

Formulation of Herbal Pain Relief Turmeric Balm

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ABSTRACT

Turmeric is a mild digestive, being aromatic, a stimulant and a carminative Turmeric is one of Nature's most powerful healers. The active ingredient in turmeric is curcumin. Turmeric has been used for over 2500 years in India, where it was most likely first used as a dye.

The medicinal Properties of this spice have been slowly revealing themselves over the centuries. Long known For its anti-inflammatory properties, recent research has revealed that turmeric is a natural Wonder, proving beneficial in the treatment of many different health conditions from cancer to Alzheimer's disease. An ointment base on the spice is used as an antiseptic in India.

Turmeric Water is an Asian cosmetic applied to impart a golden glow to the complexion. Curcumin has Been shown to be active against Staphylococcus aureus (pus-producing infections). Anemia, Cancer, diabetes, digestion, food poisoning, gallstones, indigestion, IBS, parasites, poor Circulation, staph infections, and wounds. Turmeric decreases Kapha and so is used to remove Mucus in the throat, watery discharges like leucorrhea, and any pus in the eyes, ears, or in Wounds, etc.

In Unani medicine, turmeric has been used for conditions such as liver obstruction And jaundice and has been applied externally for ulcers and inflammation. Roasted turmeric has Been used as an ingredient of a preparation used for dysentery. Turmeric has also been used in Tooth powder or paste. Turmeric has been used for many conditions in traditional medicine in India, Pakistan and Bangladesh.

The rhizome is generally the part of the plant that is most widely Used. It can be prepared in various ways and is reputed to alleviate asthma and coughs. Hot water extracts of the dried rhizome have been taken orally in Ayurvedic medicine to reduce Inflammation. Turmeric is also regarded as a 'rasayana' herb, which is a branch of Ayurvedic Medicine. Here turmeric is used to counteract ageing processes.

Key words: Ayurveda, Curcumin, Haldi, Rasayan, Traditional Medicine.

Family: Zingiberaceae



Scientific Name: Curcuma longa

Common Name: Curcuma, Curcumin, Haldi, Indian saffron, Turmeric

Chemical Constituents:

Curcuminoids (3-6%) are major polyphenolic compounds in turmeric rhizomes (Ravindranath and Satyanarayan 1980, Satyawati et al 1976). The main colouring principle of turmeric rhizome was isolated in 19th century and named as 'Curcumin'. Other phenolic compounds present in turmeric rhizomes are 1-hydroxy-1, 7-bis (4-hydroxy-3-methoxyphenyl)-(6E)-6-heptene-3, 5-dione; 1-(4-hydroxy-3, 5-dimethoxyphenyl)-7-(4-hydroxy-3-methoxyphenyl)-(1E, 6E)-1, 6-heptadiene-3, 4-dione; 1, 5-bis (4-hydroxy-3-methoxyphenyl)-penta-(1E, 4E)-1, 4-dien-3-one; 1-(4-hydroxy-3-methoxyphenyl)-5-(4-hydroxyphenyl)-penta-(1E, 4E)-1, 4-dien-3-one; 1-(4-hydroxy-3-methoxyphenyl)-7-(3, 4-dihydroxyphenyl)-1, 6-heptadiene-3,5-dione and 1, 7-bis (4-hydroxyphenyl)-1,4, 6-heptatrien-3-one. The pale yellow to orange-yellow volatile oil (4-6%) obtained from turmeric consists of a number of mono- and sesquiterpenes.

The sesquiterpenes were named as curcumenone; dehydrocurdione; (4S, 5S)-germacrone 4,5-epoxide; bisabolol 3, 10-diene 2-one; arthromeres (Roth et al 1998); bisacumol; bisacurone; curcumenol; isoprocucumenol; zedoaron ediol; procurcumenol; epiprocucumenol; germacrone-13-al; 4-hydroxybisabolol-2, 10-diene-

9-one; 4, 5-dihydrobisabol-2, 10-diene; 4-methoxy-5-hydroxybisabol-2, 10-diene-9-one; 2,5-dihydroxybisabol-3, 10-diene and procumadiol (Ohshiro et al 1990). Some other compounds named as curcylone (Kiso et al 1983); α -turmerone; β -turmerone; terpinolene; α -phellandrene; curcadiol; labda-8 (17)-diene-15, 16-dial and three acidic polysaccharides isolated on a column of DEAE Sephadex A-25 were named as Ukon A, B and C.

They were composed of L-arabinose.

Biological activity:

Activity of turmeric has been reported. Curcumin is one of its major components being responsible for its various biological actions. It exhibits anti-parasitic, antispasmodic, anti-inflammatory, anticarcinogenic and gastro-intestinal effects in vitro whereas it has shown anti-parasitic and anti-inflammatory activity through oral application in animal models (Araujo and Leon 2001, Davis et al 2007, Thangapazham et al 2007).

I. INTRODUCTION:

Turmeric is an ancient spice, a native of South East Asia, used from antiquity as dye and a condiment. It is cultivated primarily in Bengal, China, Taiwan, Sri Lanka, Java, Peru, Australia and the West Indies. It is still used in rituals of the Hindu religion, and as a dye for holy robes, being natural, unsynthesized and cheap. Turmeric is in fact one of the cheapest spices. Although as a dye it is used similarly to saffron, the culinary uses of the two spices should not be confused and should never replace saffron in food dishes.

Its use dates back nearly 4000 years, to the vedic culture in India where it was used as a culinary spice and had some religious significance. The name derives from the Latin terra merita "meritorious earth" referring to the colour of ground turmeric which resembles a mineral pigment. Turmeric (*Curcuma longa*) has been used for 4,000 years to treat a variety of ailments. Several research studies have found that turmeric may, in fact, help treat a number of illnesses. However, it is important to remember several facts when you hear news reports about turmeric's medicinal properties.

First, many studies have taken place in test tubes and animals, and the herb may not work as well in humans. Second, some studies have used an injectable form of curcumin (the active substance in turmeric). Finally, some of the studies show

conflicting evidence. Nevertheless, turmeric may have promise for fighting infections and some cancers, reducing inflammation, and treating digestive problems. Turmeric is widely used as a food coloring and gives Indian curry its distinctive flavor and yellow color.

It is also used in mustard and to color butter and cheese. Turmeric has long been used in both Ayurvedic and Chinese medicine as an anti-inflammatory, to treat digestive and liver problems, skin diseases, and wounds. The curcumin in turmeric has been shown to stimulate the production of bile by the gallbladder. Curcumin is also a powerful antioxidant; antioxidants scavenge damaging particles in the body known as free radicals, which damage cell membranes, tamper with DNA, and even cause cell death.

Antioxidants can neutralize free radicals and may reduce or even help prevent some of the damage they cause. In addition, curcumin reduces inflammation by lowering levels of two inflammatory enzymes (called COX-2 and LOX) in the body and stops platelets from clumping together to form blood clots. It is a valuable home remedy for bronchial asthma. A teaspoon of turmeric powder with a glass of milk twice or thrice daily is very effective. It acts best on an empty stomach.

Turmeric is a valuable intestinal antiseptic. The rhizome, its juice or dry powder, mixed in buttermilk or plain water is highly beneficial in intestinal problems, especially chronic diarrhoea. It also helps prevent flatulence. About 20 drops of the juice of raw turmeric, mixed with a pinch of salt, taken first thing in the morning daily is considered an effective remedy for expelling worms. Turmeric, being rich in iron is useful in anemia. A teaspoon of raw turmeric juice, mixed with honey is taken everyday in the treatment of this condition. Turmeric is useful in the treatment of measles.

Turmeric roots are dried in the sun and ground to a fine powder. This mixed with a few drops of honey and the juice of few bitter gourd leaves can be taken by those suffering from measles. Turmeric with its antiseptic properties is a useful remedy for chronic cough and throat irritations. Half a teaspoon of fresh turmeric powder mixed in 30 ml of warm milk is very effective in these conditions. To prepare this milk is poured on a hot ladle with turmeric in it and boiled over a slow fire.

In case of a running cold smoke from burning turmeric can be inhaled. This increases

The discharge from the nose and brings quicker relief. Turmeric in combination with caraway Seeds or ajwain is beneficial for cold in infants and children. A teaspoon of turmeric powder and Quarter teaspoon of ajwain are added to boiling water which is then cooled. About 30 ml of this decoction sweetened with honey may be taken thrice a day in treating such conditions.

For Treating sprains or the swelling caused by sprains, turmeric paste mixed with lime and salt can be Applied with beneficial results. *Curcuma longa*, commonly known as turmeric, is traditionally used as a spice in Indian cuisine. A wide range of biological activities, for example. Anticancer, antimicrobial, anti-inflammatory and anti-free radical properties suggest a logical basis for its traditional use in food.

History of turmeric:

Turmeric (*Curcuma longa*) and several other species of the *curcuma* genus grow wild in the Forests of Southern Asia including India, Indonesia, Indochina, nearby Asian countries, and some pacific Islands including Hawaii. All of these areas have traditional culinary and medicinal uses going back to pre-history. In the Indian Ayurveda system of herbal medicine, turmeric is known as strengthening and warming to the whole body.

Traditional uses in India include to improve Digestion, to improve intestinal flora, to eliminate worms, to relieve gas, to cleanse and Strengthen the liver and gallbladder, to normalize menstruation, for relief of arthritis and swelling, as a blood purifier, to warm and promote proper metabolism correcting both excesses and deficiencies, for local application on sprains, burns, cuts, bruises, insect bites and itches, for Soothing action in cough and asthma, as antibacterial and anti-fungus, and in any condition of Weakness or debility.

“The ancient Hawaiians used this herb For many things, including the prevention and treatment of sinus infections (it is very astringent And appears to pull mucus out), ear infections (swimmers ear) and gastrointestinal ulcers.” Turmeric is eaten as a food both raw and cooked throughout Asia. While turmeric root looks much like ginger root, it is less fibrous and is more chewable, crunchy, and succulent. The fresh root

(not the powder) has a somewhat sweet and nutty favor mixed with its bitter flavor. As a result, it is not unpleasant to eat and not difficult to chew.

It is sometimes chewed plain or chopped up and put in salads raw. Traditional use includes mashing/grinding it in a mortar to make a paste to mix with other spices for flavoring in curries. In modern times, the most common use is of the dried root powder as the base of most curries in India and other nearby countries. (personal observation) another traditional use of turmeric is as a food colorant and dye for cloth – in both cases a cheaper alternative to saffron. It was and is used in religious ceremonies and offerings – often representing life, purity, and prosperity.

The old herbals of Europe make little if any mention of turmeric. Marco Polo refers to turmeric as Indian saffron used for dyeing cloth. Michael castle man writing in 1991 says: “The ancient Greeks were well aware of turmeric, but unlike its close botanical relative, ginger, it never caught on in the West as either a culinary or medicinal herb. It was, however, used to make orange-yellow dyes. In the 1870’s, chemists discovered turmeric’s orange-yellow root powder turned reddish brown when exposed to alkaline chemicals. This discovery led to the development of turmeric paper ... to test for alkalinity.” European and American herbalists up until the late 20th century had little interest in turmeric.

“Turmeric is a mild aromatic stimulant seldom used in medicine except as a coloring. It was once a cure for jaundice. Its chief use is in the manufacture of curry powders. It is also used as an adulterant of mustard and a substitute for it and forms one of the ingredients of cattle condiments. ... Turmeric paper is ... used as a test for alkaloids and boric acid.” This disregard of turmeric as an important nutritional and medicinal herb continued in western herbalism up until the late 20th Century. The increased flow of bile depend in part on the contraction of the gallbladder and in part on the increase in bile secretion; The stimulation of bile depends mostly on the presence of essential oil; The flavonoids cause the contraction of the gallbladder and thereby increase the effective emptying of this organ.” “While studies were being pursued in European, primarily German laboratories, Asian.

To prepare a turmeric balm, you'll need the following ingredients and steps:

Ingredients:

Sr.No.	Ingredients	Quantity
1.	Turmeric Powder	2 tablespoons
2.	Coconut Oil(or another carrier oil like olive oil)	2 tablespoons
3.	Bees wax(optional for a firmer balm)	1 tablespoon
4.	Essential Oils(optional, for fragrance)	Few drops

Instructions:

1.Melt the Base:

In a small saucepan, combine the coconut oil and beeswax. Heat gently over low heat until melted, stirring occasionally.



2. Mix in Turmeric:

Once melted, add the turmeric powder to the oil mixture. Stir it well to combine.



3. Add Essential Oils:

If using, add a few drops of your preferred essential oil for scent and additional benefits.



4. Cool and Store:

Pour the mixture into a small container or jar. Let it cool and solidify at room temperature.



Once solid, your turmeric balm is ready to use.

Tips:

- 1)Store the balm in a cool, dark place to prolong its shelf life.
- 2)Use gloves when handling turmeric, as it can stain skin and surfaces.

This balm can help with inflammation and soreness due to turmeric's natural properties.



Turmeric medicinal Uses:

The medicinal applications of turmeric have gained increasing recognition over the years. Turmeric, a flowering plant belonging to the ginger family, is widely used as a food coloring and is a key component of curry powder.

It has historically been utilized for its healing properties, addressing various health issues such as liver ailments, digestive problems, skin conditions, and promoting wound healing, thanks to its anti-inflammatory properties. The primary active compound in turmeric, curcumin, has demonstrated a broad spectrum of therapeutic benefits.

Health benefits of incorporating turmeric into our daily routine include:

1. It acts as a natural antiseptic and antibacterial, making it effective for disinfect cuts and burns.
2. When paired with cauliflower, it may help prevent prostate cancer and inhibit the growth of existing cases.
3. It has been shown to prevent the spread of breast cancer to the lungs in mice.
4. Turmeric might help prevent melanoma and induce cell death in existing melanoma cells.
5. It may lower the risk of childhood leukemia.
6. It serves as a natural detoxifier for the liver.
7. Turmeric may help prevent and slow Alzheimer's disease by eliminating amyloid plaque build-up in the brain.
8. It could inhibit metastasis in various types of cancer.
9. It is a strong natural anti-inflammatory that can match the effectiveness of many anti-inflammatory medications without the associated side effects.
10. Additionally, it functions as a natural pain reliever and a cox-2 inhibitor.

Digestive disorder:

Turmeric is recognized as a digestive bitter and carminative. It can be incorporated into dishes like rice and beans to enhance digestion and alleviate gas and bloating. As a cholagogue, it promotes bile production in the liver and facilitates its release through the gallbladder, thereby enhancing the body's capacity to digest fats.

Turmeric is especially recommended for those dealing with chronic digestive issues or congestion. It can be taken as a standalone extract or in a blend of digestive bitters that includes other bitter and carminative herbs. It proves advantageous for individuals who feel fatigued after meals or suffer from gas and bloating. Regardless of the form in which it is consumed, turmeric supports both the digestive system and liver health.

Therapeutic Applications of Turmeric:

Turmeric is a plant featuring large, foot-long lily-like leaves and yellow to yellowish-white flowers, primarily found in India, Bangladesh, and China. It has a potent flavor, and its vibrant yellow hue tends to leave stubborn stains on clothing. The medicinal and culinary benefits of turmeric are derived from its root or rhizome, which is dried and ground into a spice.

Turmeric is helpful in addressing various health issues, including gallbladder disorders, hepatitis, indigestion, infections, appetite loss, scabies, Alzheimer's disease, arthritis, asthma, athlete's foot, boils, and bursitis. Scholars Research Library 95 lists a variety of health conditions and ailments such as breast cancer, colon cancer, cataracts, colic, dermatitis, diarrhea, eczema, fibrosis, gallstones, gas, arteriosclerosis, heart disease, elevated cholesterol and triglycerides, inflammation, intestinal discomfort, irritable bowel syndrome, jaundice, amenorrhea, lymphatic issues, menstrual cramps, morning sickness, general pain, psoriasis, sprains, ulcers, wounds, and yeast infections. Additionally, it is utilized to treat bruises, assist in childbirth, alleviate eye inflammation, manage epilepsy, reduce fever, control hemorrhages, treat hemorrhoids, relieve itching, and address ringworm.

Features:

Turmeric belongs to the ginger family and is cultivated and harvested commercially in India, Asia, and various tropical nations. Its thick, processed rhizomes are rich in protein, vitamins, minerals, carbohydrates, and yellowish-orange

essential oils known as curcuminoids, which contribute to turmeric's biological properties.

Adverse Effects: In clinical trials, encapsulated turmeric or curcumin was generally well tolerated, with side effects typically resembling those of a placebo. In a study involving patients with duodenal ulcers, a burning sensation occurred in the turmeric group at a rate twice that of the placebo group (13% compared to 7%). Additionally, there have been rare instances of allergic contact dermatitis reported.

Antiplatelet and anticoagulant medications, commonly known as blood thinners,

may be influenced by turmeric, which could alter the blood's clotting capacity. This could potentially interfere with the effectiveness of various blood-thinning medications, such as:

- Warfarin (Coumadin)
- Clopidogrel (Plavix)
- Aspirin

Parts Utilized:

The medicinal and culinary preparations primarily use the roots, rhizomes, and bulbs. Typically, these are boiled and subsequently dried to produce the well-known yellow powder. Curcumin, the key active compound, possesses antioxidant qualities that some suggest could be comparable to those of vitamins C and E. Additionally, other components of this herb also exhibit antioxidant properties.

The different uses of turmeric are as follows:

1) Food Additive:

- Turmeric serves as a gentle aromatic stimulant in the production of curry powders.
- It is utilized in products that are packaged to shield them from sunlight.
- The oleoresin extracted from turmeric is incorporated into oil-based products.
- A solution of curcumin or curcumin powder mixed with alcohol is employed in products containing water.
- In certain pickles and mustard, turmeric is added to counteract color fading.
- Additionally, turmeric is used to color various foods such as cheeses, salad dressings, margarine, yogurts, cakes, biscuits, popcorn, cereals, and sauces.
- Turmeric also acts as a substitute for mustard in cattle feed.

2) Medicinal Uses:

Medicinally, turmeric is utilized for addressing digestive issues. Raw turmeric juice is effective for managing hyperacidity and indigestion, and it also serves as a blood purifier. Curcumin, the active compound in turmeric, possesses antioxidant properties, making turmeric popular in alternative medicine.

Additionally, turmeric is applied to cuts and burns due to its believed antiseptic properties that aid healing. Curcumin helps reduce histamine levels, producing anti-inflammatory effects. The fluoride content in turmeric is important for dental health, and it also offers protection to the liver and helps combat atherosclerosis.

3) Cosmetics:

- The paste made from the juice of raw turmeric is applied to the skin for about thirty minutes before rinsing off, enhancing the skin's glow. It is a key component of the traditional bathing ceremony in Indian weddings, where it is used alongside sandalwood paste before bathing.
- There is a belief that frequent baths in turmeric-infused water can diminish body hair growth.
- Consistent use of turmeric is said to result in fairer, softer, and smoother skin.
- Turmeric is also utilized to address pigmentation spots, blotches, and conditions like eczema.

The uses of turmeric for dental problems:

- Turmeric can be used in the following ways to relieve dental problems:
 - Gargling with turmeric water (leaves 5 g of turmeric powder, two cloves and two dry guava leaves in 200 g of water) provides immediate relief.
 - Massaging aching teeth with ground and roasted turmeric removes pain and inflammation.
 - Applying the powder of burnt pieces of turmeric and seeds of bishop and grass on the teeth and brushing them strengthens the gums and teeth.
 - Apply a paste consisting of 1 teaspoon of turmeric with ½ teaspoon of salt and ½ teaspoon of mustard oil. Relieves gingivitis and periodontitis. Brush your teeth and gums with this paste twice a day.

Who should not take it?

Although turmeric is considered safe for most individuals, some people need to avoid it.

These conditions require extreme caution:

Pregnancy and breast-feeding: There is not enough research to determine whether turmeric supplements are safe for pregnant or breast-feeding women.

Gallbladder disease: According to some older research, turmeric can cause the gallbladder to shrink, worsening symptoms.

Kidney stones: It is rich in oxalate, which can bind to calcium and cause the formation of kidney stones.

Coagulation disorders: it can slow down the blood's ability to coagulate, which can worsen bleeding problems.

Diabetes: Can cause extremely low blood sugar levels.

Iron deficiency: May interfere with iron absorption.

Dose:

•For osteoarthritis: 500 to 1500 mg of turmeric per day for 3 months.

•For itchy skin: 500 mg of turmeric three times a day for 2 months.

•For ulcerative colitis: 100 to 10,000 mg of turmeric extract per day.

II. CONCLUSION:

Turmeric is traditionally known in India as a delicious and colourful spice, and as an Ayurvedic medicine to improve appetite, act as a carminative, and treat gallstones and other biliary problems, as well as the indigestion. It is a traditional medicine in India, China and other Southeast Asian countries to treat asthma and colds, and is used as an ointment, paste or poultice for scabies, boils, bruises, insect bites and other injuries of the skin. Turmeric is administered orally for many other conditions, including menstrual problems, pain, epilepsy, respiratory tract infections, bleeding, diarrhoea, jaundice, and rheumatic disorders.

Recently, it has gained a reputation as an anti-inflammatory agent, high cholesterol treatment, antioxidant and cancer prevention. It is also known to prevent cardiovascular diseases and other degenerative changes associated with aging. It is also attributed with virtues against allergies, AIDS, cataracts and other diseases. Curcumin is added to foods such as butter and margarine to prevent oxidation and improve colour. Turmeric is a popular spicy spice that has been traditionally used to improve digestion and treat indigestion and inflammatory disorders.

Turmeric and its main ingredient, curcumin, are also promoted as antioxidants, for the treatment of cancer, HIV and high cholesterol, as well as cardiovascular disease preventatives. However, controlled clinical trials are lacking for these indications or have not shown convincing positive results. No clinical benefit was shown for peptic ulcer disease and one study was inconclusive for dyspepsia. Controlled trials for arthritis and inflammation have not properly demonstrated beneficial effects. Other uses have not been evaluated in controlled clinical trials.

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