







REVIEW

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# Thymol, thyme, and other plant sources: Health and potential uses

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Thymol is a naturally occurring phenol monoterpene derivative of cymene and isomer of carvacrol. Thymol (10–64%) is one of the major constituent of essential oils of thyme (*Thymus vulgaris* L., Lamiaceae), a medicinal plant with several therapeutic properties. This plant, native to Mediterranean regions, is commonly used as a culinary herb and also with a long history of use for different medicinal purposes. Nowadays, thymol and thyme present a wide range of functional possibilities in pharmacy, food, and cosmetic industry. The interest in the formulation of pharmaceuticals, nutraceuticals, and cosmeceuticals based on thymol is due to several studies that have evaluated the potential therapeutic uses of this compound for the treatment of disorders affecting the respiratory, nervous, and cardiovascular systems. Moreover, this compound also exhibits antimicrobial, antioxidant, anticarcinogenesis, anti-inflammatory, and antispasmodic activities, as well as a potential as a growth enhancer and immunomodulator. In the present review, these bioactivities have been covered because some of them can contribute to explain the ethnopharmacology of thymol and its main source, *T. vulgaris*. Other important aspects about thymol are discussed: its toxicity and bioavailability, metabolism, and distribution in animals and humans.

## KEYWORDS

essential oil, Lamiaceae, medicinal plant, natural food preservative, thyme, thymol