oregon
- Chang HM and But PPH, Pharmacology and Applications of Chinese Materia Medica, volume 2, 1987 World Scientific, Singapore
- 3. Hartwell, J.L. 1967-1971. Plants used against cancer. A survey. Lloydia 30-34



## Chinese Rose Hips

*Rosa canina*, also known as the dog rose, is a variable scrambling rose species native to Europe, Northwest Africa and Western Asia. Dog rose is a soft, branched and smooth bush. It usually attains the height of six to 10 feet and flowers in June and July. Rose hips are the fruits that develop from the blossoms of the wild rose. They are typically orange to red in colour but some species may be purple or black. Its fruit is inodorous but possesses a rather pleasant, sweetish and acidulous taste.

The vanilla-like fragrance of the fruit is due to the presence of vanillin. Rose hip is used as the flavouring ingredient in Cockta, a soft drink made in Slovenia. In the pharmaceutical and natural health products industry, rose hip is used as a natural flavour enhancer. This ingredient is a known source of vitamin C and is high in bioflavonoids, iron and other nutrients.

### **Health Benefits of Chinese Rose Hips**

#### **Traditional Uses**

Rose hips have traditionally been used to treat and prevent respiratory infections, gallstones and ulcers. They have been used to treat inflammatory diseases such as arthritis and have also been used as a tonic for the stomach and the kidneys.<sup>1</sup>

#### **Rose Hips for Osteoarthritis**

In 2008, a study suggested that Rose hip powder may reduce osteoarthritis pain.<sup>1</sup> Rose hip fruit juice extract can boost the antioxidant status in healthy young adults. Researchers from The Parker Institute Musculoskeletal Statistics Unit at the Frederiksberg Hospital in Denmark, found that compared to the placebo group, patients who were treated with Rose hip powder showed a reduction in pain scores in a three month period. The review found that it was almost twice as likely that a patient allocated to rose hip powder responded more to therapy than compared to the placebo group.<sup>2</sup>

#### Safety

Rose hips have been listed as Generally Recognized as Safe (GRAS) by the U. S. Food and Drug Administration (FDA).

**Common name:** Rose Hips, dog rose

Botanical name: Rosa canina

Part of use: Fruit



- 1. Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com
- Christensen R, Bartels EM, Altman RD, et al. Does the hip powder of Rosa canina (rosehip) reduce pain in osteoarthritis patients? - a meta-analysis of randomized controlled trials. Osteoarthritis Cartilage. 2008 Apr 11.



## **Chicory Root**

Chicory is native to Europe and temperate regions in Asia. It has become naturalized in North America and Australia.<sup>1</sup> Chicory was cultivated as early as 5,000 years ago by the Egyptians as a medicinal plant. In Europe (especially in France) and the US, chicory leaves were grown as a vegetable or used in salads. In Europe, the roots were ground and used as a caffeine-free coffee substitute. When World War II disrupted shipping, most of the US coffee was produced from chicory.<sup>1</sup> Chicory is caffeine-free and therefore is regaining its popularity. The thick roots are used in the Southern US as an additive flavour to coffee and sometimes as a coffee substitute. Companies offer coffee mixed with chicory to reduce the caffeine content. It is also used as a sweetener in the food industry.<sup>2</sup>

### **Health Benefits of Chicory Root**

#### **Cleanse the Body**

Chicory Root can effectively cleanse the body in a number of ways. The root of chicory provides a soluble fiber inulin that feeds digestive flora in the intestines while increasing stool bulk.<sup>3</sup> This friendly flora helps to improve the overall digestive function of the body. Chicory root also acts as a gentle laxative and diuretic for removing excess water and toxins.<sup>3</sup> It can also reduce strain on the liver.<sup>3</sup> The inulin content is not digestible, so although the taste is sweet, it doesn't increase blood sugar levels.

#### **Chicory Root and Liver Health**

Chicory root is a valuable herbal supplement for promoting liver and gallbladder health.<sup>3</sup> By helping to increase the flow of bile from the liver to the gallbladder, chicory aids in the process of the digestion of fat and helps the body to digest foods and liquids more efficiently. Chicory root also helps the body to remove contaminants from the digestive system and because of this potential, the liver does not have to work as hard to filter out toxins in the body.<sup>3</sup> It may also help the body resist gallstones and liver stones.<sup>3</sup>

#### **Other Benefits**

Chicory root contains vitamin C, a powerful antioxidant which aids in decreasing the levels of serum LDL cholesterol in the blood.<sup>3</sup> Use cautiously in patients with gallstones, due to its bile stimulating effect.<sup>1</sup>

#### Common name:

Chicory, blue sailors, succory, and coffeeweed

**Botanical name:** *Cichorium intybus* 

Part of use: Root



- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- Joseph O'Neill (2008), Functional Ingredients, Using inulin and oligofructose with high-intensity sweeteners. http://newhope360.com/sweeteners/ using-inulin-and-oligofructose-highintensity-sweeteners
- 3. Global Healing Centre. Organic Chicory Root. http://www.globalhealingcenter. com/organic-chicory-root.html



## **Dandelion Root**

Dandelion is a perennial herb, native throughout the northern hemisphere and can be found growing wild in meadows of temperate zones.<sup>1</sup> Dandelion is considered a great survival food because of its good nutrient contents. The leaves of the dandelion contain substantial levels of vitamins A, C, D, and B complex as well as iron, magnesium, zinc, potassium, manganese, copper, choline, calcium, boron, and silicon.

Dandelion roots and leaves are widely used in Europe. The European Scientific Cooperative on Phytotherapy (ESCOP) recommends dandelion root for the restoration of hepatic and biliary functions, dyspepsia and loss of appetite. The German Commission EU authorizes the use of combination products containing dandelion root and herb for biliary abnormalities, appetite loss, dyspepsia and for the stimulation of diuresis.<sup>1</sup> Other historical uses of the root and leaves of dandelion include the treatment of breast diseases, water retention, digestive problems, joint pain, fever and skin diseases.

### **Health Benefits of Dandelion Root**

#### **Dandelion Root and Liver Health**

The Chinese began mentioning dandelion around the seventh century to treat liver disease.<sup>2</sup> Some modern naturopathic physicians suggest that dandelion can detoxify the liver and gallbladder, reduce side effects of medications metabolized by the liver and relieve symptoms associated with liver disease.<sup>1</sup> Modern researches have also proven the validity of the dandelion herb. Studies in humans and laboratory animals have shown that the roots increase the flow of bile, which is beneficial for liver disorders, hepatitis, bile duct inflammation, gallstones, jaundice and the bile duct. It works to increase bile production in the liver which in turn increases the flow to the gallbladder.<sup>3</sup>

#### **Cleansing the Body**

Dandelion has diuretic effects. For diabetes patients, it has the ability to cleanse obstructions and stimulate the liver to detoxify poisons.<sup>2</sup>

#### Safety

Dandelion is listed as Generally Recognized as Safe (GRAS) with rare side effects including contact dermatitis, diarrhea and gastrointestinal upset.<sup>1</sup>

Common name: Dandelion

**Botanical name:** *Taraxacum officionale* 

Part of use: Root and leaves



- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.
- 3. K. Faber, "The Dandelion-Taraxacum officinale," Pharmazie, 1958, (13) 423-35.



## Fenugreek

Fenugreek is native to India and Southern Europe. The seeds are hard, yellowish brown and angular; some are oblong, rhombic or cubic. Fenugreek seeds are available whole or as a roasted yellow powder. Fenugreek is frequently included in spice mixtures. They give off a spicy smell and taste bittersweet. The bitter aftertaste is similar to celery. The major use of fenugreek is found in curry powders and many mixtures, especially vindaloo. In India, people also make a mild and flavourful tea by steeping whole fenugreek seeds in boiling water for a variety of medicinal purposes. Commercially, fenugreek is used in the preparation of mango chutneys and as a base for imitation maple syrup.

### **Health Benefits of Fenugreek**

#### Fenugreek and Healthy Glucose

Fenugreek helps to support therapy for the promotion of healthy glucose levels.<sup>1</sup> Studies have shown that participants with type 2 diabetes had significantly lower blood sugar levels after eating fenugreek. An anti-hyperglycemic compound (GII) was purified from the water extract of the seeds of fenugreek. Researchers found GII may improve glucose tolerance without fasting. After 15 days of treatment with GII, glycosylated hemoglobin came down and insulin increased to normal. GII treatment brought down all the altered serum lipids (TC, HDL-C, TAG, PLs and FFAs) to normal levels. Researchers concluded that the extract of fenugreek seed has good potential as an oral anti-diabetic drug with intermittent therapy.<sup>2</sup>

#### Fenugreek and Blood Lipids

Fenugreek is being studied for its cardiovascular benefits. It is used in herbal medicine to help reduce elevated blood lipid levels.<sup>1</sup> A study in 2010 found that fenugreek extract significantly lowered the plasma levels of total cholesterol (TC), triglycerides (TG) and low-density lipoprotein cholesterol (LDL-C), while increasing the plasma level of high-density lipoprotein cholesterol (HDL-C). The results revealed significant cholesterol lowering effects and antioxidant activity in the ethyl acetate extract of the fenugreek seed. <sup>3</sup> Common name: Fenugreek

Botanical name: Trigonella foenum-graecum

Part of use: Seed



- 1. Health Canada NHPD Monograph, Fenugreek - Oral, 2009.
- Moorthy R, Prabhu KM, Murthy PS. (2010) Anti-hyperglycemic compound (GII) from fenugreek (Trigonella foenum-graecum Linn.) seeds, its purification and effect in diabetes mellitus.Indian J Exp Biol. 2010 Nov;48(11):1111-8.
- Belguith-Hadriche O, Bouaziz M, Jamoussi K, El Feki A, Sayadi S, Makni-Ayedi F.(2010) Lipid-lowering and antioxidant effects of an ethyl acetate extract of fenugreek seeds in high-cholesterol-fed rats. J Agric Food Chem. 2010 Feb 24;58(4):2116-22.



## German Chamomile

Chamomile has been used medicinally for thousands of years and is a widely recognized herb in western culture. For centuries, European countries have used chamomile for colic in infants and vomiting because of its antispasmodic properties.<sup>1</sup> It is a popular treatment for numerous ailments including sleep disorders, anxiety, digestion/ intestinal conditions, skin infections/inflammation (including eczema), wound healing, infantile colic, teething pains and diaper rash. In the United States, chamomile is best known as an ingredient in herbal tea preparations for its mild sedative properties. The primary nutrients in German chamomile are calcium, iron, magnesium, selenium, silicon, tryptophan, vitamin A, Vitamin C and zinc.<sup>1</sup>

### **Health Benefits of German Chamomile**

#### Sleep Enhancement

Chamomile is popularly used as a sleep aid and has been used to treat insomnia. There is some evidence suggesting that chamomile possesses sedative properties, possibly by binding to five-hydroxytryptamine receptor four (5-HT4) in the brain.<sup>2</sup> In a clinical study, researchers examined the cardiac effects of two cups of chamomile tea on patients undergoing cardiac catheterization. The authors observed that 10 of 12 patients in the study achieved deep sleep within 10 minutes of drinking the tea.<sup>3</sup>

#### Safety

The U.S. Food and Drug Administration (FDA) has approved Hungarian chamomile flower oil and extract as food additives or listed them as Generally Recognized As Safe (GRAS). The Commission EU has approved the internal and the external use of chamomile for gastrointestinal and inflammatory diseases and bacterial skin diseases including those that affect oral cavity and gums. The British Herbal Compendium lists chamomile's internal and external uses for sleep disorders in addition to the aforementioned indications. The Council of Europe lists German chamomile as a natural source of food flavouring. The Longwood Herbal Task Force, a research group located in Boston, Massachusetts in the United States, reports that chamomile's main uses are as a mild sedative, an anti-inflammatory agent and as a remedy for gastrointestinal upsets. The German Standard License for chamomile tea indicates its use for respiratory and gastrointestinal infections.<sup>2</sup>

**Common name:** German Chamomile

#### **Botanical name:**

Chamomilla recutita, Matricaria chamomilla

Part of use: Flower



- "Today's Herbal Health, Third Edition"; Louise Tenney; 1992
- 2. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 3. Gould L, Reddy CV, Gomprecht RF. Cardiac effects of chamomile tea. J Clin Pharmacol 1973;13:475-479
- Kato A, Minoshima Y, Yamamoto J, et al. Protective effects of dietary chamomile tea on diabetic complications. J Agric Food Chem. 2008 Sep 10;56(17):8206-11. Epub 2008 Aug 6.



## Ginger

Ginger is a perennial commonly found in warmer climates in India, Jamaica and in regions of China. It has a long history of medicinal use that dates back more than 2,500 years.<sup>1</sup> Ginger is widely used as a seasoning or fragrance in foods, beverages, soaps, candles and cosmetics.<sup>1</sup> Reports of the beneficial effects of ginger date back to the ninth and 10th centuries. Ginger has been used in various traditional medicines. In modern times, it is used to treat common colds, fever, rheumatic disorders, gastrointestinal complications, diarrhea and more.

### **Health Benefits of Ginger**

#### **Anti-inflammatory Effects**

Ginger has a long history of use as an anti-inflammatory and many of its constituents have been identified as having anti-inflammatory properties.<sup>1</sup> The benefits of ginger are also supported by modern research and many laboratories have provided scientific support for its anti-inflammatory properties.<sup>2</sup> In the early 1970s, this discovery provided the first evidence that ginger is effective in chronic inflammation treatment.<sup>2</sup>

#### **Antibacterial Effects**

Ginger has been shown to have antibacterial effects against a range of organisms.<sup>1</sup> There are some studies which found that the essential oils of ginger showed antimicrobial activity against Gram-positive and Gram-negative bacteria, yeasts and some fungi.<sup>3</sup> An extract of *Zingiber* officinale demonstrated antibacterial effects against bacillus cereus.<sup>4</sup>

#### **Nausea and Vomiting in Pregnancy**

For pregnant women, ginger is used to alleviate nausea and vomiting during pregnancy.<sup>5</sup> A double-blind, placebo-controlled, randomized clinical trial, showed that 20 women (77 percent of the subjects) in the first trimester of pregnancy that consumed ginger syrup reported a significant decrease in nausea.<sup>6</sup>

#### Safety

The U.S. Food and Drug Administration (FDA) lists ginger as Generally Recognized as Safe (GRAS). Ginger is listed as an official drug in the Ayurvedic, Indian Herbal, Chinese, Japanese, African, and British pharmacopoeias.<sup>1</sup>

Common name: Ginger

**Botanical name:** Zingiber officinale

Part of use: Root



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- Grzanna R, Lindmark L, Frondoza CG. Ginger--an herbal medicinal product with broad anti-inflammatory actions. J Med Food. 2005. 8(2):125-32
- 3. Careddu P. Motion sickness in children: results of a double-blind study with ginger (Zintona) and dimenhydrinate. HNR 1999;6(2):102-107.
- Carney, G. E. and Bowen, N. J. p24 proteins, intracellular trafficking, and behavior: Drosophila melanogaster provides insights and opportunities. Biol.Cell 2004;96(4):271-278.
- 5. Blumenthal M. Ginger as an antiemetic during pregnancy. Altern Ther Health Med 2003;9:19-21.
- Vutyavanich T, Kraisarin T, Ruangsri R. Ginger for nausea and vomiting in pregnancy: randomized, double-masked, placebo-controlled trial. Obstet Gynecol 2001;97:577-582.



## Juniper Berry

Juniper berry is the ripe, fresh or dried spherical ovulate cone of *Juniperus communis* that grows in the temperate regions of Europe, Asia and North America.<sup>1</sup> Juniper berries are used commercially for the preparation of gin and essential oils. Gin has been drunk in the western world for at least three hundred years.<sup>1</sup> In ancient Greece, the berries were used as a diuretic. The Native Americans used it as a survival food during the cold winter. The berries are also roasted and grounded and used as a coffee substitute.<sup>2</sup>

The German Commission EU Monographs, a therapeutic guide to herbal medicine, approved the use of juniper berry to relieve dyspepsia. It has also been used in combination with other botanicals for bladder and kidney conditions.<sup>1</sup> Juniper berry is also traditionally used in herbal medicine as a diuretic and a urinary tract antiseptic to help relieve benign urinary tract infections. It is also used in herbal medicine to aid digestion and stimulate appetite.<sup>3</sup> Constituents in the Juniper berry include volatile oil, sugars, glucuronic acid, ascorbic acid, fatty acids, phytosterols, flavonoid glycoside and more.<sup>1</sup>

### **Health Benefits of Juniper Berry**

#### **Juniper Berry and Urinary Tract Health**

Juniper berry is often used to increase the flow of urine. It contains a volatile oil that has traditionally been used to treat conditions of the urinary tract. It is beneficial for ridding the body of uric acid which may crystallize in the kidney. It is also used to dissolve kidney stones and sediment in the prostate and is known to have diuretic effects.<sup>3</sup>

#### **Other Benefits**

Laboratory tests provide support for the use of juniper oil and the berries to relieve inflammation. <sup>1</sup>

#### Safety

When used as a spice, flavour, cosmetic, soap, shampoo, hair grooming aid, fragrance, fumigant or to treat dyspepsia, juniper berry has been listed as Generally Recognized as Safe (GRAS) in the U.S.<sup>4</sup> Juniper berry is also known to stimulate uterine contractions, however it should not be used during pregnancy.<sup>2</sup>

Common name: Juniper berry

Botanical name: Juniperus communis

Part of use: Berry



- 1. Herbal Medicine Expanded Commission E Monographs
- 2. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.
- 3. Health Canada NHPD Monograph. 4. Natural Standard: The Authority
- on Integrative Medicine. www.naturalstandard.com



## Lemon Balm

Lemon balm is native to the Eastern Mediterranean region,Western Asia and is widely cultivated throughout Europe.<sup>1</sup> The beneficial material in lemon balm is found in the dried leaves and flowering tops of the herb. The leaves have the smell of lemons because like lemons, they contain citronella.<sup>1</sup> Lemon balm was used by the ancient Greeks, Romans and has been mentioned in the Bible. The pleasant smelling essential oil is used in various products. The medicinal use of lemon balm has been documented since ancient Greek and Roman times.<sup>2</sup> The known major components of lemon balm are reported to include hydroxycinnamic acid derivatives, rosmarinic acid, caffeic acids, chlorogenic acid, metrilic acid, tannins and flavonoids.

### **Health Benefits of Lemon Balm**

#### **Antioxidant Effects**

Lemon balm has been reported to demonstrate high phenolics content and antioxidant properties.<sup>1</sup> An in-vitro study demonstrated that lemon balm was very effective against a series of human cancer cell lines.<sup>1</sup> Rosmarinic acid and caffeic acid in lemon balm have demonstrated significant antioxidant and immune modulating activities.<sup>1</sup>

#### Antiviral, Antibacterial and Antifungal Effects

Health Canada recommends the use lemon balm in herbal medicine as a sleep aid and to relieve digestive disturbances such as dyspepsia (upset stomach).<sup>3</sup> The Commission EU approved the use of lemon balm in the treatment of dyspepsia, insomnia and functional gastrointestinal complaints.<sup>1</sup> In Germany, lemon balm is licensed as a standard medicinal tea for sleep disorders and gastrointestinal tract disorders.<sup>1</sup>

#### Safety

Lemon balm has been reported to be relatively well tolerated when ingested. Lemon balm has been assigned to the Federal Drug Association (FDA) and Generally Recognized As Safe (GRAS) in the United States. No serious side effects have been reported.<sup>1</sup>

#### **Common name:** Lemon Balm, Bee balm, Melissa officinalis, Mélisse

**Botanical name:** *Melissa officinalis* 

Part of use: Herb top



- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Louise Tenney (2000). Today's Herbal Health 5 th Edition
- 3. Health Canada Compendial Monographs



## Licorice Root

Licorice (*Glycyrrhiza glabra*) is a flavourful herb that has been used in food and medicinal remedies for thousands of years. It is also known as the sweet root. Licorice supplements are made from the roots and underground stems of the plant. The roots are brown on the outside and yellow on the inside. The licorice plant originally grew wild in some parts of Europe and Asia. The root contains a compound that is about 50 times sweeter than sugar and has been used in both eastern and western medicine to treat a variety of illnesses.

### **Health Benefits of Licorice Root**

#### **Reduce Oxidation, Plasma Lipid and Cholesterol Levels**

The antioxidant effect of the licorice herb is approved by modern medical science. Licorice root contains flavonoids which is an antioxidant. In 2002, a group of researchers found the dietary consumption of licorice root extracted by hypercholesterolemic patients, may act as a moderate hypocholesterolemic nutrient (a potent antioxidant agent that fights against cardiovascular disease). Researchers concluded that the licorice root extract and its major flavoniod antioxidant (glabridin) seem to have a variety of beneficial effects on cells. They also concluded that licorice root extract consumption was associated with reduced atherogenic modifications of LDL including reduced oxidation, CS binding ability (retention) and aggregation, plasma lipid levels and systolic blood pressure.<sup>1</sup>

#### **Other benefits**

Licorice root is used in herbal medicine as an expectorant to help relieve chest complaints such as catarrhs, coughs and bronchitis. It is also used to help relieve inflammatory conditions of the gastrointestinal tract such as gastritis in adults.<sup>2</sup>

#### Safety

Licorice and licorice extract have Generally Recognized as Safe (GRAS) status in the United States.<sup>3</sup> Consult a health care practitioner prior to use if you are pregnant. <sup>2</sup>

Common name: Licorice

**Botanical name:** *Glycyrrhiza glabra* 

Part of use: Root and stolon



- Fuhrman B., Volkova N., Kaplan M., Presser D, Attias J., Hayek T, and Aviram M. (2002). Antiatherosclerotic Effects of Licorice Extract Supplementation on Hypercholesterolemic Patients: Increased Resistance of LDL to Atherogenic Modifications, Reduced Plasma Lipid Levels, and Decreased Systolic Blood Pressure Nutrition 2002: 18. 268 –273
- 2. Health Canada Compendial Monograph



## **Passion Flower**

Passion flower is a perennial creeping vine, native to the tropical and semi-tropical Southern United States, Mexico and Central and South America.<sup>1</sup> It was first cultivated by the Native Americans for its edible fruit. Spanish conquerors first learned of the passion flower from the Aztecs of Mexico, who used it as a sedative to treat insomnia and nervousness. The plant was taken back to Europe where it became widely cultivated and introduced into European medicine.<sup>1</sup> Since the 16<sup>th</sup> Century, Europe has been using it to treat anxiety. Passion flower contains glycosides, rutin, fatty acids, gum, phytosterols, sugar, volatile oil and more. Passion flower is most commonly used in combination with other herbal products.

### **Health Benefits of Passion Flower**

#### **Nervous Restlessness**

The Commission EU approved the internal use of passion flower for nervous restlessness.<sup>1</sup> The British Herbal Compendium indicates its use for sleep disorders, restlessness, nervous stress and anxiety.<sup>3</sup> The German Standard License for passion flower tea also indicates its use for nervous restlessness, mild disorders of sleeplessness and gastrointestinal disorders of a nervous origin.<sup>4</sup> The ESCOP indicates its use for tenseness, restlessness, irritability and difficulty in falling asleep.<sup>5</sup> This claim is also researched in the lab.

A double-blind, placebo controlled trial of 182 patients with adjustment disorder and anxious mood, was conducted using a combination product containing passion flower. After 28 days, the scores of patients in the controlled group significantly dropped on the Hamilton-Anxiety (HAM-A) scale (an anxiety rating scale). Further research is still required to extrapolate passion flower as a monotherapy.<sup>6</sup>

#### Safety

Passion flower is currently included in the U.S. Food and Drug Administration (FDA). The Everything Added to Food in the United States (EAFUS) database, contains ingredients added directly to food that the FDA has either approved as a food additive or listed as Generally Recognized as Safe (GRAS).<sup>2</sup> **Common name:** Passion flower

**Botanical name:** Passiflora incarnata

Part of use: Flower



- 1. Herbal Medicine Expanded Commission E Monographs
- Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 3. Bradley, P.R. (ed.).1992. British Herbal Compendium, Vol. 1. Bournemouth: British Herbal Medicine Association.
- Wichtl, M. and N.G.. Bisser (eds.). 1994. Herbal Drugs and Phyropharmaceuticals. Stuttgart: Medpharm Scientific Publishers.
- 5. ESCOP. 1997. "Passionflorae herba." Monographs on the Medicinal Uses of Plant Drugs. Exeter, U.K.: Europeab Scientific Cooperative on Phytotherapy.
- 6. Krenn L. (2002) Passion Flower (Passiflora incarnata L.)--areliable herbal sedative. Wien Med Wochenschr.;152(15-16):404-6.



## Pipsissewa

Pipsissewa is a stout, almost woody, evergreen perennial plant. It usually grows up to 35cm in height. The stems are simple or occasionally branched. Its botanical name *Chimaphila umbellata*, is derived from two Greek words meaning 'winter' and 'loving'. Pipsissewa is commonly found in temperate regions of Europe, Russia and North America.<sup>1</sup>

In herbal medicine, it was widely used by the First Nations people of North America for its reputed ability to dissolve kidney stones.<sup>1</sup> Pipsessewa was also used by herbalists in the old world. Although once plentiful in Europe, it is currently a protected species in many countries.<sup>1</sup> Pipsissewa is used both in food and herbal medicines. In the food industry, it is used as a flavouring agent in candies and soft drinks, particularly root beer.

### **Health Benefits of Pipsissewa**

#### Antimicrobial and Anti-inflammatory Effects

The primary constituents are arbutin, chimaphilin, ericolin and isohomoarbutin.<sup>1</sup> Based on its arbutin content it can reasonably be inferred that chimaphila shares similar antimicrobial and anti-inflammatory properties. Due to these effects, it is used as a homeopathic for treatment of prostatic hyperplasia.<sup>1</sup>

#### **Prevent Prostate Enlargement**

In a clinical assessment in Japan, Pipsissewa (*Chimaphila umbellata*) extract was developed in a new formula. Three tablets of this new formula were given to patients. Results showed a gradual improvement for prostatic hyperplasia (prostate enlargement).<sup>2</sup>

#### Safety

In Tamaki's clinical assessment, as an active ingredient of a new formula, pipssisewa was well tolerated.<sup>2</sup>

Common name: Pipsissewa

Botanical name: Chimaphila umbellata

Part of use: Whole plant



- 1. Todd Caldecott (2008) Pipsissewa. Home publications Western herbs.
- Tamaki M, Nakashima M, Nishiyama R, Ikeda H, Hiura M, Kanaoka T, Nakano T, Hayashi T, Ogawa O. (2008) Assessment of clinical usefulness of Eviprostat for benign prostatic hyperplasia-comparison of Eviprostat tablet with a formulation containing two-times more active ingredients. Hinyokika Kiyo. 2008;54(6):435-45. (Article in Japanese)



## Reishi Mushroom

Reishi (Ganoderma lucidum) is a woody mushroom that is highly regarded in traditional medicine. It is increasingly used in western countries in conjunction with or in place of allopathic medicine. Of the many known species, only six (red, black, blue, white, yellow, and purple) reishi have been investigated for their potential health benefits. The black and especially the red reishi mushroom have demonstrated the most significant health-enhancing effects.<sup>5</sup> There are five active elements that set Reishi apart from the rest of the herbs: The rich content in polysaccharides is known to cleanse the body; Organic germanium acts as the balancer; Adenosine as the regulator; Triterpenoids as the builder; Ganoderic essence as the regenerator.<sup>1</sup>

### **Health Benefits of Reishi Mushroom**

#### **Boost Immune System**

The fungi *Ganoderma lucidum* (reishi) has been used for a long time in China to treat various human diseases and strengthen overall vitality. The water extract and the polysaccharides fraction of reishi have been found to posses anti-cancer properties. The reishi polysaccharides are capable of slowing the spread of cancer cells in the body, boosting the immune system in people getting chemotherapy and decreasing certain side effects of chemotherapy and radiation therapy.<sup>2</sup>

#### **A Strong Antioxidant**

Reishi's polysaccharides are believed to be a strong antioxidant that blocks harmful free radicals from damaging cells. Research shows that *Ganoderma lucidum* polysaccharides may help improve antioxidation.

#### **Other Benefits**

Numerous in vitro and animal studies have found that reishi has antitumor and anticancer effects.<sup>3</sup> It also inhibits tumor cell growth. In Traditional Chinese Medicine, reishi was reported to be used in a combination formula to reduce pain in patients with active rheumatoid arthritis.<sup>3</sup>

#### Safety

Acute and long-term studies have found Reishi to be generally well tolerated in recommended doses for long term use.<sup>3</sup> The allergy is uncommon, but it was reported in a study.<sup>3</sup>

**Common name:** Reishi, Lingzhi, Ganoderma

**Botanical name:** *Ganoderma lucidum* 

**Part of use:** Fruiting body



- 1. R. Russell , M. Paterson. Ganoderma A therapeutic fungal biofactory. Phytochemistry 2006;67:1985–2001.
- Lin ZB, Zhang HN. Anti-tumor and immunoregulatory activities of Ganoderma lucidum and its possible mechanisms. Acta Pharmacol Sin 2004;25(11):1387-95.
- 3. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com



## Sarsaparilla

Sarsaparilla is a vine plant with prickly stems and shiny leaves. It produces small flowers and black, blue or red berry-like fruits which are greedily eaten by birds.<sup>1</sup> The root is commonly used to make root beer.<sup>2</sup> Sarsaparilla is native to the Pacific regions of Mexico and along the coast of Peru. The smilax root from Mexico was introduced into European medicine in the 16th century. Since this time, smilax roots have had a long history of medical uses throughout the world. European physicians considered sarsaparilla root as a tonic, blood purifier, diuretic and sweat promoter.<sup>2</sup>

Sarsaparilla was registered as an official herb in the U.S. Pharmacopoeia. From 1820 to 1910, sarsaparilla was used in the treatment of syphilis and as a blood purifier. From the 1500s to present day, sarsaparilla has been used worldwide as a blood purifier, a general tonic and to treat gout, arthritis, fever, cough, hypertension, digestive disorders, skin diseases, cancer and more.<sup>2</sup> The majority of sarsaparilla's pharmacological properties and actions have been attributed to saponins. The steroidal saponins have been reported to enhance bioavailability of other herbs and facilitate the body's absorption of other photochemicals.<sup>2</sup> Sarsaparilla's primary nutrients are copper, iodine, iron, manganese, silicon, sodium, sulfur, vitamin A, B-complex, vitamin C and zinc. <sup>3</sup>

### **Health Benefits of Sarsaparilla**

When found in the food of patients who are not allergic or hypersensitive to sarsaparilla, it has been beneficial for skin ailments such as psoriasis and eczema.<sup>4</sup> It also works as an anti-inflammatory by increasing circulation to the rheumatic joints and helps relive arthritis and other inflammatory conditions.<sup>4</sup> Other studies have found that sarsaparilla has other effects such as antiviral effects, antiarthritic activity, anticancer properties and more.<sup>3</sup>

#### Safety

Sarsaparilla is likely safe when used in amounts commonly found in the food of patients who are not allergic or hypersensitive to sarsaparilla or any of its constituents.<sup>2</sup> Common name: Sarsaparilla

**Botanical name:** Smilax officinalis

Part of use: Root



- 1. Tropical Plant Database. Database File for: Sarsaparilla (Smilax officinalis)
- http://www.rain-tree.com/sarsaparilla.htm 2. Natural Standard: The Authority
- on Integrative Medicine. www.naturalstandard.com
- 3. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.
- Sautour, M., Miyamoto, T., and Lacaille-Dubois, M. A. Steroidal saponins from Smilax medica and their antifungal activity. J Nat.Prod. 2005;68(10):1489-1493.



## Schisandra Berry

Schisandra, also spelled schizandra, is a vining shrub native to Northern and Northeast China, areas of Korea and Russia.<sup>1</sup> In Chinese, the berries of *Schisandra chinensis* are called Wu Wei Zi, translated as the "five-flavour fruit," based on its salty, sweet, sour, pungent and bitter flavours.<sup>1</sup> It has been used as a natural medicine for thousands of years and prescribed by physicians in China.<sup>2</sup>

The use of schisandra in North America is limited; only a small number of studies have currently been published in English. Most of the published research is in Chinese, Japanese or Russian.<sup>1</sup> In the 16<sup>th</sup> century, the largest description of materia medica in traditional China was written in a pharmaceutical book titled, *Bencao Gangmu (Guidelines to Roots and Herbs).* In Traditional Chinese Medicine, schisandra has been widely used as a kidney tonic and lung astringent. Schisandra helps promote the production of body fluid, increase the body's resistance to a broad spectrum of adverse biological, chemical and physical effects and help the body handle stress.<sup>1</sup>

Schisandra fruit has been found to have a variety of active constituents including essential oils, vitamins A, C and E, flavonoids, triterpenic acid, citric acid, ganwuweizic acid and more.<sup>1</sup>

### **Health Benefits of Schisandra Berry**

#### **Antimicrobial Effects and Liver Health**

Scientific studies have found that schisandra works as an antibacterial, a stimulant and it protects the liver against toxins. Liver problems lead to immune disorders because of the build up of toxins.<sup>2</sup> In vitro and in animal models, schisandra extract has been examined for its anti-inflammatory effects. A constituent of schisandra has been shown to inhibit inflammatory cell infiltration in animals with liver injuries.<sup>1</sup> In vitro, *Schisandra chinensis* extract has also shown antibacterial activity.<sup>1</sup>

#### **Other Benefits**

Antioxidant effects; Adaptogenic effects; Anti-hepatitis effects; Anti-aging effects; Anti-cancer effects.

Common name: Schisandra berry

Botanical name: Schisandra chinensis

Part of use: Berry



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.



## Siberian Ginseng

Siberian ginseng is native to China, Korea, Japan and Eastern Russia. It is known as Ci Wu Jia in Chinese, one of the most popular energizing tonics in Traditional Chinese Medicine. Siberian ginseng has been a widely used herb for more than 2,000 years. Throughout Chinese medicine, siberian ginseng was viewed as a valuable source for uplifting the 'Qi' and treating a 'Yang' deficiency regarding the kidney and the spleen. The Chinese also used siberian ginseng to treat insomnia.

However, it wasn't until the 1950s that the west was introduced to the myriad of the possible benefits associated with siberian ginseng, whose dried or fresh root became the mainstay of numerous herbal remedies.

### **Health Benefits of Siberian Ginseng**

#### **Immune Deficiency**

Siberian ginseng possesses a wide range of properties including antiviral characteristics that helps fight diseases. A few studies have examined the effects of *Eleutherococcus senticosus* on the immune response. In a controlled trial, 36 subjects were randomized to receive 10 mL of *Eleutherococcus senticosus* root extract or a placebo three times daily (after meals) for one month. After four weeks of therapy, those in the active group had a significant increase in the total number of the immunocompetent cells compared to the placebo. Researchers also claimed that no side effects were observed during the trial or afterwards (observation period six months).<sup>1</sup>

#### **Athletic Performance**

Siberian ginseng is used in herbal medicine to help improve mental and physical performance after periods of mental and physical exertion.<sup>2</sup> A group of Russian researchers who published their research in scientific literature, found that a single four mL dose of a 33 percent ethanolic liquid extract given to five male skiers one to one and a half hours before a 20-50 kilometer race, helped enhance their ability to adapt to increased exercise demands.<sup>3</sup>

#### **Other Benefits**

Siberian ginseng is used in herbal medicine as a tonic to help relieve general debility<sup>2</sup> and it may also be helpful in relieving chronic fatigue.<sup>5</sup>

**Common name:** Siberian ginseng, Eleuthero, Ci Wu Jia

**Botanical name:** *Eleutherococcus senticosus* 

Part of use: Root



- 1. Health Canada NHPD Monograph, Siberian ginseng - Oral, 2009.
- Bohn B, Nebe CT, Birr C. Flow-cytometric studies with Eleutherococcus senticosus extract as an immunomodulatory agent. Arzneimittelforschung 1987;37:1193-1196.
- Farnsworth NR, Kinghorn AD, Soejarto DD, Waller DP. Siberian ginseng (Eleutherococcus senticosus): current status as an adaptogen. In: Wagner H, Hikino H, Farnsworth NR, eds. Economic and Medicinal Plant Research Vol 1. New York, NY: Academic Press; 1985:155-215
- Facchinetti F, Neri I, Tarabusi M. Eleutherococcus senticosus reduces cardiovascular response in healthy subjects: a randomized, placebocontrolled trial. Stress Health 2002; 18:11-17.
- 5. Alternative Medicine Review. Volume 11, Number 2. 2006



## Tamarind

Tamarind is widely cultivated in tropical areas around the world.<sup>1</sup> The plant is native to tropical Africa, yet was introduced in India so long ago that it is considered indigenous there.<sup>1</sup> In India, tamarind has been traditionally used as a spice for the preservation of food products.<sup>1</sup>

Tamarind is used in almost every household in India. Its powder can be used as a condiment or flavouring agent. It is also used for chutneys and curries.<sup>1</sup>Tamarind contains fruit acids, sugars, terpenes, phenylpropanoids, tamarindienal, lectins, tamarind gum, pectinic oligogalacturonides and a group of polysaccharides.<sup>1</sup>

### **Health Benefits of Tamarind**

#### **Immunoprotective Effects**

Tamarind may help to support the immune system. When exposed to UV radiation, the pectinic oligogalacturonides in tamarind may prevent hypersensitivity to the immune system and may help to protect the body from DNA damage thus, protecting the immune system from UV induced immunomodulation.<sup>1</sup> The polyphenolic flavonoid in tamarind is known to have antioxidant properties.<sup>1</sup>

#### **Other Benefits**

The tamarind fruits and leaves have been used for many years in traditional South Asian medicine. Taken internally or applied externally, tarmarind is used in the treatment of sore throats, sunstroke and upset stomachs.<sup>1</sup>

#### Safety

Tamarind is listed as Generally Recognized As Safe (GRAS) in the United States when used orally and appropriately in food amounts (maximum use of 0.81% of dietary intake).<sup>1</sup>

Common name: Tamarind

Botanical name: Tamarindus indica

Part of use: Fruit



References: 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com



## Thyme

Thyme, also known as *Thymus vulgaris*, is a perennial subshrub with small grey or green leaves. Thyme is native to the Mediterranean region and is commercially cultivated in European countries, Morocco and the United States.<sup>1</sup> Thyme's common name may be derived from the Greek word 'thyo' meaning perfume, based on its use as an incense or possibly 'thymon', meaning courage.<sup>1</sup> During the middle ages, thyme was considered a symbol of bravery and strength.<sup>2</sup> Women sometimes embroidered a sprig of thyme on gifts for knights.<sup>1</sup>

The use of thyme spread throughout Europe and was brought to the new world with the early colonists.<sup>2</sup> It was used as a flavouring agent and for its medicinal value.<sup>2</sup> It was also used for respiratory problems such as asthma and whooping cough.<sup>1</sup> In modern times, thyme oil is used as a constituent in the manufacturing of cosmetics, soap, mouthwash and toothpaste. Red thyme oil is often used in perfumes.<sup>1</sup>

Thymol, which is a major constituent of thyme, is an ingredient often found in antiseptic mouthwashes.<sup>1</sup> Recent studies of combination products including thymol such as Listerine<sup>®</sup>, have shown antibacterial activity when used as a mouthwash because it reduces oral bacteria.<sup>1</sup>

### **Health Benefits of Thyme**

#### **Antifungal and Antibacterial**

In a laboratory study, two constituents of thyme (carvacrol and thymol) demonstrated antibacterial activity against E. coli. Based on in vitro research, thyme was seen to reduce some foodborne pathogens such as Listeria monocytogenes.<sup>1</sup>

#### As an Antioxidant

Thyme is considered an important source of dietary antioxidants.<sup>1</sup> Thyme has been shown to exhibit a high antioxidant capacity based on in vitro research on Oxygen Radical Absorbance Capacity (ORAC).<sup>1</sup>

#### Safety

Thyme has been listed as Generally Recognized as Safe (GRAS) by the U.S. Food and Drug Administration (FDA).  $^{\rm 1}$ 

#### **Common name:**

Thyme, Common thyme , Conehead thyme , English thyme, French thyme, Garden thyme , Thyme

#### **Botanical name:**

Thymus vulgaris

#### Part of use:

Herb top flowering and/or Leaf



- 1. Natural Standard: The Authority on Integrative Medicine. www.naturalstandard.com
- 2. Louise Tenney (2000). Today's Herbal Health. 5 th Edition.

# Using Herbs Safely



It is very important to consume herbs properly and in the recommended doses. Please see below some precautions to keep in mind prior to consuming any herbal remedy or supplement.

- If you experience any negative side effects with an herb, discontinue use
- Always seek professional advice if your symptoms progress
- Do not take herbal medicines during pregnancy or while breast-feeding, unless their safety has been established
- People have different sensitivity levels to medication. It is always recommended to begin with a low dosage and increase gradually
- Never exceed the manufacturer's recommend dose
- Consult with your physician prior to taking any herbal medicine/supplement
- Consult your physician if you are taking prescribed medications prior to consuming any herbal remedies due to possible drug interaction
- If you suffer from a chronic illness, seek professional help
- Do not try to treat any serious illness yourself. Seek professional attention

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Paul Kramer has more than 25 years of experience in nutritional product development, Network Marketing and corporate management. Paul is the author of the best-selling book, *Fighting Body Pollution,* available in eight languages worldwide. As a Nutritional Consultant, Paul is recognized as an expert in the health and wellness industry.

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