

# Maimes Report on Holy Basil

## *Ocimum sanctum* – Tulsi

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### INTRODUCTION

This report was written by Steven Maimes – SALAM Research (Rochester, New Hampshire) to advance understanding of the uses and benefits of the herb HOLY BASIL (*Ocimum sanctum*). It is a work in progress and will be periodically revised. Please note the disclaimer and fair use notice at the end of the report.

Throughout this report we will refer to the herb *Ocimum sanctum* as **holy basil** (or HB) and if the source was from India we may call it **Tulsi**. Holy basil is not to be confused with sweet culinary basil (*Ocimum basilicum*).

Familiar name: **Holy Basil**, Sacred Basil

– Latin: *Ocimum sanctum* (“sacred fragrant lipped basil”). More recently this species has become known by the name *Ocimum tenuiflorum* (“basil with small flowers”) or *Ocimum gratissimum* (“very grateful basil”).

– Botanical Family: **Lamiaceae** (mint)

– Hindi: **Tulsi**

– Sanskrit: **Tulasi**

*Ocimum sanctum* is one of roughly 60 species of the genus *Ocimum*, the basil genus, which consists of aromatic herbs and shrubs indigenous to the tropical regions of Asia, and the Americas. *Ocimum sanctum* is little known in the Western world but widely cultivated in India.

At least three types of Tulsi are encountered with in cultivation; the green leafed (Sri or Rama Tulsi) is the most common; the second type (Krishna Tulsi) bears dark green-to-purple leaves; a third type is a forest variety (Vana Tulsi) that often grows wild. [See photos at end of report]

Holy basil has for thousands of years been revered and used in Ayurvedic systems of medicine and is a well-known sacred plant of the Indian subcontinent. Holy basil has largely been overlooked in the West, despite being one of the most esteemed botanicals in Ayurvedic medicine.

Ayurveda is a system of healing that has its roots in ancient India. *Ayur* means “life” and *Veda* “knowledge.” The knowledge contained in Ayurveda deals with the nature and purpose of life and includes health and disease.

Medicinal, religious and culinary use of holy basil has been documented for centuries in Asia, China, the Middle East, North Africa and Australia. After the herb was introduced in Europe from the Orient it became known to Christians as sacred or holy basil.

Additional text on **Tulsi’s History and Mythology in India** can be found later in this report.

### ACTIVE COMPOUNDS – HOLY BASIL (*Ocimum sanctum*)

- Leading phytochemical compounds in holy basil leaf include eugenol (volatile oil), ursolic acid (triterpenoid) and rosmarinic acid (phenylpropanoid). Other active compounds include caryophyllene and oleanolic acid. Seeds contain fixed oils having linoleic acid and linolenic acid.

- Nutritional components include vitamins A and C; minerals calcium, iron and zinc; as well as chlorophyll.

- Holy basil contains no caffeine or other stimulants.

- Note that there can be many chemo-types of the various members of the *Ocimum* family. Also chemical compositions change throughout the seasons and are affected by different soil, growing, harvesting, processing and storage conditions.

Holy basil is highly aromatic and different varieties may smell and taste of peppermint, cloves, licorice or lemon. The clove-like odor comes from its high eugenol content. The plant grows abundantly in India, Malaysia, Australia, Central and South America and western Asia. It also grows in Puerto Rico.

## **SCIENTIFIC RESEARCH**

For thousands of years, Ayurvedic physicians, practitioners and laypeople have observed the effects of using holy basil. Some of them documented their actions and reported on the efficacy and safety of the herb. Many of these writings can be found in India (written in Hindi). There is also an oral tradition of knowledge.

It is our belief that the long standing approach of Ayurveda cannot be superseded by modern methods. The results of relatively short-term animal studies, in vitro studies, and small human clinical studies are both variable and limited in their applications. As individuals and conditions are never completely alike, the effect of herbs will not be exactly the same from application to application – even with double blind, placebo-controlled studies in spite of their increased reproducibility and validity. Furthermore, the experienced physician or practitioner’s own perceptions about the effectiveness of a treatment cannot be simply displaced by out-of-context research.

Humans are physically, mentally and emotionally very complex. The observations made by practitioners over prolonged periods of time may provide more accurate overall assessment of the effect of holy basil than short-term clinical studies and experiments.

Most of the modern research on holy basil has been on animals. These animal studies have tended to corroborate and confirm the related claims in Ayurvedic literature. This research has confirmed dozens of holy basil’s traditionally known actions and therapeutic uses including its remarkable adaptogenic and anti-stress activities, as well as its powerful support for the immune system. Modern clinical studies are also in agreement with claims from Ayurvedic literature. Clinical studies were undertaken in cases of bronchial asthma, viral encephalitis, stress-related arterial hypertension, compounded states of the humoral and cellular immune system, gastric ulcers, arthritis and chronic fatigue syndrome.

## **Science and Statistics**

There seems to be many reasons why little significant scientific research is being done on herbs. There are certainly economic concerns. We know that herbs are inexpensive (especially when compared to the retail price of pharmaceuticals) and that pharmaceutical companies would not profit from the cost of expensive herbal studies. Also, even if science comes up with statistics and models – there are too many variables. Within science it is possible to demonstrate statistically effects (good or bad) that are of no widespread relevance. The statistical significance of a “finding” merely provides an estimate of the likelihood or probability that the “effect” identified was not just a random accidental occurrence, and might actually be due to the variables and conditions of interest (or some other unidentified cause).

## **Science and Belief**

In science nothing is ever really proven in any absolute sense. Scientific “facts” are always in a state of flux and exist only in the relative conceptual world. All scientific research can do is provide support (“corroboration”) for or against specific hypotheses (guesses).

Beyond science we have belief that there is an absolute relevance to life and our existence and that there is interconnectedness between all living things. This belief can apply to the herbs that we take. We take holy basil to increase health and prevent and treat disease. The belief that the herb will help can contribute to its efficacy. [This topic will be expanded in future versions of this report.]

## **TONICS AND ADAPTOGENS**

Within Ayurvedic and Chinese medicine, there is a long history of using tonic remedies to restore health. Indian physicians practicing Ayurveda recognized the contribution of rejuvenating herbs 5000 years ago. In ancient China, tonic herbs were referred to as “superior” or “imperial” herbs and were used daily by the wisest and wealthiest people. The main function of a tonic is to maintain wellness with an emphasis on staying well more than getting cured.

**Adaptogenic herbs** are considered phytomedicines or natural product remedies based on plants. They can be considered a sub-category of herbal tonics because they rejuvenate the body and increase vital energy. The Russians introduced the term “adaptogen” in the 1960s simply to distinguish the tonic action of Siberian ginseng from other herbs. An adaptogen has the ability to increase the body’s resistance to stress by stimulating a non-specific, self-regulation response in adapting to stress. Adaptogens also produce an

increase in the power of resistance against multiple (physical, chemical or environmental) stressors. Simply, adaptogens help the body adapt to stress, support normal functions and restore balance.

Today, herbalists are beginning to classify holy basil as a primary adaptogen and are finding that HB modulates the “stress response” and increases adaptive energy.

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**NOTE:** References and sources exist for most of the following information. For most readers, these references are not important. This draft document will not provide individual references. Some sources will be included in the Reference section. Inquire if you need specific references. We also have noted conclusions of studies without providing details. Notations beginning with “AYURVEDA” = remedies from the Ayurvedic (or folk) tradition.

**"HEALTH is a state of complete physical, mental and social well being and not merely absence of disease or infirmity."** (The World Health Organization)

**HOLY BASIL**  
**It's Uses and Benefits Relating to the Various Human Body Systems**  
*Based on observations made by practitioners and modern scientific research*

*Note: We tried to place actions into the correct body systems. Since many actions overlap, only the primary system was selected.*

**CARDIOVASCULAR-CIRCULATORY SYSTEM** – (heart, blood, circulation)

- Cardio-tonic – prevents heart attacks
- Lowers stress-related high blood pressure; normalizes blood pressure
- Vascular protection – protects the heart and blood vessels, promotes even circulation
- Mild blood thinning qualities, thereby decreasing the likelihood of strokes
- Lowers dangerous cholesterol
- Protects against damage caused by foreign toxins in the blood (such as industrial chemicals)
- Treatment of stress-related arterial hypertension (high blood pressure)
- AYURVEDA: Tulsi is an excellent heart tonic and can be combined with the colder Arjuna and slightly warm Hawthorne to make a tridoshic remedy that builds and purifies the heart.
- AYURVEDA: The drinking of Tulsi-leaf tea keeps the blood pressure even. Tulsi tea also provides warming benefits for the heart.

**DIGESTIVE SYSTEM** – (esophagus, stomach, intestines, liver, pancreas)

- Liver support – generally contributes to healthy liver function, and counteracts various liver diseases
- Liver protective – improves the metabolic breakdown and elimination of dangerous chemicals in the blood; included as part of a detoxification program
- Anti-diabetic – insulin and glucose normalizing; blood-sugar and blood-lipid normalizing
- Hypoglycemic (low blood glucose)
- Balances blood sugar and insulin metabolism; can reduce fasting blood glucose
- Inhibits lipid peroxidation (the oxidative deterioration of lipids); normalizes lipids
- Anti-ulcer activity – found to possess potent anti-ulcerogenic as well as ulcer-healing properties and could act as a potent therapeutic agent against peptic ulcer disease; decreases incidence of gastric ulcer.
- Reduces the effect of irritating drugs on the stomach lining and increases the production of protective stomach mucous.
- Improves the digestive system – such as indigestion, heartburn, bloating, vomiting, intestinal gas, diarrhea, dysentery, intestinal worms and induces appetite.

- Enhances the efficient digestion, absorption and use of nutrients from food and other herbs.
- Improves the digestive fire (agni)
- Helps in the elimination of toxins
- Diminishes "bad breath"
- Antimicrobial effects – inhibits the growth of E. coli
- AYURVEDA: Tulsi is a remover of worms and parasites, when the fresh juice or strong tea is taken with honey; the sweetness excites the parasites drawing them out of their hiding places.
- AYURVEDA: Taking Tulsi, as a tea, with dried ginger is a common treatment for indigestion.
- AYURVEDA: Tulsi seeds soaked in water make a type of kheer or pudding that is useful in dysentery.
- AYURVEDA: Tulsi is one of the rare 'digestives' that stimulates and nourishes the agni at all the levels.

**ENDOCRINE SYSTEM** – (pituitary, thyroid, parathyroid, adrenal, thymus, pineal, pancreas, ovaries, and testes)

Adaptogenic actions:

- Stress resilience – increases the capacity to cope and adapt to changing and challenging environments, and reduces the negative physical and psychological effects of stress; anti-stress
- Energy and performance – improves stamina and endurance; reduces fatigue; enhances motor activity and physical performance; increases the body's efficiency in using oxygen; enhances protein synthesis and strength
- Improve endurance and resistances when tested against a battery of stress-induced conditions indicating non-specific mode of actions
- Enhances the body's natural bipolar adaptogenic homeostatic balancing capacity and helps return stressed physiological systems to normal
- Supports normal cortisol (hydrocortisone); supports the stress response assisting in the normalization of cortisol; balances and regulates cortisol levels
- Lowers the stress-induced release of adrenal hormones
- Long-term subtle effect on the physiological functions of the body; can normalize the altered physiological functions of illness over time.
- Anti-aging effect – by increasing adaptive effects
- AYURVEDA: Increases Ojas (essence that supports the body) and is adaptogenic.

Other actions:

- Results with chronic fatigue syndrome
- Calms the mind – improves both cellular and humoral immunity

**IMMUNE SYSTEM** – (inflammatory response, white blood cells, lymph glands)

- Strengthens and modulates the immune system – immunomodulatory effects
- Improves immune response – enhances humoral (body fluids) and cellular immunity
- Increased cell-mediated immunity – both in the number of immune defense cells and also in their activity; increases T-cell activity
- Anti-inflammatory action – reduces the painful and dangerous inflammation that plays a key role in various forms of arthritis, cancer and degenerative neurological disorders (COX-2 inhibition)
- Anti-inflammatory similar to aspirin and ibuprofen, but unlike aspirin and ibuprofen it is not irritating to the stomach. Modulates inflammation (COX-2 inhibition)
- Immunostimulant properties – inhibits antigen-induced (allergic) histamine
- Reduces asthmatic and other adverse immune reactions
- Used in the treatment of colds and flu
- Antiviral properties – success with viral hepatitis, viral encephalitis and AIDS-virus
- Contains eugenol – known to be anti-viral and one of the best herbal antibiotics
- Antioxidant – reduced oxidative stress
- Anti-allergic – management of immunological disorders including allergies and asthma
- Antibiotic protection – offers significant natural antibacterial, antiviral and antifungal properties thereby helpful in treating many serious systemic diseases, as well as localized infections
- Anti-aging – supports the body and mind in reducing the negative effects of aging
- Relieves canker sores and useful in pyorrhea (gum infection)

### **INTEGUMENTARY OR SKIN SYSTEM** – (skin, sweat)

- Benefits skin – reduces eczema, psoriasis and various other skin disorders
- Helps difficult skin diseases like leprosy and staph infection of the skin
- Antiseptic agent for wounds
- Antibiotic protection
- Essential oil has antifungal and antibacterial activity
- Contains ursolic acid – one of the cosmetic industry's latest favorites because not only does it quickly heal skin, returns elasticity and removes wrinkles, but it is so good at preventing and curing skin cancer
- AYURVEDA: Tulsi applied topically as a paste with black pepper is used to treat ringworm and eczema
- AYURVEDA: A paste of the leaves applied externally is useful to reduce the irritation of insect bites and parasitical diseases of the skin; also applied to the finger and toe nails during fever when the limbs are cold.

### **MUSCULAR SYSTEM** – (skeletal, smooth and cardiac muscles)

- Anti-arthritis activity
- Anabolic activity – enhances protein synthesis, muscle mass and strength
- A remedy for sore eyes and night-blindness (vitamin A)
- AYURVEDA: To treat conjunctivitis the juice of Tulsi mixed with honey is used as an eye wash to either wash the eyes or spread on the tender skin below the eye.

### **NERVOUS SYSTEM** – (brain, spinal cord, nerves)

- Anti-convulsions potential
- Central nervous system effect – increased motor activity
- Analgesic activity
- Normalizes neurotransmitter levels in the brain
- Influences the neurochemistry of the brain in a manner similar to antidepressant medications
- Nerve tonic; sharpens memory
- Antipyretic – prevents, removes or reduces fevers
- Treatment for viral encephalitis, malaria and typhoid; The Imperial Malarial Conference has declared Tulsi to be a genuine remedy for malaria.
- Drug and nicotine withdrawal
- AYURVEDA: Tulsi oil is also used as ear drops in case of pain. Add fresh garlic juice after you cook Tulsi in mustard oil and then place this warm medicated oil in the ears to remove ear aches.
- AYURVEDA: The fresh juice of Tulsi taken with black pepper powder cures periodic fevers. In case of acute fevers, a decoction of the leaves boiled with powdered cardamom in half a liter of water and mixed with sugar and milk brings down the temperature.

### **REPRODUCTIVE SYSTEM**

- Anti-fertility effect – may reduce the estrogen hormone levels in females and decrease the sperm count in men
- AYURVEDA: Aphrodisiac – powdered Tulsi root with clarified butter (ghee)

### **RESPIRATORY SYSTEM** – (respiration, nose, trachea, lungs)

- Contributes generally to respiratory health – supports healthy pulmonary function; provides lung and bronchial support
- Helpful in the treatment of a variety of serious allergic, inflammatory and infectious disorders affecting the lungs and related tissues
- Used to strengthen the respiratory system – one of the main herbs for coughs and colds
- Used for bronchial asthma; expectorant and bronchodilator effects
- Used against respiratory ailments including bronchitis and tuberculosis

- Anti-catarrh (inflammation of mucus membranes) and anti-phlegm (mucus)
- Used for rhinitis (inflammation of nasal mucus membrane)
- AYURVEDA: Can serve as a cure and a prophylactic as well for the severe acute respiratory syndrome (SARS) - The root of the tulsi plant should be crushed and boiled with turmeric powder for a few minutes, after which it should be filtered. Consuming two spoonfuls of this potion twice daily will cure SARS and prevent contracting of the disease.
- AYURVEDA: Tulsi tea with honey is a good expectorant especially in cases where fever is involved.
- AYURVEDA: The juice of the leaves is given in catarrh and bronchitis in children.
- AYURVEDA: Chewing the leaves relieves cold and flu. A decoction of the leaves, cloves and common salt also gives immediate relief in case of influenza.

#### **URINARY OR EXCRETORY SYSTEM** – (kidney, bladder)

- Seeds are used in curing urinary problems.
- Seeds are used as diuretics and for facilitating urination.
- Strengthening effect on the kidney.
- AYURVEDA: In case of kidney stone the juice of basil leaves and honey, if taken regularly for 6 months it will expel them via the urinary tract.

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### **ADDITIONAL USES AND BENEFITS OF HOLY BASIL**

#### **PSYCHO-SPIRITUAL** – mind-body connection

- Aids meditation and delivers nutrients to the mind necessary for the experience of enlightenment.
- Opens the heart and mind
- Elevates mood and spirit
- When used in the prevention and cure of illness and disease – “ritual” becomes a spiritual component of its efficacy. Perhaps its role as a healing herb was instrumental in its "sacred" implication.
- Spiritually endowed and empowered to transform souls
- AYURVEDA: Ayurvedic physician and author Dr. Vasant Lad says that Tulsi affects the “energy field.”
- AYURVEDA: Tulsi performs the indispensable spiritual function of balancing and toning the energetic chakra system. Specifically, it has an affinity with the second chakra (third eye).
- AYURVEDA: “Its quality is pure sattva... Basil opens the heart and the mind, bestowing the energy of love and devotion (bhakti). Sacred to Vishnu and Krishna, it strengthens faith, compassion and clarity. Basil gives the protection of the divine by clearing the aura and strengthening the immune system.” (“The Yoga of Herbs” by Frawley & Lad)
- AYURVEDA: Tulsi tea with honey promotes clarity of mind
- AYURVEDA: Wearing a Tulsi mala, a necklace of 108 beads carved from Tulsi’s woody stems and worn around the neck or wrist, is a common way to benefit from the power of her presence which includes psychic protection and spiritual nourishment. In the Padmapurana Lord Shiva tells the sage Narada about this power: *“Oh Narada, wherever Tulsi grows there is no misery. She is the holiest of the holy. Wherever the breeze blows her fragrance there is purity. Vishnu showers blessing on those who worship and grow Tulsi. Tulsi is sacred because Brahma resides in the roots, Vishnu resides in the stems and leaves and Rudra resides in the flowering tops.”*
- INDIA: In India, many families keep a Tulsi plant in their homes, where it is held to create an atmosphere of peace and prosperity. It has long been used for its purifying influence.

#### **STRESS**

Stress may be the number one cause of illness and disease. The American Institute of Stress reports as many as 75% to 90% of visits to healthcare professionals are related in some way to the adverse effects of stress. In survey after survey, Americans identify stress as their number one health concern today and more than 50% of adults in the U.S. report high stress on a daily basis. Adapting to stress is a natural mechanism for human survival. But the stress of modern living has increased levels of stress adaptation. Too much stress can seriously affect performance, health, and well-being.

Holy basil has been used successfully in the prevention and treatment of many stress disorders – see chart.

### Holy Basil's Role in the Prevention and Treatment of Stress Disorders

Stress Disorder	Prevention & Treatment
Disturbed central nervous system (CNS) – psychosis, depression, hypertension, schizophrenia	Calms the central nervous system
Reduced immunity – chronic and viral infections	Improves cellular and humoral (fluids) immunity
Muscular fatigue	Anti-fatigue (improves stamina)
Increased adrenaline – increased blood pressure and heart rate	Reduces blood pressure and heart rate
Increased intestinal motility (movement by independent means) – emotional diarrhea, irritable bowel syndrome	Decreases intestinal mobility
Increased coagulation (thrombosis - blood clots)	Anti-coagulant and Anti-thrombotic
Increased free radicals (cell damage); results in heart attacks (arteriosclerosis – hardening of the arteries), diabetes, cataracts and other diseases	Antioxidant (reduces cell damage)
Bacterial, fungal, viral and parasitic infections (biological stressors) – such as pneumonia, colds, herpes	Anti-bacterial, anti-fungal and anti-viral
Radiation, cancer, leukemia (physical stressors)	Anti-radiation and anti-cancer

Adapted from *Tulsi* by Dr. Narendra Singh (2002)

### ANTI-CANCER; RADIATION AND CHEMOTHERAPY PROTECTION

- Anti-cancer – reduces tumors
- Useful in cancer protocols
- Ursolic and oleanolic acids have anti-tumor activity
- Anti-oxidative – protects healthy cells from radiation damage [anti-cancer]
- Protective effect against chemical carcinogens
- Radioprotective properties – ability to protect the DNA of the body from the dangerous, mutating power of various forms of radiation.
- Reduces the cell and tissue damage caused by harmful rays of the sun, TV, computers, X-rays, radiation therapy, high altitude air travel, etc. Protection against radiation-induced chromosome damage; enhancement of bone marrow radioprotection
- Protects against chemotherapy-induced damage
- Protects the heart from damage caused by a widely used chemotherapy drug, Adriamycin (doxorubicin) – protects components of heart and liver cells from oxidative damage caused by free radicals generated by the chemotherapy.

## HEALTH PROMOTION

- Holistic health promotion – enhances general health and well-being, having positive overall effects on the body and mind.
- Allopathic medicine complement – enhances the effectiveness and reduces the negative and often dangerous side effects of many standard modern medical treatments.
- Anti-aging effects – helps retain youthful vigor, and slows the biological aging process by reducing the impact of physiological aging factors.
- Provides significant antioxidant and free radical scavenging protection. Neutralizes dangerous biochemicals that contribute to premature aging, cancer, and degenerative diseases.
- Enhances the efficient digestion, absorption and use of nutrients from food and other herbs.

## CONCLUSION NOTE

Tulsi has been recognized for thousands of years to be one of India's greatest healing herbs. Tulsi in Sanskrit means "one that is incomparable" – one that does not tolerate or permit similarity.

What other herb claims to have benefits for hundreds of conditions with thousands of years of empirical experience and use? Tulsi is incomparable and as such must be taken seriously. The knowledge of holy basil needs to spread for the benefit of all humanity.

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## DOSAGE

Dosing of herbal preparations is highly dependent on a variety of factors such as growing and harvesting conditions, plant parts and extraction methods used. The dosage form chosen by manufacturers and the different chemical markers used is also variable. Therefore ranges must be employed as guidelines.

### Dried Leaves

- Holy Basil is generally effective in a single dose of 300mg to 600mg of dried leaves daily for preventive therapy, and 600mg to 1800mg in divided doses daily for curative therapy.
- Dr. Narendra Singh recommends a dose of 2 grams of the freshly dried herb twice daily for several months.

### Tulsi (or Holy Basil) Tea

- Holy basil can also be taken as tea (usually around 2 grams a cup). A cup of Tulsi tea simply from an infused tea bag is an excellent prophylactic and a good direct medicine for many mild therapies.

### Other dosage information

- Classically, a typical dose is 10-20 ml of the fresh leaf juice.
  - Herbal decoction and dose in most cases; an ounce of dried herb in 16 ounces of water and gently simmered for 30 minutes, then taken three times a day in 5 ounce quantities.
  - A child's dose is usually a quarter to half that of an adult dose.
  - Supercritical extracts and other extracts – as directed.
  - Dr. Narendra Singh in his book on *Tulsi* reports that after three decades of clinical research that the adaptogenic/antistress activity of holy basil (including an increase in stamina and immunological resistance) is likely to take one week to one month to develop and gives appreciable improvements in health lasting for a month or more after discontinuation. For preventive measures, taking HB for at least a month is recommended.
  - Higher doses (400 milligram/kilogram) of are speculated to increase central nervous system (CNS) activity and/or reduce stress. Doses less than 200 milligram/kilogram are thought to decrease CNS activity.
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## PRECAUTIONARY INFORMATION: CONTRAINDICATIONS AND SAFETY

### Safety and contraindications

- Holy basil has a long history of safe traditional use in India. There is no indication of safety concerns about HB in the literature and no human drug interaction data is currently available.
- Holy basil is generally a very safe healing herb. It is advised to become familiar with manufacturers and their products before assuming that the product is safe and effective.
- Holy basil is available as a dietary supplement in the United States under the Dietary Supplement Health and Education Act of 1994 (DSHEA).
- Holy basil is synergistic with other herbs.
- UK – HB is on the general sales list
- Canada – approved as an over-the-counter drug
- France – considered Traditional Medicine
- Germany – not yet Commission E approved.

### Precautions

- Holy basil is not recommended for therapeutic use during pregnancy and lactation and should not be given therapeutically to infants or toddlers. Studies from the 1970's suggested that holy basil might have a mild anti-fertility effect in animals. Although this has not been shown to occur in people, if you are pregnant or trying to be, do not take medicinal doses of holy basil.
  - It has been reported that holy basil may decrease blood sugar – this may be a concern for people who are hypoglycemic (low level of sugar in the blood)
  - HB has mild blood thinning qualities
  - [Ayurvedic practitioners claim that Ayurvedic herbs are less toxic due to their slow bioavailability.]
  - Regarding basil – most likely sweet culinary basil (*Ocimum basilicum*), it has been said:
    - Basil should be used cautiously by persons with diabetes.
    - Basil may increase the hypoglycemic effects of insulin and/or oral antidiabetics; do not use concurrently.
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## ADDITIONAL

### Differentiating between Rama, Krishna and Vana Tulsi

When using Tulsi one of the first questions people have is, 'Which Tulsi should I use?' Rama Tulsi, meaning white, and Krishna Tulsi, or black, are both varieties of *Ocimum sanctum*. Rama Tulsi is actually very green while Krishna Tulsi is deep magenta, often bordering on purple. Though Krishna is used more for its clearing action, as in clearing toxins out of the head, and Rama is used more for its dipana actions, to increase the digestive fire, for the most part the two varieties can be used interchangeably. The chemotypes of the two varieties can vary greatly depending on when and where they grow. Often Tulsi is blended evenly between Rama, Krishna and Vana varieties or perhaps a 2:2:1 blend [Prashanti de Jager].

### Tulsi and children

Like adults, children also love Tulsi tea. Tulsi, being a relatively gentle herb, is frequently used in cases of pediatric fever, cough, asthma and abdominal disorders, or as an enjoyable prophylaxis.

Tulsi is known as “the incomparable one”, “the mother medicine of nature”, “the elixir or life”, and “the queen of herbs”

## TULSI’S HISTORY AND MYTHOLOGY IN INDIA

*“The Tulsi is the most sacred plant in India. No plant in the world commands such...universal respect, adoration and worship from the people as does Tulsi. It is the plant par excellence.” [Indian Botanical Folklore]*

*“A house with a Tulsi plant in front of it is a place of pilgrimage... The wind that carries the aroma of Tulsi spreads purity wherever it blows.”*

In India, many traditional Hindus grow Tulsi and have at least one living Tulsi plant. They use its leaves in routine worship; they feel protected by its sacred aura; and they use rosary beads for meditation made from its cut stems.

Tulsi is used by Ayurvedic practitioners and laypersons for many health ailments and it has both medicinal and spiritual significance in Ayurveda. Tulsi is also used as a valued culinary herb closely related to the sweet basil plant widely available in the West.

The Tulsi plant has ties with the Hindu god Vishnu (the preserver) and his worship. Tulsi is acclaimed in India as possessing sattva (energy of purity) and as being capable of bringing on goodness, virtue and joy in humans. In the Puranas (sacred Hindu text), everything associated with the Tulsi plant is holy, including water given to it and soil in which it grows, as well as all its parts, among them leaves, flowers, seed, and roots. There are many legends from India regarding the Tulsi plant.

Tulsi is classified as a “rasayana,” an herb that nourishes a person’s growth to perfect health and promotes long-life. For perhaps 5000 years, Tulsi has been considered truly legendary of India’s healing herbs. From general well-being to acute critical imbalances, Tulsi’s magnanimous healing nature is used and honored daily by millions.

Tulsi has a long history of medicinal use, and is mentioned in the oldest ancient Sanskrit Ayurvedic text – *Charak Samhita* (written perhaps 600 BC and compiled approximately 400 CE). Tulsi is also mentioned in the *Rigveda* (Book of Eternal Knowledge), thought to have been written around 5000 BC.

Tulsi in Sanskrit means “one that is incomparable” – one that does not tolerate or permit similarity. It is pronounced in English as “tool-see.”

Positive judgments by Indian enthusiasts on the health and therapeutic merits of Tulsi are as pronounced as Chinese and East Asian convictions about the merits of ginseng.

AYURVEDA: Tulsi was recognized thousands of years ago by the ancient rishis to be one of India’s greatest healing herbs. They saw that this herb is so good for health and healing that they declared that it was God herself. Where most herbs are used for two or three diseases, Tulsi is recommended for hundreds of serious disorders and is actually highly recommended as a daily prophylactic to prevent disease. They established Tulsi as one of the eight indispensable items in any Vedic worship ritual to ensure that every house and temple had at least one Tulsi bush in its proximity, thus allowing everybody easy access to her outstanding healing power. Still today Tulsi, which can be found planted around most homes in India, is the most respected and honored herb there due to its continuing importance in healing, religion, spirituality, culture, and in decorative aesthetics. It is so readily found, now even in the West, that one of its names is Sulabha, ‘the easily obtainable one.’ [Prashanti de Jager]

INDIA: Holy basil has also been used in the traditional systems of medicine of Siddha (based largely on Ayurveda) and Unani (founded by Hakim Ibn Sina).

AYURVEDA: Destroyer of kapha (phlegm) and pitta (bile); Regulator of three doshas. Tulsi is used in over 300 Ayurvedic medicines

## HOLY BASIL PRODUCTS

We recommend the organic holy basil products manufactured by New Chapter (Vermont). They include:

- New Chapter: Supercritical Holy Basil
  - *Ocimum sanctum*, (leaf), supercritical extract (min. 7% eugenol - 6.6 mg and min, 4% caryophyllene - 3.8 mg) – 94 mg. *Ocimum sanctum*, (leaf), hydroethanolic extract (minimum 1% triterpenic acids - 5.4 mg including ursolic acid oleanolic acids, and minimum 1% rosmarinic acid - 5.4 mg) – 536 mg.
- New Chapter: Holy Basil
  - Holy Basil (*ocimum sanctum* leaf; minimum 2% ursolic acid) - 800 mg
- New Chapter: Zyflamend (compound formula)
  - Contains 100 mg of Holy Basil extract; also contains Rosemary, Turmeric, Ginger, Green Tea

### Other recommended products include:

- Om Organics (Colorado): Organic Tulsi Tea (bulk and tea bags)
- Planetary Formulas (California): Holy Basil Extract (5:1; yielding 9 mg ursolic acid) - 450 mg
- MediHerb (Australia): Andrographis Complex – formula containing Echinacea, Holy Basil and Andrographis; Holy Basil leaf 4:1 extract (from *Ocimum teniflorum* leaf 500 mg) – 125 mg.
- Metagenics (California): Exhilarin – formula containing Holy Basil, Ashwagandha, and Bacopa with Supportive Herbs; Holy Basil Leaf Extract (*Ocimum sanctum*) - 250 mg

Note: We are not affiliated with any of these companies and only recommend these products based upon personal experience and company reputation. There are certainly other reputable products not listed.

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## ACKNOWLEDGEMENTS

Some of the information in this report came from the following sources

- *Tulsi: The Mother Medicine of Nature* by Dr. Narendra Singh
  - “Tulsi Queen of Herbs: India’s Holy Basil” by Ralph Miller and Sam Miller
  - “Sri Tulsi ji: The Incomparable Queen of Herbs” by Prashanti de Jager
  - *Holy Basil: Tulsi (A Herb)* by Yash Rai
  - Donnie Yance – writings on adaptogens
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## REFERENCES

### Articles on Tulsi - Holy Basil:

- “Tulsi Queen of Herbs: India’s Holy Basil “  
© Ralph Miller and Sam Miller [PDF format]  
<http://www.omorganics.com/Tulsi23Jul03.pdf>
- “Sri Tulsi ji: The Incomparable Queen of Herbs”  
© by Prashanti de Jager  
[http://www.omorganics.com/tulsi\\_article.htm](http://www.omorganics.com/tulsi_article.htm)

### Web site

- Holy-Basil.com – [www.holy-basil.com](http://www.holy-basil.com)
  - Health Benefits of Holy Basil – <http://www.holy-basil.com/12039.html>

### Books on Tulsi

- *Tulsi: The Mother Medicine of Nature* by Dr. Narendra Singh and Dr. Yamuna Hoette with Dr. Ralph Miller. International Institute of Herbal Medicine (Lucknow, India). 2002
- *Holy Basil: Tulsi (A Herb)* by Yash Rai. Navneet Publications India Ltd. 2002

### Supplier of Holy Basil Seeds

- Seeds of Change (Santa Fe, NM) – <http://www.seedsofchange.com>
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## LEGAL

### DISCLAIMER

In accordance with federal guidelines pertaining to any ingestible products, we are required to state that the data in this report is provided for informational purposes only, and that it is not meant to "substitute for the advice provided by your own physician or other medical professional", nor is it intended for "the diagnosis, treatment, cure, or prevention of any disease." We must also advise that you should "not use the information contained herein for diagnosing or treating a health problem or disease, or prescribing any medication," and that "The FDA has not evaluated any statements in this report." The information in this report has been obtained from scientific research and sources considered reputable in the specific area of discussion.

### HEALTH DISCLAIMER

Holy basil is not to be used if you are pregnant, breastfeeding, or if you may become pregnant. One should consult a qualified professional who knows the benefits of herbs for any personal health recommendations.

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## VARIETIES OF TULSI

