

# Full Spectrum™ Turmeric



## Enhanced Bioavailability

- **Certified Organic Turmeric Extract**
- **Powerful antioxidant, also promotes healthy inflammatory response**
- **Includes Bioperine® to enhance bioavailability**

Turmeric (*Curcuma longa*) is a traditional Ayurvedic botanical known for centuries for its multiple health-promoting benefits. Curcumin is the active constituent demonstrated to be responsible for the biological activities of turmeric. The curcuminoids in turmeric have strong antioxidant properties and have been shown through scientific research to support a healthy inflammation response. Modern science has recently recognized the many positive benefits delivered by one of the most time-tested of the traditional Ayurvedic herbals. Planetary Herbals and Planetary Ayurvedics now offer a high-potency, 1,000 mg, certified organic liquid turmeric with Bioperine®, a specialized extract of black pepper for enhanced bioavailability.



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Expert Formulations – Exceptional Results

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent any disease.

## History

Turmeric is related to ginger and grown throughout India, Asia, and Africa. Curcumin is the active compound in turmeric, responsible for turmeric's characteristic deep yellow pigment. Turmeric is often used as a flavoring or coloring agent in prepared foods such as mustard, butter, and cheese, and is a primary ingredient in curry powder. In India, turmeric powder is often applied to the skin for ornamental purposes during holidays and religious ceremonies. Turmeric has been used in Ayurveda and Traditional Chinese herbalism for centuries. Ayurvedic health practitioners have used turmeric for support of liver health, circulation, healthy skin, and bile flow.

## Antioxidant Support

Curcumin, the active ingredient in turmeric, exhibits both direct and indirect antioxidant activity, however, its antioxidant activities may be primarily indirect. Curcumins elicit indirect antioxidant activity by acting as catalysts for enzymes that directly scavenge free radicals. Curcumin stimulates the synthesis of proteins necessary for the production of intracellular antioxidants such as glutathione, an antioxidant existing throughout all the body's cells. Also, curcumin is able to cross the blood-brain barrier, and therefore may exert antioxidant activity in neurons and the brain.

## Inflammation Response

Cytokines are important cellular messengers at the very center of the immune process. They are generally secreted by white blood cells to activate nuclear factor kappa B (NF-kB) response. NF-kB is a transcription factor protein complex involved in cellular response to oxidative stress. Curcumin has been demonstrated in studies to inhibit the expression of NF-kB and the COX-II enzyme. The COX-II enzyme is needed to produce pro-inflammatory prostaglandin E2 synthesis in cell membranes. Thus, turmeric's lowering of COX-II lowers metabolic inflammation. Curcumin's anti-inflammatory potential on liver health has also been investigated in preliminary studies. Curcumin may exert some protective influence on the liver through the inhibitory effects on the expression of NF-kB, COX-II enzymes and inflammatory cytokines that cause fibrosis in the liver cells.

*Adhering to the quality control requirements and codes of ethics of: American Herbal Products Association, National Nutritional Foods Association*

## Bioavailability

The bioavailability of typical turmeric supplements is often very low. The reason is because curcumin is rapidly metabolized in the liver and intestinal wall and converted into other compounds through glucuronidation. Piperine, the active ingredient of long pepper and black pepper, has been added to Planetary Herbals FULL SPECTRUM TURMERIC, to inhibit intestinal glucuronidation. This increases the bioavailability of curcumin and the expression of the compound's many benefits. Our product includes Bioperine<sup>®</sup>, which is standardized to contain a minimum of 95% piperine, for enhanced absorption.

Planetary Herbals embraces the principals of *Phyto-Dynamics*, which integrates the health promoting properties of the natural world with modern clinical and pharmacological research. Combining time-tested natural herbs with scientific research provides reliable, expertly crafted, superior quality herbal supplements.

BioPerine<sup>®</sup> is a Registered Trademark of Sabinsa Corporation with US and International Patents.

## References:

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