

# TURMERIC: IMPORTANCE AND ITS USES

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## INTRODUCTION

Turmeric is a plant that has a very long history of medicinal use, dating back nearly 4000 years. In Southeast Asia, turmeric is used not only as a principal spice but also as a component in religious ceremonies. Because of its brilliant yellow colour, turmeric is also known as “Indian saffron.” In North India, turmeric is commonly called “haldi,” a word derived from the Sanskrit.



## GENERAL INFORMATION

- ✓ The turmeric plant needs temperatures between 20°C and 30°C and a considerable amount of annual rainfall.
- ✓ Individual plants grow to a height of 1 m, and have long, oblong leaves. Plants are gathered annually for their rhizomes.
- ✓ The rhizome, from which the turmeric is derived, is tuberous, with a rough and segmented skin
- ✓ The rhizomes mature beneath the foliage in the ground. They are yellowish brown with a dull orange interior.
- ✓ The main rhizome is pointed or tapered at the distal end and measures 2.5–7.0 cm (1–3 inches) in length and 2.5 cm (1 inch) in diameter, with smaller tubers branching off.
- ✓ India produces nearly the world’s entire turmeric crop and consumes 80% of it. With its inherent qualities and high content of the important bioactive compound curcumin, Indian turmeric is considered to be the best in the world.

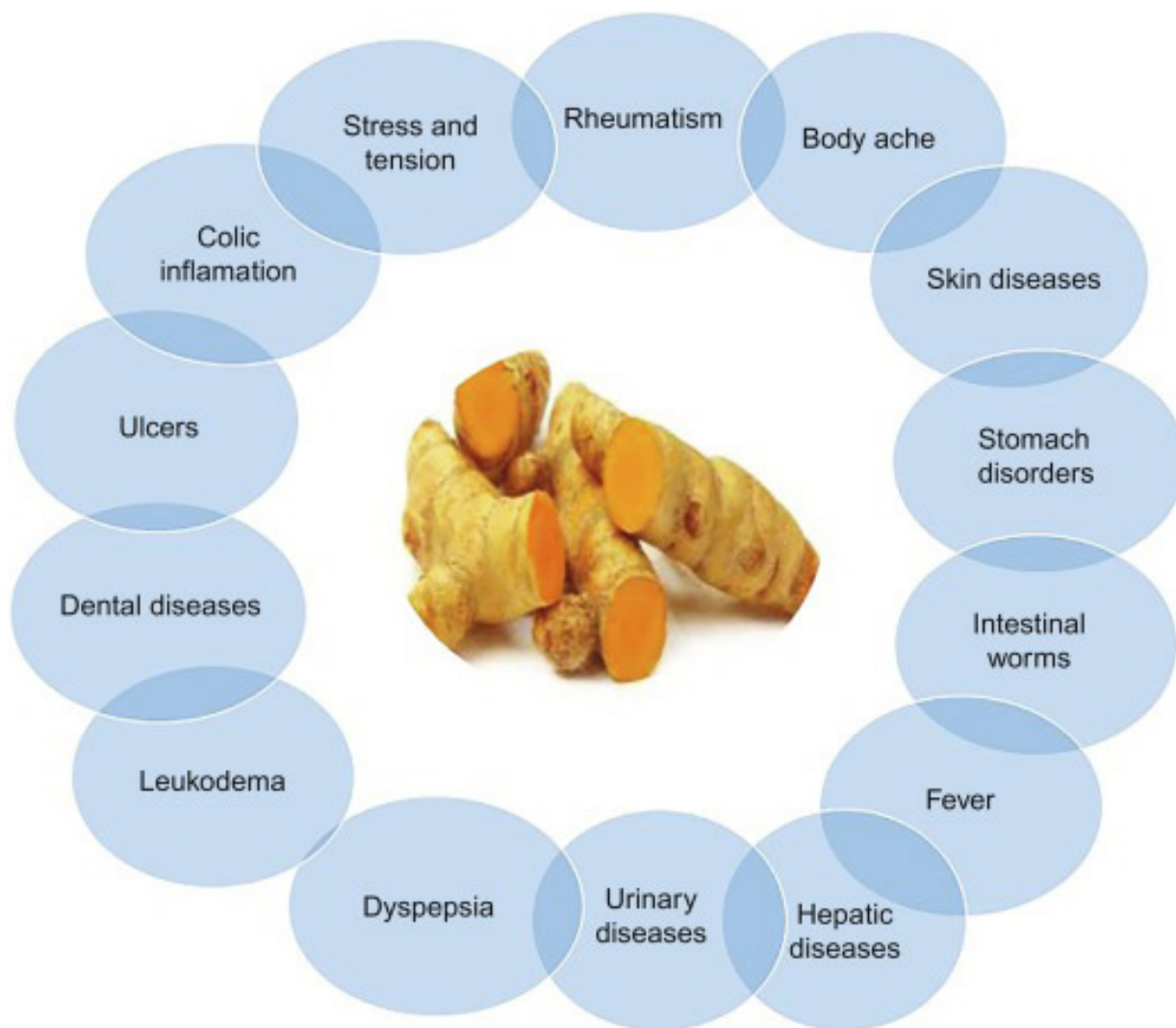
Erode, a city in the South Indian state of Tamil Nadu, is the world’s largest producer of and the most important trading centre for turmeric. It is also known as “Yellow City,” “Turmeric City,” or “Textile City.” Sangli, a city of Maharashtra, is second only to Erode in size and importance as a production and trading site for turmeric. Before turmeric can be used, the turmeric rhizomes must be processed.

- ✓ Rhizomes are boiled or steamed to remove the raw odor, gelatinize the starch, and produce a more uniformly coloured product.
- ✓ In the traditional Indian process, rhizomes were placed in pans or earthenware filled with water and then covered with leaves and a layer of cow dung.
- ✓ For hygienic reasons, this method has been discouraged. In present-day processing, rhizomes are placed in shallow pans in large iron vats containing 0.05–0.1% alkaline water (e.g., solution of sodium bicarbonate).
- ✓ The rhizomes are then boiled for between 40–45 minutes (in India) or 6 hours (in Hazare, Pakistan), depending on the variety.
- ✓ The rhizomes are removed from the water and dried in the sun immediately to prevent overcooking.





- ✓ The final moisture content should be between 8% and 10% (wet basis). When finger tapping of the rhizome produces a metallic sound, it is sufficiently dry. The dried rhizomes are polished to remove the rough surface. Sometimes, lead chromate is used to produce a better finish, but for obvious reasons this practice should be actively discouraged. The powder maintains its colouring properties indefinitely, although the flavour may diminish over time. Protecting the turmeric powder from sunlight retards the rate of deterioration.



## COMPOSITION OF TURMERIC

- ✓ The main component of the root is a volatile oil, containing turmerone, and there are other colouring agents called curcuminoids in turmeric.
- ✓ In a standard form, turmeric contains moisture (>9%), curcumin (5–6.6%), extraneous matter (<0.5% by weight), mould (<3%), and volatile oils (<3.5%).
- ✓ Volatile oils include d- $\alpha$ -phellandrene, d-sabinene, cinol, borneol, zingiberene, and sesquiterpenes

## IMPORTANCE

Turmeric has been put to use as a foodstuff, cosmetic, and medicine.

### 1. Food Stuff

- ✓ Turmeric is traditionally used to give boiled white rice a golden color.
- ✓ Turmeric is also used in manufactured food products such as canned beverages, dairy products, baked products, ice cream, yellow cakes, yogurt, orange juice, biscuits, popcorn, sweets, cake icings, cereals, sauces, and gelatins.
- ✓ It is a significant ingredient in most commercial curry powders.
- ✓ Turmeric has numerous uses in Asian cuisine.
- ✓ It is used in savoury and sweet dishes, and is widely used in Eastern specialties such as fresh turmeric pickle.





## 2. Medicinal Use

Strengthening the overall energy of the body, relieving gas, dispelling worms, improving digestion, regulating menstruation, dissolving gallstones, and relieving arthritis.

- ✓ Used as an antiseptic for cuts, burns, and bruises, and as an antibacterial agent.
- ✓ It is used as an anti-inflammatory agent, and as a remedy for gastrointestinal discomfort associated with irritable bowel syndrome and other digestive disorders
- ✓ Indians use turmeric, in addition to its Ayurvedic applications, to purify blood and remedy skin conditions.
- ✓ Turmeric paste is used by women in some parts of India to remove superfluous hair.
- ✓ Turmeric is currently used in the formulation of several sunscreens.
- ✓ Several multinational companies are involved in making face creams based on turmeric.
- ✓ Turmeric is a well-documented treatment for various respiratory conditions (e.g., asthma, bronchial hyperactivity, and allergy), as well as for liver disorders, anorexia, rheumatism, diabetic wounds, runny nose, cough, and sinusitis.
- ✓ In traditional Chinese medicine, it is used to treat diseases associated with abdominal pain. From ancient times, as prescribed by Ayurveda, turmeric has been used to treat sprains and swelling). In both Ayurvedic and traditional Chinese medicine, turmeric is considered a bitter digestive and a carminative.



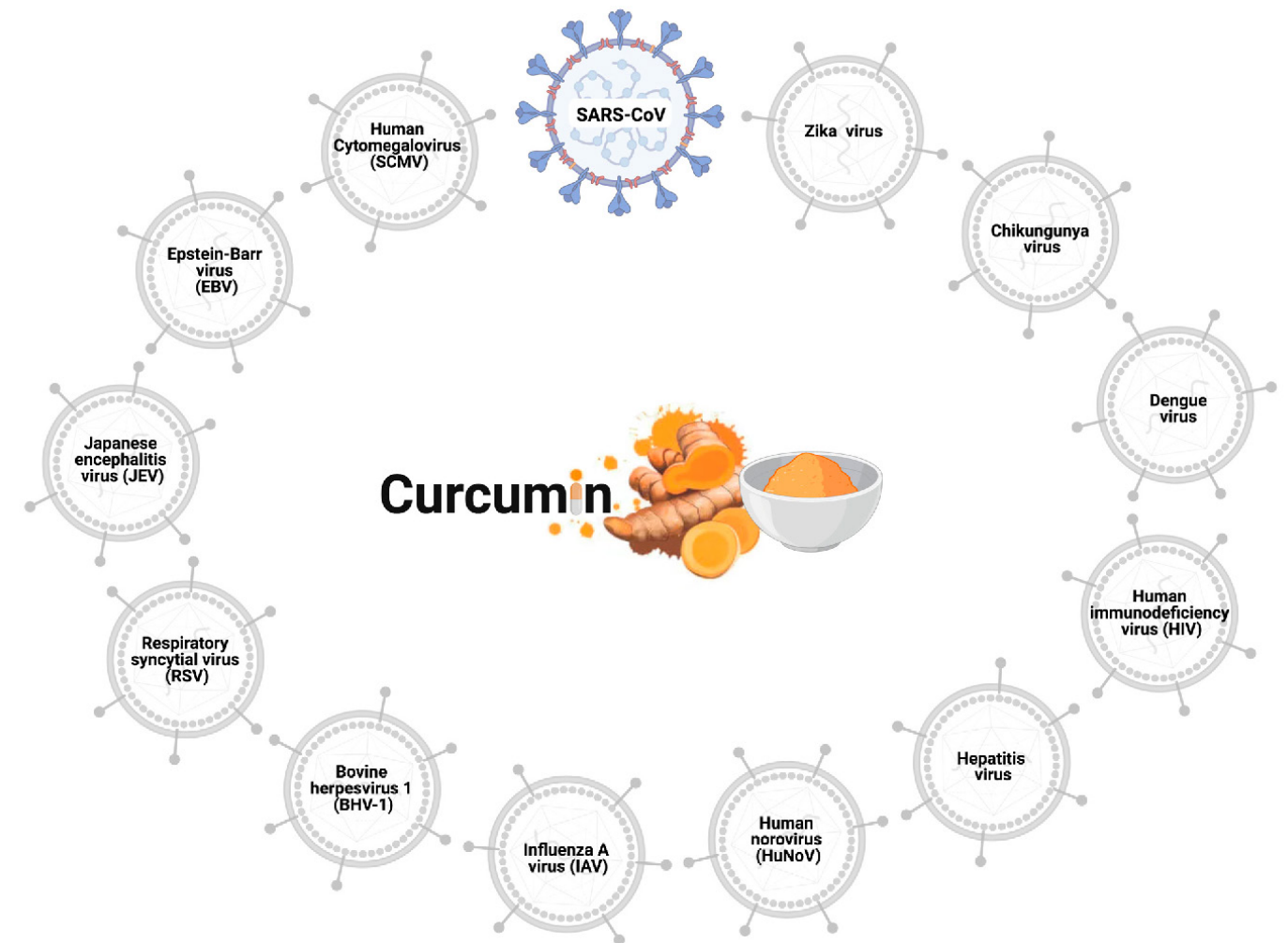
# Turmeric

## Uses + Benefits

Turmeric Coffee	● Anti-Allergy
Turmeric Tea	● Anti-Cancer
Golden Milk	● Anti-Fungal
Turmeric Fat Bombs	● Anti-Inflammatory
Turmeric Healing Paste	● Anti-Viral
Turmeric Lemonade	● Heals Wounds Fast
Turmeric Supplements	● Helps Control Blood Sugar
Turmeric Soups	● Immunity Booster
Turmeric in Stir Fry's	● Improves Digestion
Turmeric Water	● Improves Memory
	● Prevents Tooth Decay
	● Prevents Alzheimer's Disease
	● Reduces Arthritis Symptoms
	● Reduces Risk of Heart Disease
	● Reduces symptoms of Depression
	● Helps with aging
	● Promotes a Longer Lifespan
	● Natural Painkiller
	● Protects Lungs

## 3. Use of Turmeric

- ✓ Modern in vitro studies reveal that turmeric is a potent antioxidant, anti-inflammatory, anti-mutagenic, anti-microbial, and anti-cancer agent.
- ✓ Sufficient levels of turmeric may be consumed from curries in vivo to ensure adequate antioxidant protection.
- ✓ As an antioxidant, turmeric extracts can scavenge free radicals, increase antioxidant enzymes, and inhibit lipid peroxidation.
- ✓ A mutagenicity study showed that turmeric inhibits the mutagenicity produced by direct-acting mutagens such as N-methyl N'-nitro-N-nitrosoguanidine and sodium azide. Turmeric extracts were found to inhibit microsomal activation-dependent mutagenicity of 2-acetamidofluorene.
- ✓ The curcumin in turmeric has proven a strong anti-inflammatory property that blocks the action of inflammatory molecules in the body.
- ✓ Positive results are shown on the people suffering from conditions like rheumatoid, arthritis and inflammatory bowel diseases.



## CONCLUSION

The most widely used part of turmeric is its root, comprising loads of phytochemical, vitamins, and minerals, quite beneficial for the cure of various human diseases. It has various other medicinal uses as it possesses antioxidant, anti-inflammatory and anti-mutagenic properties. Hence, it seems that turmeric is a safe medicinal herb.