

# Enhancing absorption and bioavailability of curcumin and turmeric

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Few natural products have demonstrated the range of protective and therapeutic promise as have turmeric and its principal bioactive components, the curcuminoids. Success in translating this potential into tangible benefits has been limited by inherently poor intestinal absorption, rapid metabolism, and limited systemic bioavailability. Seeking to overcome these limitations, food ingredient formulators have begun to employ a variety of approaches to enhance absorption and bioavailability.

The article "Beyond Yellow Curry: Assessing Commercial Curcumin Absorption Technologies," is now available from the *Journal of the American College of Nutrition*, official publication of the American College of Nutrition.

Turmeric and its main [bioactive components](#)—curcumin, desmethoxycurcumin and bisdemethoxycurcumin—have many biological effects including anti-inflammatory, antioxidant, antitumor, antibacterial, and antiviral activities. Turmeric traditionally has been consumed in fat-based sauces, such as in a fat-rich yellow curry. More recently, intake of concentrated extracts of curcuminoids has become common in the form of health supplements. This review introduces needed order to the curcumin marketplace by examining [bioavailability](#) studies on a number of commercial curcumin ingredients and evaluating them on a level playing field.

A hydrophilic carrier dispersed curcuminoid formula exhibits 45.9 times

the bioavailability of the standard purified 95 percent curcuminoid preparation and, based on relative mass efficiency, 1.5 times the bioavailability of the next best commercial ingredient, a cyclodextrin complex.

Curcumin is currently being actively researched. When asked about the future of this field of research, author Dallas Clouatre said, "I would like to see and perhaps be involved in research on improving bioavailability. Also, it would be useful to test whether curcumin's benefits can be improved or even directed through use of combination products. The "silver bullet" research model for nutritional and pharmaceutical compounds long has been questioned. Alternatives, such as an examination of what is sometimes termed the "entourage effect," need to be explored."

The authors conclude, "Delivery strategies can significantly improve the bioavailability of curcuminoids. Total formula mass is important for making practical formulation decisions about dosing, cost and space."

**More information:** "Beyond Yellow Curry: Assessing Commercial Curcumin Absorption Technologies." [DOI: 10.1080/07315724.2014.950392](https://doi.org/10.1080/07315724.2014.950392)

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