

“Herbal Remedies Among World Cultures: Origins, Preparations and Uses”

Clementina E. Adams

Professor Emerita
Clemson University
USA

Abstract

This article provides an overview of some natural remedies, such as herbs, and plants also called Phyto remedies. There is information about the use of those remedies to treat diseases. It will discuss the way diseases have been understood by the main populations in the world, as well as the different elements and processes used to treat those diseases. It includes the uses of herbal and phyto remedies according to specific populations in the world including Greeks, Asians, Indians, Europeans, Africans, Native Americans, and Latin Americans. Information is provided on the names, uses, and preparation of some of those remedies, as well as herbal/plant uses, side effects, and possible interactions between herbs/plants and prescribed drugs. Cautions for users of natural medicines, when taking prescribed drugs. Some advances in ethnopharmacology are stated, especially in the integrative approach to the production of drugs. It includes six tables with plant-specific information on names, uses, and preparation. A useful reference list is also provided.

Keywords: Ethno, Phyto, Ethnopharmacology, Tonic, Imbalance

In present times there has been an increase in diseases among populations in various parts of the world. Some of those diseases can be caused by allergies related to a variety of triggers such as herbs, nuts, certain foods, humidity (mold and mildew), and animals, especially cats. Other diseases are caused by imbalances in our respiratory or circulatory systems, organs degeneration, or through transmissible diseases. Currently, childhood diseases have been controlled with the use of appropriate vaccines, but some object to the use of those vaccines, either based on religious or personal beliefs. That has resulted in the resurgence of those highly contagious diseases.

Pharmaceutical companies have taken advantage of recent technological advances to provide the public with well-advertised medicaments. However, the side effects of most of those medicines have created a dilemma for people needing them. On the one hand, some side effects that improve physical appearance through weight loss have been welcomed by the users as well as for those who do not actually need but simply want such medicines. As examples, Ozempic and Manjaro developed to control diabetes have been used by the general population based on their side effects, such as losing weight and some benefits for treating heart and circulatory system issues. Another medicine developed for diabetes also results in weight loss is Wegovy which has been shown to also have the positive side effect of lowering cardiovascular risks; however, it seems to have a higher number of negative side effects that consumers might ignore. Consumers should be made fully aware of all the side effects associated with the use of those medicines.

The high-level consumption of prescribed and over the counter medicines has provided a highly lucrative incentive for medical supplement laboratories and pharmaceutical companies to create their own or derive them from similar components. The increasing number of television and radio ads, internet messages, and apps, among others, have contributed to the increasing use of those medicines, especially now that more people are tracking their body Mass Index (BMI).

Most people cannot afford the available prescription medicines, such as those mentioned before and are on the lookout for similar or better alternatives. Safe and economic alternatives to either prescribed or recommended medicines derived from nature, are always available in nature. Herbal or phyto remedies, also called folk remedies, offer a natural and safer way to treat a considerable number of diseases. Since ancient times folk remedies have been an available and practical source of treatment for many people around the world. The use of herbal and plant medicine has distinct levels of use among the world population. Plants and herbs have been researched and documented for decades and are found to be effective for the treatment of commonly known illnesses. The World Health Organization (WHO), defines traditional medicine as:

The total sum of the knowledge, skills, and practices based on the theories, beliefs, and experiences from Indigenous to different cultures, whether explicable or not, used in the maintenance of health and in the prevention, diagnosis, improvement or treatment of physical and mental illness. (WHO, 2015).

Roldán (2003), found that the word phyto also known as phytotherapy or phyto-remedies, comes from the Latin root, phyto, that means plant. Cartwright (2013) focused on classifying herbal remedies, also known as, folk medicine, traditional medicine, alternative medicine, Indigenous medicine, or natural medicine. Roldán also provides a list of herbal remedies, their uses and preparation, e.g., in table 1.

Table 1: Some Herbal Remedies used by Hispanic Americans: Prepared by the Author Based on Roldán, A.A. (2003) *Las 40 plantas medicinales más populares*.

Spanish name	English name	Uses	Preparation
<i>Anís</i>	Anisette	As a laxative	Boil leaves/flowers in water and drink the tea.
<i>Arnica</i>	Golden aster	For bruises	Boil flower heads into a cream and apply.
<i>Gordolobo Pulmonaria</i>	Lung herbs	As an antiseptic	Boil young leaves in a liter of water and take a teaspoon after meals.
<i>Azahar</i>	Azahar	For spasms and cramps	Select 6 to 8 flowers and two grams of leaves and boil.
<i>Cola de caballo</i>	Horsetail	As a diuretic and against dysentery and gonorrhea	Brew teas made of the stems.
<i>Eucaliptus</i>	Eucalyptus	For colds, pharyngitis, and laryngitis.	Brew tea with leaves.
<i>Gordolobo</i>	Cudweed	Commonly used for coughs and sore throats	Brew a handful of this herb in a pot of water and drink.
<i>Boldo/ Abedul</i>	Boldo	For digestion and as a treatment for hepatitis.	Brew tea made from the leaves and take it after meals.
<i>Manzanilla/ Valeriana</i>	Chamomile/ Valerian	As a general tonic and calming agent, for heart palpitations, and irritability.	Brew tea made from the leaves and have a cup after meals.
<i>Nogal</i>	Walnut	For washing skin sores and curing thrush in infants	Prepare tea by brewing some of the leaves.
<i>Romero</i>	Rosemary	To improve digestion	Prepare tea by brewing some leaves.
<i>Ruda</i>	Rue	To induce menstruation; poisonous in excess.	Brew tea from leaves.
<i>Sauco</i>	Elderberry/ Linden	To alleviate coughing	Brew tea using flowers.
<i>Tilo</i>	Justicia Pectoralis	To help with renal problems	Boil roots or flowers like tea.

To better understand the variety of acronyms or other important terms used to understand folk remedies, The US National Library of Medicine, 2003, par.1, includes a decoding of those terms to make their meanings clearer: Complementary and Alternative Medicine (CAM); National Center for Complementary and Integrative Health (NCCIH); and National Center for Complementary and Alternative Medicine (NCCAM). John Hopkins University, 2024, based on research conducted there, presented a list of other names given to herbal remedies such as: folk remedies, herbal products, botanical products, or phytomedicines, e.g., in Table 2.

Table 2: *Some of the Most Common Herbal Supplements, adapted by the Author, Based on Hopkin's Chart.*

Herbal/Plant	Description and uses
Black Cohosh	A shrub-like plant of eastern North America. It's generally used for menopausal conditions, painful menstruation, uterine spasms, and vaginitis.
Purple coneflower Echinacea	U.S. native plant, also called the purple coneflower. It is used to straighten the body's immune system and for the prevention of colds and flu.
Evening Primrose	A bright yellow, night-blooming flowering plant. Its oil help to reduce symptoms of arthritis and premenstrual syndrome (PMS).
Feverfew	This pain-relieving plant have been used for migraine, headaches, and menstrual cramps.
Garlic	Generally used for cardiovascular conditions, such as high cholesterol and triglyceride levels linked to atherosclerosis.
Gingko biloba	This herb is used for some conditions linked to aging, such as poor circulation and memory loss.
Ginseng	Used as a tonic to increase the overall body tone. It's also helpful in raising energy levels and diminishing stress.
Goldenseal	Native of the U.S., popular for its healing properties and antigerms qualities. It is used for colds and flu, and to soothe an inflamed or sore nose lining.
Green tea	This herb is used to combat extreme tiredness (fatigue), prevent arteriosclerosis, certain cancers, lower cholesterol, and for weight loss.
Hawthorn	This is used for several heart-related conditions. It's supportive in treating angina, atherosclerosis, heart failure, and high blood pressure.
Saw palmetto	This may be used for an enlarged prostate. This is a common condition in men over age 50.
St. John's wort	Wild growth with yellow flowers has been used for centuries to treat mental disorders. Today it's a popular recommendation for mild to moderate depression.

For generations, there have been various theories regarding the definition of what a disease is and its causes. The Greeks for example, believed that a disease is caused by the imbalance of four humors: blood, phlegm, black bile, and yellow bile (Benzie and Wachtel-Galor, ed., 2011; Nutton, 1997). For Asians, a disease is caused by an imbalance between yin and yang. In India, a disease is known as Ayurveda, with three elemental humors: air and spice (wind), fire and water (bile), and water and earth (phlegm), (Srinivasa, 2012). To yogis in India a disease is known as *prana*. (Carteret, 2011, Struthers, Roxanne, Valerie V. S., Eschiti, S., and Patchell, Beverly, 2004, and NCCIH, 2013).

For Native Americans, a disease is seen as an imbalance in self-harmony (Struthers, Roxanne, Valerie V. S., Eschiti, S., and Patchell, Beverly, (2004)., 2005; Trotter, 2004). “First, the Greeks came with the notion that diseases are caused by an unbalance of humors. This concept is still alive in Latin American countries where it has survived as an unbalance between cold and heat in the body.” (Adams, 2018).

In Africa, diseases are caused by an imbalance of spiritual and physical elements (Okeke, Okafor, and Ugochukwu, 2006; Tabi, Powell, and Hodnicki, 2006). In Latin America, illnesses are explained by natural healers as an imbalance between cold and heat in the body, (Neff, 2005; Lunny, 1997; Tafur, Crowe, and Torres, 2009).

To ensure the proper and effective use of herbal or phyto remedies, family involvement is incredibly important, especially that of mothers and grandmothers. The “curanderos,” usually community elders, have experience in diagnosing illnesses and are well known for treating them in their neighborhoods (Liñan, 2000; Neff, 2005).

Based on years of experience, the curanderos have cataloged a variety of diseases and their corresponding treatments, for example, diabetes, among the hot illnesses, can be treated with cactus infusions, aloe vera juice, or bitter melon with additional flowers, herbs, and roots, (Padilla, Biggerstaff, and Mehler, 2001; Baer, García de Alba, Mares, Placentia-Campos, and Goslin, 1998; Barsh, 1997; Becerra and Inglehart, 1995; Bose, Vashistha, and O’Loughlin, 1983; Harwood, 1971). The Old Farmer’s Almanac, 2020, offers a list of home remedies available to every household.

The Mezzo-American Indians established the first medical schools in Mexico and developed a very sophisticated system that categorized diseases and treatments with a pharmacopeia of over 5,000 well-studied and safe herbal medications that were documented in the Badiano Codex of 1552 (De la Cruz, 1939). For a more complete listing of folk remedies used by lay healers, with additional information on their efficacy and safety, see Table 1 as well as Firenzuoli and Gori, 2007, and Chevalier, 2016.

It is estimated that up to four billion people (representing 80% of the world’s population) living in developing countries rely on herbal medicinal products as a primary source of healthcare. They see traditional medical practices as an integral part of the healing culture in those countries, (Bandaranayake, 2006; Bodeker et al., 2005; Mukherjee, 2002; Snyderman, 2002). However, recent facts indicate that places like the United Kingdom (UK) have a historical tradition of using herbal medicines, (Nissen and Evans, 2012). The use of herbal remedies is also widespread and well established in many other European countries, (Calapai, 2008; WHO, 2003). Examples of those remedies are in table 3.

Table 3: European medicinal plants from traditional uses to scientific knowledge

Medicinal plant	Traditional uses	Scientific knowledge
Bergamot (<i>Citrus bergamia</i>)	Fragrances, disinfectants, healer	Reduce inflammation and triglyceride levels.
Chaste tree (<i>Vitex Agnus cactus</i> L.)	Anxiety, convalescence, great sedative	Used to alleviate premenstrual syndrome
Coltsfoot (<i>Tussilago fanfara</i> L.)	Cough sedative	Hepatotoxic and Mutagenic alkaloids
Garlic (<i>Allium sativum</i> L.)	Influenza and diarrhea, aphrodisiac and abortive. Used against parasites and witches	Platelet antiaggregant. Hypolipidemic and hypotensive herbal remedy
Greater celandine (<i>Chelidonium majus</i>)	Hepatobiliary diseases (yellow latex for yellow bile)	Hepatotoxic
Germander (<i>Teucrium chamaedrys</i> L.)	Depurative, digestive, slimming	Hepatotoxic
Marigold (<i>Calendula officinalis</i> L.)	Depurative gastric ulcer, liver, dysmenorrhea.	Emollient and healer
St. John's wort (<i>Hypericum perforatum</i> L.)	Burns, gastritis, ceremonial uses	Antidepressant, Induction of CYP3A

Regarding Latin America, following the native Indigenous beliefs, an illness is explained as an imbalance between cold and heat in the body (Neff, 2005). In other words, being healthy requires avoiding extreme temperatures, which influence vasocontraction and metabolic rates (Lunny, 1997; Tafur, Crowe, and Torres, 2009). According to this theory, the following are examples of hot diseases: pregnancy, hypertension, diabetes, acid indigestion, shock (susto), evil eye (ojo), and bile (bilis). On the other hand, menstrual cramps, (frío de la matriz), the common cold (coryza), pneumonia, regular indigestion (empacho), and colic are in the realm of cold diseases.

In China, according to Benzie and Wachtel-Galor, editors (2011), the use of traditional herbal preparations accounts for 40% of the total medicinal consumption, while in Ghana, Mali, Nigeria and Zambia, the first line of treatment for 60% of children suffering from malaria is that of herbal medicines. In Europe, North America, and other industrialized regions over 50% of the population have used complementary or alternative medicine at least once, while in Canada, 70% of the population have used complementary medicine at least once (Benzie, and Wachtel-Galor, eds., 2011). Around 10% of adults in North America use herbal remedies, while in Asia, Latin America, and native North America, more than 80% of women have trusted the benefits of natural remedies (Sturluson, (n.d.).

In the US, the Gullah population, composed of the black inhabitants of Sea Island, SC., are among the users of herbal remedies. They seem to have followed African traditions and crafts. Their unique language is a mixture of African and English; consequently, the names of some herbs are different than the US English counterparts. Their herbal remedies consist of a few plants, usually brewed with water, such as: Blackberries for stomach pains, diarrhea, and dysentery; Life Everlasting for cramps, fever, and toothache; Sampson's snakeroot, also known as echinacea or purple corn flower, for indigestion. Emotional healing was performed by a healer, who would place his hands on the patient, providing peace in the healing process with the use of balms and blessings. The healer would remove spells with the use of herbs and oils. For more information on the Gullah population's use of such approaches, see D'ura, 2021 and Mitchel, 1999, and table 4.

Table 4: Some Gullah Herbal Remedies, adapted by the Author, Based on Mitchell's Research, 1999.

Herb Names	Use		Other Herb Names	Use
Aloe Leaves	Flatulence, colic, rattlesnake bites		Aloe	Diuretic
Angelica Tree Root	Serpent's bite		Angelica Tree Tubers	Stimulant, chronic rheumatism, skin eruption
Artichoke, Jerusalem Leaves	Tonic and diuretic		Artichoke, Jerusalem, Tubers	Eaten as food
Aysha berry, Black Cohost	Worms, chills, fever		Aysha berry, Black Cohost	Tonic for mucus tissues, narcotic, and sedative
Bitter Apple Fruit, rind removed	Fever		Bitter Apple Fruit dried in oven or in the sun	Powerful cathartic

The use of CAM and traditional medicines among patients with chronic, painful, debilitating, or potentially fatal conditions, such as HIV/AIDS and cancer, is widespread, ranging from 50 to 90 percent use (Richardson and Straus, 2002). Bagozzi (2003) wrote that in Europe, North America and other industrialized regions, over 50% of the population has used complementary or alternative medicine at least once, while in San Francisco, London and South Africa, 75% of people living with HIV/AIDS use TM/CAM, and 70% of the population in Canada have used complementary medicine at least once. According to Pandey M. M., Subha, Rastogi, and Rawat, K S., about 70 percent of rural population in India, continue to use the traditional Ayurvedic system of medicine. However, currently, more people tend to use CAM techniques because they believe the side effects will be lower in comparison to herbs or prescribed drugs.

Ortiz, Shields, Clauson, and Clay (2007) found that Hispanics used CAM at a higher rate than might be expected, 50%–90%, from 1980 to March 2007. Howell et al. (2006) emphasized that the major increase in the use of CAM, in the United States (US) has occurred over the past two decades as the use of dietary supplements is common among the adult population. Bagozzi (2003) stated that, in Germany, 90% of the population have used a natural remedy at some point in their life, and 80.3% of Hispanics surveyed confirmed their use of herbal remedies; consequently, between 1995 and 2000, the number of doctors who had undergone special training in natural remedy medicine had almost doubled to 10,800.

The World Health Organization (WHO) 2017 and 2025 as well as Plant Power Journal, 2017, focused attention on the increasing use of traditional herbal medicine around the world. In China, for example, herbal remedies are prominent in the treatment of severe respiratory diseases as well as SARS. In Africa, 80% of the population trust and use herbal or plant remedies. It is not surprising that the worldwide market for those remedies reaches about \$60 billion dollars. More focused research on natural cures has become a priority worldwide. Currently, China, India, Nigeria, the United States of America (USA) and WHO have all made substantial research investments in traditional herbal/plant medicines.

A practical program to treat the common cold based on natural remedies was offered by R. Sahelian, 2017 and D. Spero, 2011. Sahelian recommended that at the earliest onset of symptoms, the patients needed to consult with their health care provider first, and then, take 3 to 5 grams of vitamin C (500 mgs), every three hours. He also suggested in addition, using a zinc lozenge, 10 to 20 mg of zinc in the form of zinc acetate, keeping the lozenge in the mouth for at least five minutes, and continuing to consume the lozenges every four hours and later every three hours. R. Sahelian, as well as E. Lissiman, A. Bhasale, and M. Cohen. recommended the use of garlic to effectively control the common cold. He provided a list of herbs/plants that help to reinforce the immune system so that it can treat upper respiratory and other diseases. Natural plants recommended by R. Sahelian are:

Andrographis: A shrub found in China and India. It has been evaluated in the treatment of the common cold and flu
AHCC: A mushroom extract supplement, developed in Japan in 1989. That mushroom has been assessed for its potential role in the improvement of the immune system, liver health, cancer treatment and as a biological response modifier.

Beta glucan extract: a naturally derived polysaccharide that has been studied for its anti-tumor and immune stimulating properties.

Bovine colostrum: which is the first milk produced by cows during the initial days after giving birth, seems to have a role in human health. Using this supplement may increase energy levels. It carries several health benefits, including lower risks of upper respiratory illnesses and diarrhea in immune-suppressed children, and a reduced risk of intestinal damage from anti-inflammatory drugs. In addition, it has been tested as an effective treatment of the common cold.

Echinacea: most recent studies have not found echinacea to have a considerable influence as a treatment for the common cold.

Elderberry: has been tried in the treatment of the common cold and flu. Flavonoid supplementation could potentially reduce the risk for upper respiratory infections.

Lactoferrin and Whey protein combination

Olive leaf extract supplement for improving digestion. Taylor presents a list of herbal remedies with their description, sources, and their diverse forms., e.g., in table 5.

Table 5: Preparation of Herbal/Plant Remedies. Prepared by the Author Based on Taylor (2005), The healing power of rainforest herbs.

Forms	Description	Source
Decoctions	Long-term boiled extracts, usually of roots or bark	Plant parts: bark, root, or seeds
Distillations	Steam distillation to gather essential oils	Herbs and seeds
Essential oils	Herbs extracts can be applied to the skin, usually diluted in a carrier oil.	Herbs and seeds
Extracts	Includes liquid extracts, dry extracts, and nebulizers.	
Herbal elixirs	Alcoholic extract of herbs, usually with an ethanol percentage of 12–38%.	Herbs and light ethanol
Herbal wine	Maceration of herbs in wine	Herbs and wine
Juice	A liquid form	Fresh herbs and fruits
Poultice or compress	Herbs or parts of a plant are usually crushed or dried and rehydrated with a small amount of water and then applied directly in a bandage, cloth, or just as is.	Herbs and plants
Salves, creams, lotions	Soak herbs in food grade oil for weeks or months which allows certain phytochemicals to be extracted into the oil.	Almonds, coconuts, eucalyptus, and herbs
Syrups	Extracts of herbs prepared with syrup or honey (sixty-five parts of sugar are mixed with thirty-five parts of water and herbs; the whole is then boiled and macerated for three weeks.	Herbs and honey
Tablets/capsules	Dry extracts of plant material that are evaporated into a dry mass; they can then be further refined to a capsule or tablet.	Plant parts and herbs
Teas	Infusions or steeping: hot water and extracts of herbs, such as chamomile or mint; Maceration: infusion of plants with high mucilage-content, such as sage, thyme, etc.; they are then left to stand for 7 to 12 hours.	Herbs; plant extracts; roots
Vinegars	Prepared in the same way as tinctures, except using a solution of acetic acid as the solvent.	Herbs and plant parts

Users of plant medicines need to be careful to first inform their personal physicians about the ones they are using. Care must be taken to follow dosage instructions and be aware of possible interactions with other prescribed medicines. It is also important to check for allergic reactions and side effects of each plant medicine used.

The FDA does not regulate Herbal supplements. The most common drug and herb interactions are found in the use of tricyclics, MAO inhibitors, and Selective Serotonin Reuptake Inhibitors (SSRIS). On the other hand, the most possible interactions with prescribed medicines come from herbs such as ginseng, Ma Huang (*Ephedra sinica*), passion flowers. St. John's wort, Kava, and Yohimbe, among others.

Vahabi and Eatemadi, 2016 developed a chart representing the drug and herb interaction with the corresponding effects, for example, garlic, commonly used to treat high cholesterol and high blood pressure, tends to interact with Warfarin, and general anesthetics. That interaction is observed in effects such as altering of bleeding time and antagonistic effects to immunosuppressant medications. Another example is Ginkgo Biloba used in the improvement of memory or to treat Alzheimer's, tends to interact with Warfarin, aspirin, and chemotherapy, among others, with the corresponding effects of increasing bleeding risks, diminishing off periods in Parkinson's disease, as well as bilateral subdural hematoma.

The book *Biomedicine and Pharmacotherapy* includes a syncretic review regarding the interaction between herb-anesthesia and prescribed drugs, as well as the effects of taking anesthetics and analgesics in regard to cancer metastasis, Vahabi and Eatemadi (2016). For more information see Miller, 1998, Barnes and Grieve, 2016.

Based on Vahabi and Eatemadi, examples of plant remedies and their interaction with pharmaceuticals are found in the following cases: St. John's Wort, which can induce the metabolizing effect of CYP3A, a family of cytochrome P450 enzymes important for metabolizing many drugs and other substances in the body, particularly in the liver and small intestine. It is also a major help in the metabolism of a wide range of medications and compounds, including cholesterol, steroids, and certain types of drugs like statins and HIV protease inhibitors. In addition, P450 enzymes tend to decrease the effective levels of medicines such as cyclosporin, estrogens, and amitriptyline and other drugs.

Another herbal remedy, Kava, in its liquid form inhibits several of the CYP 450 enzymes, which can elevate serum levels. However, other studies show a variety of levels of decrease in the metabolism of enzymes. Roldan offered a caution about the use of eucalyptus leaves, which brewed as a tea, can help in the case of respiratory problems. However, eucalyptus oils can be toxic when ingested, even in small doses.

Barnes and Greive, 2016, describe the effectiveness of Pine tar which has been used for more than 2,000 years for the treatment of skin conditions as well as being an antipruritic, anti-inflammatory, antifungal, and anti-bacterial. Initially the use was only topical given the toxic effect if the pine tar was to be ingested. However, currently, the product is manufactured within conditions of extreme purity, which allows for the elimination of toxic phenol and carcinogenic components. More information about drugs and herbal remedies interactions are found in table 6.

Table 6: Herbal Medicines: Uses and Possible Interactions with Prescribed Medicines.
Chart Adapted by the Author, Based on Vahabi and Eatemadi, 2016, and Hutches A., 1992.

Prescribed Medicines	May Interact with Prescribed Medicines	Health Problems/ Conditions
Anticoagulants: Warfarin Antiplatelet Drugs: Aspirin, NSAIDs, Ticlopidine, Clopidogrel	Alfalfa, Cinchona Bark (Quinine), Clove Oil, Feverfew, Ginko, Garlic, Ginger, Ginseng	Diabetes Cautions when taking: Garlic, Ginger, Ginseng, Hawthorn, Ma Huang, Nettle
CNS Stimulants: Decongestants, Methylphenidate, Dextroamphetamine, Beta 2-antagonists, Caffeine, Theophylline	Guarana, Kola (Gotu Kila) Ma Huang, St. John's wort, Yohimbe	Hypertension Caution when taking: Devil's Claw, Ginseng, Goldenseal, Hawthorn, Licorice, Ma Huang, Squill, Yohimbe
Antidepressants: Tricyclics, Mao inhibitors, SSRs	Ginseng, licorice, Black Cohosh, wild Cherry, Flaxseed,	Allergies: Caution when taking: Goldenrod, St. John's wort, Slippery Elm, Echinacea, Chamomile, Feverfew, Yarrow
Digestive Problems: Simethicone, Loperamide, ranitidine, Omeoprazole, Prilosec OTC	Angelica, Fring Tree, Juniper, Wormwood, Horseradish,	Pregnancy or Nursing: Caution when taking: Aloe (internal), Black and Blue Cohosh, Cascara, Dong Quai, Feverfew, Ginseng, Kava-Kava, licorice, Saw Palmetto, Aloe, Sarsaparrilla, wild Yam, Fringe Tree

It is appropriate to conclude that there are plenty of benefits derived from the use of herbal remedies, with consideration of known side effects, and probable interactions with pharmaceuticals. Another advantage of using herbal remedies relies on the effectiveness and low cost of those remedies. It is important to remember that many prescribed drugs are plant/herb based, which is known as Ethnopharmacology, and together with integrative medicine have given importance to the use of ethnomedicine in healthcare. For example, aspirin was derived from the bark of the willow tree, which contains salicin, an element that is converted to salicylic acid, the main component of aspirin.

The use of the bark of the willow tree as a pain reliever and antipyretic dates to 3,500 years ago. When using aspirin, it is important to keep in mind that aspirin interacts with anticoagulants, acetazolamide, and anti-hypertensive and anti-inflammatory drugs.

Ethnopharmacology seems to provide excellent contributions to better and safer healthcare, especially for the poor and for people living in marginalized regions. It also allows us to envision a future with a healthier life for everyone; however, one important thing to consider is that potential users should inform their doctors about the specific herbal remedies they might be taking, in addition to prescribed medicines. That action will minimize the possibility of any side effects or interactions with prescribed drugs.

Plants and herbs are not only an important part of the beauty of nature, but also a major source of protection against elevated temperatures. They are an economic source of healing elements that contribute to the well-being of humanity. We can envision a better, happier, and healthier future, under the umbrella of nature.

References

- Adams, C.E. (2018). Women and Folk Remedies: Youth, Fertility, and Health. *Journal of Behavioral and Social Sciences*, Vol. 5, 183-204, ISSN: 2375-8899.
- Arora, K., Nagpal, M., Jain, U., Jat, R.C., and Jain, S. (2014). *Mangroves: a novel gregarious Phyto medicine for diabetes. International Journal of Research and Development in Pharmacy and Life Sciences*, 3, 1244–1257.
- Baer, R.D., García de Alba, J., Mares, L.R., Plascencia-Campos, A.R., and Goslin, N. (1998). Mexican use of lead in the treatment of empacho: community, clinic, and longitudinal patterns. *Social Science and Medicine*, 47, 1263–1266.
- Bagozzi, D. Fact sheet No. 134. WHO (2003). Retrieved from: <http://www.who.int/mediacentre/factsheets/en/02>, 2025.
- Bandaranayake, W.M. (2006). Quality control, screening, toxicity, and regulation of herbal drugs, in *Modern Phytomedicine. Turning Medicinal Plants into Drugs*. Ahmad, I., Aqil F., and Owais, M., editors. Weinheim: Wiley-VCH GmbH and Co. KGaA, (pp. 25–57).
- Barnes, T. A. and Greive, K. A. (2016). Topical Pine Tar: History, Properties, and Use as a treatment for Common Skin Conditions. *Australas J. Dermatol.* 58 (2), 80-85.
- Barsh, R. (1995). Epistemology of Traditional Healing Systems. *Human Organization*, 1997, 56, 28-37.
- Becerra, R.M., and Inglehart, A.P. (1995). Folk medicine use: diverse populations in metropolitan areas. *Social Work in Health Care*, 21(4), 37–58.
- Benzie I.F., and Wachtel-Galor S. editors. *Herbal Medicine: Biomolecular and Clinical Aspects*. Boca Raton, FL: CRC Press/Taylor and Francis; (2011, March 28), second edition, Ch. 11.
- Boevers, R. V. “Prescriptions drugs versus herbal medicine.” Retrieved from: <http://www.ezinearticles.com/RonaldV.Boevers/> (March 12, 2008).
- Bodeker C., Bodeker G., Ong C.K., Grundy C.K., Burford G., and Shein K. (2005). *WHO, Global atlas of traditional, complementary, and alternative medicine. Geneva, Switzerland: World Health Organization*.
- Bose, V., Vashistha, K., and O’Loughlin, B.J. (1983). Azarcón por empacho: another cause of lead toxicity. *Pediatrics*, 72, 106–108.
- Brandon, H. (August 3, 2024). The Power of Nature: Top 9 herbs to Cleanse your Arteries and Safeguard against Heart Attacks. <https://www.elephantwellness.com/post/the-power-of-nature-top-9-herbs-to-cleanse-your-arteries-and-safeguard-against-heart-attacks>
- Calapai, G. (2008). European legislation on herbal medicines: a look into the future. *Drug Safety*, 31, 428–431.
- Carteret, M. Traditional Asian health beliefs and healing practices. Retrieved from: www.dimensionsofculture.com/traditional-asian-health-beliefs-and-healing-practices/ (2011).
- Cartwright, M. Greek medicine. *Ancient history encyclopedia*. Retrieved from: https://www.ancient.eu/Greek_Medicine/ (September 12, 2013).
- Chevallier, Andrew, (2016). 550 Herbs Loose Leaves and Remedies for Common Ailments. *DK Encyclopedia of Herbal Medicine*.
- . (2010). *Herbal Remedies*. New York, N.Y. Metro Books.
- De la Cruz, M. (1939). *An Aztec Herbal: The Classic Codex of 1552*. Trans. and Comm., W. Gates, 2000. Intro., Byland, B., 2000. Mineola, NY: *Dover Publications Inc*.

- D'ura, Nigel. (Nov. 4, 2016). The Gullah People Have Survived on the Carolina Sea Islands for Centuries. Now, Development is Taking a Toll. *Los Angeles Times*. Retrieved July 27, 2021.
- Firenzuoli, F., and Gori, L. (2007). Herbal medicine today: clinical and research issues. *Evidence-Based Complementary and Alternative Medicine*, 4, 37–40.
- Graedon, Terry. "Home Remedies," *The People Pharmacy*, Retrieved, Sept.-Oct. 2022.
- Graz, B. and Schopper, D. (2009). Complementary and alternative medicines (CAM): towards an evidence-based consensus in the university hospital. *Revue Medicale Suisse*, 5, 2524–2526.
- Group, E. (Aug. 21, 2021). The nine best herbs for lung cleansing and respiratory support. Retrieved from: Global Healing Center: <http://www.globalhealingcenter.com/natural-health/9-best-herbs-lung-cleansing-respiratory-support/> Updated October 23, 2015.
- Harwood, A. (1971). The hot-cold theory of disease: implications for the treatment of Puerto Rican patients. *JAMA*, 216, 1153–1158.
- Hopkins, John. (2025). Symptoms and Remedies. *Complete Home Medical References*. Amazon.com.
- . Drugs, Herbs, and Supplements. <http://ohnshopkinshealthacare.Staywellsolutionoine.com> First Indexed by Google, August 2016.
- Howell, L., Kochhar, K., Saywell, R. Jr., Zollinger, T., Koehler, J., Mandzuk, C., Allen, D. (2006). Use of herbal remedies by Hispanic patients: do they inform their physician? *Journal of the American Board of Family Medicine*, 19, 566–578.
- Hutchens, A.R. (1992). *A Handbook of Native American Herbs*. Boulder, Co. Shambhala Publications, Inc.
- Jackson, K.C. Use eucalyptus oil for hair growth, acne treatments, and the most luxurious showers you will take all winter. (Jan 29, 2015) Bustle: <https://www.bustle.com/articles/61253-use-eucalyptus-oil-for-hair-growth-acne-treatments-and-the-most-luxurious-showers-youll-take-all/>
- Kay, M. and Yoder, M. (1987). Hot and Cold in Women's Ethnotherapeutics: *The American West Soc. Sci/Med.*, 25 (4), 347-55.
- Kleinman, A.M. (1975). The symbolic context of Chinese medicine: a comparative approach to the study of traditional medical and psychiatric forms of care in Chinese culture. *American Journal of Chinese Medicine*, 3, 103–124.
- Kooti, W., Farokhipour, M., Asadzadeh, Z., Ashtary-Larky, D., and Asadi-Samani, M. (2016). The role of medicinal plants in the treatment of diabetes: a systematic review. *Electronic Physician*, 8, 1832–1842.
- Liñan, L. Curanderismo: Holistic Healing. (Feb 13, 2022). Denver: Denver Public Schools and the Metropolitan State College of Denver. Also found at: <https://www.yumpu.com/en/document/view/curanderismo-holistic-healing-outreach-world>
- Lissiman, E., Bhasale, A., and Cohen Mark. "Garlic for the Common Cold." *Cochrane Database System*. (2014, Issue 11).
- Lunny, V. (1997). Traditional herbal medicine in Bolivia, South America. *Herbal Medicine*, 22. Retrieved from: <http://www.positivehealth.com/article/herbal-medicine/traditional-herbal-medicine-in-bolivia-south-america/>
- Mayo Clinic staff. Herbal supplements: what to know before you buy. <http://www.mayoclinic.org/healthy-lifestyle/nutrition-and-healthy-eating/in-depth/herbal-supplements/> (Retrieved, November 14, 2014).
- Mercola, J. Eucalyptus Oil: Essential Oil Extraordinaire. <http://articles.mercola.com/herbal-oils/eucalyptus-oil.aspx/> (Retrieved, May 12, 2016).
- Miller, L. (1998). Herbal Medicinal: selected clinical considerations focusing on known or potential drug-herb interactions. *Archives of International Medicine*, 158, 2200–2211.
- Mitchel, Faith, (1999). "Hoodoo Medicine" *Summerhouse Press*.
- Mukherjee, P. K. (2002). Alternative Systems of Medicine. In: Quality Control Herbal Drugs: An Approach to Evaluation of Botanicals. *Business Horizons*, New Delhi, India, pp: 213-221.
- National Center for Complementary and Integrative Health (NCCIH). (2007). The use of complementary and alternative medicine in the United States. Retrieved from: https://nccih.nih.gov/research/statistics/2007/camsurvey_fs1.htm

- National Center for Complementary and Integrative Health (NCCIH). (2011). Traditional Chinese medicine: in depth. NCCIH Pub. No. D428. Retrieved from: <https://nccih.nih.gov/health/whatiscam/chinesemed.htm>
- National Center for Complementary and Integrative Health (NCCIH). Use of Complementary Health Approaches in the US. (NHIS). What Complementary and Integrative Approaches Do Americans Use? Key Findings from the National Health Interview Survey. NCCIH. <https://nccih.nih.gov/research/statistics/NHIS/2012/citations> (Retrieved, 2012).
- Neff, N. (2022). Folk medicine in Hispanics in the Southwestern United States [course module]. *Baylor College of Medicine*. Retrieved from: www.zoominfo.com/p/Nancy-Neff/
- Ni, H., Simile, C., and Hardy, A.M. (2002). Utilization of Complementary and Alternative Medicine by United States adults: Results from the 1999 National Health Interview survey. *Medical Care*, 40, 353–358.
- Nissen, N., and Evans, S. (April 2012). Exploring the practice and use of Western herbal medicine: perspectives from social science literature. *Journal of Herbal Medicine*. 2 (1): 6-15.
- Nutton, V. (1997). Humoralism. In W. F. Bynum and R. Porter (Eds.) *Companion Encyclopedia of the History of Medicine*. London: Routledge (1st ed.), 281–291.
- Okeke, T.A., Okafor, H.U., and Uzochukwu, B.S.C. (2006). Traditional healers in Nigeria: perception of cause, treatment, and referral practices for severe malaria. *Journal of Biosocial Science*, 38, 491–500.
- Ortiz, B.I, Shields, K. M., Clauson, K.A., and Clay, P.G. (2007). Complementary and Alternative medicine use among Hispanics in the United States. *Annals of Pharmacotherapy*, 41, 994–1004.
- Padilla, R., Gomez V., Biggerstaff, S.L., and Mehler, P.S. (2001). Use of curanderismo in a public health care system. *Archives of Internal Medicine*, 161, 1336–1340.
- Pandey, M. M., Rastogi, Subha, and Rawat, K.S. (Jun 23, 2013). Indian Traditional Ayurvedic System of Medicine and Nutritional Supplementation. *Botanicals in Dietary Supplements*. <https://doi.org/10.1155/2013/376327>
- Plant Power Journal*. Herbalism, Anatomy and Physiology: The Immune System. <http://www.traditionalmedicinals.com/articles/herbalism-anatomy-physiology-immune-system/> (Retrieved, January 20, 2017).
- Richardson M.A., and Straus S.E. (2002). Opportunities and challenges for cancer management and research seminars in oncology. *Complementary and Alternative Medicine*, 29, 531–45.
- The Gullah Community (in the United States of America), a Story. *Wikipedia.Org*, 2022.
- Reed, Conner, and Johnson. (1978). Hoodoo Medicine: *Sea Islands Herbal Remedies*.
- Roldán, A.A. (2003). Las 40 plantas medicinales mas populares. Madrid, Spain: *Editorial EDAF, S.A.*
- Sahelian, R. (Jun 20, 2017). Common cold cure? Natural vitamins, herbs, and supplements, a step-by-step guide to home remedy. <http://www.raysahelian.com/common.html>
- Snyderman, R., and Well, A.W. (2002): Integrative medicine: bringing medicine back to its roots. *Archives of Internal Medicine*, 162, 395–397.
- Spero, D. (Oct 3, 2018). Apple Cider Vinegar and Diabetes. *Diabetes Self-Management*. <https://www.diabetesselfmanagement.com/blog/apple-cider-vinegar-and-diabetes/>
- Srinivasa, U. Traditional medicine of India: ayurveda and hatha yoga. [PowerPoint slides]. Retrieved from: www.slideshare.net/ebynoanne/traditional-medicine-of-india/ (February 16, 2012).
- Sturluson, T. History of herbal medicine. Retrieved from: <https://www.herbal-supplement-resource.com/history-of-herbal-medicine/> (Jan 30, 2014).
- Struthers, Roxanne, Valerie V. S., Eschiti, S., and Patchell, Beverly, (2004). *Traditional Indigenous Medicine, Part I. National Library of Medicine*, 10 (3): 141-149.
- Tabi, M.M., Powell, M., and Hodnicki, D. (2006). Use of traditional healers and modern medicine in Ghana. *International Nursing Review* 53, 52–58.
- Tafur, M.M., Crowe, T.K., and Torres, E. (2009). A review of curanderismo and healing practices among Mexicans and Mexican Americans. *Occupational Therapy International*, 16, 82–88.
- Taylor, L. *The healing power of rainforest herbs*. Garden City Park, NY: Square One Publishers, (2005).
- The Gullah Community (in the United States of America) A short Story. *Wikipedia.Org*. Retrieved, March 22, 2025.
- The Old Farmers' Almanac. Home Remedies and Household Tips. (2020). *Yankee Publishing Inc.*

- Trotter, R.T. (2004). Curanderismo: A picture of Mexican American folk healing. *The Journal of Alternative and Complementary Medicine*, 7, 129–131.
- US National Library of Medicine. Collection development manual: complementary and alternative medicine. Retrieved from <https://www.nlm.nih.gov/tsd/acquisitions/cdm/subjects24.html>. (October 10, 2003)
- Vahabi, Sepideh and Eatemadi, (2016). Ali Effects of anesthetic and analgesic techniques on cancer metastasis. *Biomedicine and Pharmacotherapy* <https://doi.org/10.1016>.
- . (2016). Phyto-anesthetics: A mini-review on herb–anesthesia drug interactions, *Biomed and Pharmacotherapy* <http://dx.doi.org/10.1016/j.biopha>.
- Wong, L.Y.M., and Richman, J. (2003). Chinese understanding of diankuang in a metropolitan city in the United Kingdom. *International Journal of Mental Health*, 32, 5–30.
- World Health Organization (WHO). *Global Traditional Medicine Centre: Annual Report*. (Retrieved, May 23, 2025).
- World Health Organization (WHO). (Jan 10, 2014). The Growing Use of Herbal Medicines: Issues relating to Adverse Reactions and Challenges in Monitoring Safety. *National Library of Medicine. Pharmacol*, pp 4-177.
- World Health Organization (WHO), (2003). Traditional medicine. Fact sheet No. 134. <http://www.who.int/mediacentre/factsheets/>
- World Health Organization (WHO), (March 4, 2015). Definition, Policy and Regulation of Traditional medicine: Practitioners, practices and Products/Herbal medicines. <http://www.who.int/medicines/areas/traditional/definitions/en/>