



The Review on Traditional medicine Turmeric (Curcuma Longa)

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ABSTRACT:

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 in a preparation used for dysentery. Turmeric has also been used in toothpowder 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.

Keywords: Ayurveda, Curcumin, Haldi, Rasayan, Traditional Medicine.

Introduction:

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 color 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. 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 diarrhea. 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 every day 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 a 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 quick relief.

History of turmeric:

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 Castleman 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. For example, in all of Dr. Christopher's writings, the only mention of turmeric I can find is that it is listed as an alternative tonic. In Jethro Klauss's book *Back to Eden*, I can find no mention of turmeric at all. This indicates to me that the herbal schools Dr. Christopher and Jethro Klauss went to were not aware of the potential of turmeric which was well-known to Asian herbalists. I also suspect that there was a disconnect between Asian and western herbalists. Michael Castleman comments: "American chemists used turmeric paper, but not even the botanically oriented 19th-century Eclectic physicians had much use for turmeric itself, except to add color to medicinal ointments." In one western herbal from the early 20th Century, I do find a discussion of turmeric. This is in Maude Grieve's book *A Modern Herbal*. She gives a botanical description and the constituents of the herb as if the herb was of some importance, but then under Medicinal Actions and Uses she says: "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. However, even as Maude Grieve was writing, the roots of turmeric's emergence as a prominent healing herb were starting to grow. Daniel B. Mowrey tells the story: "Serious research on turmeric began in Germany, in the early 1920s. Sesquiterpenes in the essential oil of turmeric were isolated in 1926 and to them was ascribed the therapeutic activity. Later, a team of scientists compared the effects of whole extract, essential oil, and water-soluble extract. In 1936, curcumin was compared to whole extract and several isolated constituents. ... The results of the experiment show that turmeric acts in the following ways: Turmeric stimulates the flow of bile; several constituents have this property. The increased flow of bile depend in part on the contraction of the gallbladder and in part on the increase in bile secretion.

Turmeric medicinal uses:

For many years awareness of turmeric and its use as a medicine is continuously increasing. A flowering plant, Turmeric, in the ginger family, is commonly used as a food coloring and is one of the basic ingredients in curry powder. To heal many health disorders like liver problems, digestive disorders, treatment for skin diseases, and wound healing turmeric has long been used in Medicinal as an anti-inflammatory. Curcumin is the active ingredient in turmeric which has been shown to have a wide range of therapeutic effects.

Digestive Disorders:

Turmeric is considered as a digestive bitter and a carminative. It can be added to foods including rice and bean dishes to improve digestion, and reduce gas and bloating. It is a cholagogue, stimulating bile production in the liver and encouraging the excretion of bile via the gallbladder. This improves the body's ability to digest fats. For chronic digestive weakness and/or congestion turmeric is recommended. It can be taken as a single extract or in the form of digestive bitters, which combine turmeric with other bitter and carminative herbs. Turmeric is beneficial for people who feel tired after consuming meals or who experience gas and bloating. Whatever way turmeric is consumed it is beneficial to both the digestive system and the liver.

Liver Diseases:

Turmeric is beneficial for its influence on the liver. In spring more consumption of herbs and foods can strengthen the liver. Turmeric shares similar liver-protectant compounds that milk thistle and artichoke leaves contain. It is said to shrink engorged hepatic ducts, so it can be useful to treat liver conditions such as hepatitis, cirrhosis, and jaundice.

Cancer:

Recent scientific research confirm that turmeric can cure host of diseases, also they found that turmeric restrain the growth of various types of cancer. Turmeric is used for the treatment of skin cancer or pre cancerous skin conditions. Both topical and internal uses are beneficial.

Therapeutic Properties:

Turmeric contains curcumin and curcuminoids it is a first rate natural remedy for arthritis, it has an anti-inflammatory ingredient that can help alleviate pain. It can also help protect the gallbladder and liver and provide a defense against cancer. Curcumin can also help inhibit the formation of cancer in breast tissue. Experiment on animal shows that curcumin slashed the risk of colon cancer by almost 60%, this phytochemical seems to neutralize cancer-causing compounds, stop cancerous changes in the cells and directly fight substances that enable carcinogens to spread and wreak havoc. Turmeric also triggers better bile flow, which helps digest fats and reduces the risk of gallstones. It also helps generates the secretion of several enzymes that assist the liver in breaking down and metabolizing certain toxic substances. Some of these same phytochemicals inhibit the oxidative damage that allows cholesterol to coagulate and cling to the inside of arteries. Turmeric /curcumin is about half as effective as corticosteroids, but it doesn't have bad side effect as corticosteroids, this drug is use for the treatment of arthritis, but they can cause fluid retention and bloating, elevate blood pressure, encourage intestinal bleeding, ulcer formation and increase the risk of osteoporosis.

Direction for use / Dosage:

400 milligrams of a curcumin extract three times a day, 445 milligrams of a standardized supplement 2 to 3 times a day, 1tsp of the dried herb in a cup of warm milk daily, 1tsp to 1tbsp of a liquid extract divided into several dosages over the course of a day, or 1/8 to ¼ tsp of turmeric tincture 3x a day. Your body will absorb more curcumin if you take it with lots of black pepper. The piperine in pepper improves the body's ability to use turmeric perhaps as much as twentyfold, according to studies. Ginger is also a good companion for turmeric.

Caution:

Don't take turmeric if you have bile duct obstruction, people with gallstones should consult a herb physician before taking this. Excessive dosage of curcuminoids could cause ulcers or cancer and reduce the number of red and white blood cells in the body. Too much intake can also cause hair fall. When buying turmeric, always buy from a reputable seller since some species are toxic.

Uses of Turmeric:

Since ancient times, turmeric has been used as a traditional medicine and for beauty care. In the Ayurvedic system of Indian medicine, turmeric is an important herbal medicine prescribed for various diseases. In fact, turmeric is even used in modern times to plug radiator leaks in water-cooled radiators. The various uses of turmeric are as follows :

Food Additive:

- 1) Turmeric is a mild aromatic stimulant used in the manufacture of curry powders.
- 2) Turmeric is used in products that are packaged to protect them from sunlight. The oleoresin component of turmeric is used for oil-containing products.
- 3) The curcumin solution or curcumin powder dissolved in alcohol is used for water-containing products.
- 4) Sometimes in pickles and mustard, turmeric is used to compensate for fading.
- 5) Turmeric is also used for coloring cheeses, salad dressings, margarine, yoghurts, cakes, biscuits, popcorn, cereals, sauces, etc.
- 6) Turmeric also forms a substitute for mustard in the cattle feed.

Medicinal:

- 1) Turmeric is used for treating digestive disorders.
- 2) Raw Turmeric juice is used to treat hyperacidity and indigestion.
- 3) The juice of raw turmeric also acts as a blood purifier. Curcumin - an active component of turmeric, has anti-oxidant properties and so turmeric is used in alternative medicine.
- 4) Turmeric is used for cuts and burns as it is believed to have antiseptic effects and promotes healing.
- 5) Curcumin also has an anti-inflammatory effect by reducing histamine (hormone) levels.
- 6) The fluoride present in turmeric is essential for teeth.
- 7) Turmeric also has a protective effect on the liver and also in atherosclerosis.

Cosmetics:

- 1) The juice of raw turmeric is applied to the skin as a paste, kept for around thirty minutes and then washed off. It adds glow to the skin.
- 2) It is an essential ingredient of the traditional bathing ritual of Indian marriages where it is applied along with sandalwood paste before the bath.
- 3) It is believed that regular bathing in water containing turmeric reduces growth of body hair.
- 4) Regular turmeric use is said to make the skin fair, soft and smooth.
- 5) Turmeric is used for spots caused due to pigmentation or blotches and also for diseases like eczema.

Use of Turmeric for Medicinal Purposes:

Even though the turmeric herb has been around for thousands of years, in recent years attention has been brought to this herb for its medicinal properties. Many state that it has antiseptic qualities and has been taken orally or applied to a wound when it's raw. Traditionally turmeric was used quite often to

help prevent infection. When taken orally, it has been used to treat numerous infections, such as various stomach ailments. All of these traditional methods of treatment have been proven to be helpful in most cases. The healing properties are said to come from the rhizomes found in the herb, which is called curcumin.

Turmeric to Help with Pain and Reduce Inflammation:

Some of us are interested in how to use turmeric to reduce inflammation and help with pain. There are many popular options in order to increase the amount of turmeric that your body gets. This should be done slowly over time. Some studies show how to use turmeric is to begin with ¼ teaspoon and working up to 1 teaspoon over the period of a month. This can be done by sprinkling the powder in soups, adding it to your food while cooking dinner, or adding it to scrambled eggs, or sprinkled over salads. Studies also show that adding a dash of cayenne pepper along with the turmeric can possibly make it even more effective. Turmeric is believed to also serve as an anti-inflammatory within the digestive tract. Some people have reported that their food digests better, plus some reports have shown that adding a little extra turmeric to your diet after over indulging can help with digestion and the bloated feeling

Plant Description:

A relative of ginger, turmeric is a perennial plant that grows 5 - 6 feet high in the tropical regions of Southern Asia, with trumpet-shaped, dull yellow flowers. Its roots are bulbs that also produce rhizomes, which then produce stems and roots for new plants. Turmeric is fragrant and has a bitter, somewhat sharp taste. Although it grows in many tropical locations, the majority of turmeric is grown in India, where it is used as a main ingredient in curry.

Parts Used:

The roots, or rhizomes and bulbs, are used in medicinal and food preparations. They are generally boiled and then dried, turning into the familiar yellow powder. Curcumin, the active ingredient, has antioxidant properties, which some claim may be as strong as vitamins C and E. Other substances in this herb have antioxidant properties as well.

How to Take It:

Pediatric: There is no recommended dosage for children. Consider adjusting the recommended adult dose to account for the child's weight. Most herbal dosages for adults are calculated on the basis of a 150 lb (70 kg) adult. Therefore, if the child weighs 50 lb (20 - 25 kg), the appropriate dose of turmeric for this child would be 1/3 of the adult dosage.

Adult

The following are doses recommended for adults:

- Cut root: 1.5 - 3 g per day • Dried, powdered root: 1 - 3 g per day
- Standardized powder (curcumin): 400 - 600 mg, 3 times per day
- Fluid extract (1:1) 30 - 90 drops a day • Tincture (1:2): 15 - 30 drops, 4 times per day

Precautions:

The use of herbs is a time-honored approach to strengthening the body and treating disease. Herbs, however, can trigger side effects and may interact with other herbs, supplements, or medications. For these reasons, herbs should be taken with care, under the supervision of a health care provider. The amounts of turmeric found in foods are considered safe. Turmeric and curcumin are considered safe when taken at the recommended doses. However, taking large amounts of turmeric for long periods of time may produce stomach upset and, in extreme cases, ulcers. People who have gallstones or obstruction of the bile passages should talk to their doctor before taking turmeric. If you have diabetes, talk to your doctor before taking turmeric supplements. Turmeric may lower blood sugar levels, and when combined with medications for diabetes could cause hypoglycemia (low blood sugar). Although it is safe to eat foods containing turmeric, pregnant and breastfeeding women should not take turmeric supplements.

Possible Interactions:

If you are currently being treated with any of the following medications, you should not use turmeric or curcumin in medicinal forms without first talking to your health care provider

Pharmacology:

Turmeric is known to have many medicinal properties. It has been seen that throughout the centuries, turmeric has been used in various beauty treatments. Turmeric is said to contain certain components that help in accentuating one's skin color. No wonder – all the innumerable fairness cream advertisements that we get to see boast of containing turmeric. The best part about turmeric is that it is inexpensive effective. As per Indian rituals, the bride is smeared with turmeric paste on the day of the marriage as it is believed that turmeric is good for skin. It even enhances skin tone and gets rid of blemishes as well as acne. Experts claim that you should have chopped turmeric in empty stomach. This is said to cleanse the blood and purify you from within. As a result, you get blessed with a glowing fair skin. Most fairness and beauty creams claim of being made with turmeric paste. Turmeric paste is supposed to have certain antiseptic features. For ages, it is believed that turmeric paste helps for healing wounds and scratches. In fact, there are many band-aids that have turmeric paste on them now a days. Applying turmeric paste on burns or wounds soothes the skin and helps it to heal faster. Turmeric paste when mixed with neem and applied on the face is an excellent facemask. To get the best results, you will need to keep this mask for a span of 30 minutes and then rinse off with rose water. One needs to be extra careful while taking off turmeric mask. Turmeric is known to leave a yellow stain on the skin very easily. Ensure that you wash your face a number of times after applying this facemask. Try using turmeric in your daily beauty regime and notice a glowing and brighter skin.

Application of turmeric in dental problem:**Dental problems:**

Turmeric can be used in following ways offer relief from dental problems:

- Rinsing the mouth with turmeric water (boil 5 g of turmeric powder, two cloves, and two dried leaves of guava in 200 g water) gives instant relief.
- Massaging the aching teeth with roasted, ground turmeric eliminates pain and swelling.
- Applying the powder of burnt turmeric pieces and bishop's weed seed on teeth and cleaning them makes the gums and teeth strong.
- Applying a paste made from 1 tsp of turmeric with ½ tsp of salt and ½ tsp of mustard oil provides relief from gingivitis and periodontitis. Rub the teeth and gums with this paste twice daily.

Side Effects of Turmeric:

The use of herbs is a time-honored approach to strengthening the body and treating disease. Herbs, however, contain active substances that can trigger side effects and interact with other herbs, supplements, or medications. For these reasons, herbs should be taken with care, under the supervision of a practitioner knowledgeable in the field of botanical medicine. While pregnant women needn't avoid foods containing turmeric, its use as a medicinal herb is not recommended during pregnancy because the effects are not fully known.

Dosage:

Turmeric extracts standardized at 90 to 95% curcumin can be taken in the amount of 250 to 500 mg three times per day. Tincture, 0.5-1.5 ml three times per day, is sometimes recommended.

Toxicology:

No reports of toxicity have been reported following the ingestion of turmeric. No change in weight was observed following chronic treatment, although changes in heart and lung weights were observed; a decrease in white and red blood cell levels were observed. Although a gain in weight of sexual organs and an increase in sperm motility was observed, no spermatotoxic effects were found.

Clinical trials in turmeric:

Clinical trials have been primarily published in local journals from Asian countries. There have been no clinical studies on turmeric or curcumin from Europe or North America. Inflammation and Arthritis-In a randomized, double-blind, crossover trial from India, of 6-month duration and conducted on 42 patients with osteoarthritis, Articulon-F, an herbal mixture containing turmeric (plus ashwagandha, frankincense, and zinc) improved pain and disability scores compared to placebo. Although the results were statistically significant, the individual effect of turmeric was not evaluated and the dose of turmeric (300 mg/day) was relatively small. A "preliminary" double-blind RCT on 18 patients with rheumatoid arthritis suggested curcumin 400 mg t.i.d. was as effective as phenylbutazone 100 mg t.i.d.; however, upon analyses of the results, phenylbutazone appeared more effective, and there was no adequate placebo control. Other Indications-An open study on patients with chronic anterior uveitis evaluated 53 patients, with 21 lost to follow-up. Eighteen patients with a weak reaction to purified protein derivative (PPD) received 375 mg t.i.d. of turmeric alone for 12 weeks, versus 12 patients with a strong PPD reaction who received turmeric combined with antitubercular drugs for 1 year. The 18 patients receiving turmeric alone all improved within the initial 12 weeks, compared to 86% of the combined treatment group. After 3 years of follow-up, there was a higher recurrence rate in the turmeric group

(55%) than the combination treatment group (36%), with similar rates of vision loss. The authors suggest that turmeric may be beneficial in treating chronic anterior uveitis, but the results of this non-blinded and poorly controlled study are difficult to interpret. Small uncontrolled studies in India and China have reported potential effects of turmeric or curcumin in lowering serum cholesterol. In an open study of 45 patients that assessed cholesterol as a secondary endpoint over 4 weeks, triglycerides were reduced, but total cholesterol was unaffected. An uncontrolled pilot study in India involving 814 patients reported that a paste of turmeric combined with neem was beneficial to treat scabies.

Adverse Effects:

Encapsulated turmeric or curcumin administered in the clinical trials was well tolerated; side effects were generally similar to placebo. In one trial of patients with duodenal ulcers, a burning sensation was reported twice as often in the turmeric group than in the placebo group (13% and 7%, respectively). There are rare cases of allergic contact dermatitis reported.

Side Effects and Interactions:

Turmeric has antiplatelet effects *in vitro*, which could have an additive effect with anticoagulants or antiplatelet drugs. However, antiplatelet effects have not been demonstrated *in vivo*, and no adverse effects or interactions have been reported in clinical trials or from individual cases.

Conclusion:

Turmeric has been traditionally recognized in India as a flavorful, colorful condiment, and as an Ayurvedic medicine to improve appetite, act as a carminative, and treat gallstones and other biliary problems, as well as dyspepsia. It is a traditional remedy in India, China, and other Southeast Asian countries to treat asthma and colds, and is applied as an ointment, paste, or poultice for scabies, boils, bruises, insect bites, and other skin lesions. Turmeric is given orally for many other conditions, including menstrual problems, pain, epilepsy, respiratory tract infections, bleeding, diarrhea, jaundice, and rheumatic disorders. More recently, it has gained a reputation as an anti-inflammatory agent, a treatment for hypercholesterolemia, an antioxidant, and a cancer preventative, and is claimed to prevent cardiovascular and other degenerative changes of aging. Claims also are made for its value in allergies, AIDS, cataracts, and other diseases. Curcumin is added to foods such as butter and margarine to prevent oxidation and to improve colour. Turmeric is a valued spicy condiment that has been traditionally used to improve digestion and to treat dyspepsia and inflammatory disorders. Turmeric and its major component, curcumin, are also promoted as antioxidants; cancer, HIV, and hypercholesterolemia treatments; and cardiovascular disease preventatives. However, controlled clinical trials are either lacking for these indications or have not shown convincingly positive results.

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