



DANGERS

OF TURMERIC OIL



Turmeric is one of the most revered plants and is considered nature's greatest gift to mankind. Over 800 scientific articles have been published on the chemical composition and various pharmacological attributes of this plant. The rhizome being the most potent part reported has been identified to contain active curcuminoids along with other constituents such as Turmeric Oil comprising turmerones.

Major compounds present in turmeric essential oils have been identified to be **ar-turmerone, α -turmerone and β -turmerone**.¹ These compounds when in isolated form have demonstrated bioactivity through *in vitro* studies, cytotoxic and apoptotic effects in various cells.² With this *in vitro* data, attempts have been made to carry out *in vivo* studies in animal models to further substantiate the biological potency of Turmeric Oil.

The anti-arthritic activity of **turmeric oil** gave an amazing 90-100% inhibition of joint swelling in experimental rats. The hazardous fallout was that it **caused significant morbidity and mortality (death)**. Up to 20% mortality was observed on use of crude turmeric oil while 36% mortality was recorded on the use of refined turmeric oil within a month of its use. Further investigation of this **study revealed gastrointestinal bleeding** which in turn caused anemia. There is thus a conflict between ideal dosages of turmeric oil that can offer safety as well as efficacy.³

To further escalate its inefficiency, **turmeric oil has been found to reduce the activity of curcuminoids**. Results from another study reveals that a turmeric fraction depleted of essential oils profoundly inhibited joint inflammation and periarticular joint destruction in a dose-dependent manner. The remaining components of the turmeric fraction other than the three major curcuminoids, such as turmerones, may actually inhibit the protective, anti-arthritic effect of the curcuminoids.⁴

Many have approached a method of incorporating turmeric oil along with curcuminoids, to increase the bioavailability of the latter. While improving the activity and bioavailability of curcuminoids is wanted, however not needed, it is important that safe and effective adjuvants such as piperine which has been scientifically proven and documented to increase levels of active metabolites such as Tetrahydrocurcumin, be the right preference. Studies clearly indicating **the dangers of turmeric oil**, alone and in combination with curcuminoids, is **an eye-opener to consumers and they must refrain from using turmeric oil** and adopt alternative safer and effective methods.

1. Jain V, Prasad V, Pal R, Singh S. Standardization and stability studies of neuroprotective lipid soluble fraction obtained from *Curcuma longa*. *J. Pharm. Biomed. Anal* 2007;44:1079–1086
2. Ji M, Choi J, Lee J, Lee Y. Induction of apoptosis by ar-turmerone on various cell lines. *Int. J. Mol. Med* 2004;14:253–256.
3. Janet L. Funk, Jennifer B, Janice N, Huaping Z, Barbara N. Arthritic Effects and Toxicity of the Essential Oils of Turmeric (*Curcuma longa* L.) *J Agric Food Chem.* 2010; 58(2): 842–849.
4. Janet L. Funk, Jennifer B, Janice N, Nesrin K, Jonathan W, Gwen McCaffrey, Gregory S, Guanjie C, Clark Lantz R, Shivanand D, Aniko M, Pawel R and Barbara N. *Arthritis & Rheumatism* 2006; 54(11): 3452-3464.