

Turmeric: Does It Have Antiseizure Activity?

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Question

Is turmeric or curcumin useful as an antiepileptic agent?



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Turmeric (*Curcuma longa*) is in the same botanical family as ginger (Zingiberaceae). The rhizome is used as a coloring agent and a spice in such foods as curries, and as a medicinal agent in India and China.

Curcumin, a constituent of the turmeric rhizome, is a bright-yellow polyphenolic compound, chemically diferuloylmethane. Preliminary research suggests that turmeric and curcumin have a variety of pharmacologic properties, including anti-inflammatory, antitumor, and antimicrobial activities.^[1-3]

Clinical research in small numbers of patients has been conducted on curcumin for a diverse group of medical conditions, such as osteoarthritis; inflammatory bowel disease; pancreatitis; gastric ulcer; psoriasis; and cancer, including breast, colorectal, pancreatic, and others.^[3] Although a search of curcumin on PubMed yields more than 7000 citations, most articles report bench research; no commercial interest has applied for a drug license for any curcumin preparation.^[4]

Curcumin is poorly bioavailable, but it is a low-molecular-weight, lipophilic compound, which allows it to be absorbed and penetrate the blood/brain barrier.^[5] Some research suggests that curcumin might have neuroprotective and antioxidant activity, which might be useful for treatment of seizures. Studies in several animal models have shown that curcumin can reduce seizures that have been induced chemically or electrically.^[6-12] To date, no clinical trials of curcumin or turmeric for seizures have been published.

Turmeric and curcumin are available in the United States as dietary supplements. Both appear to be safe for most people, although no studies demonstrating safety in patients with epilepsy are available. Curcumin did not adversely affect rats concurrently given conventional antiepileptic drugs.^[13] Preliminary clinical research suggests that curcumin might inhibit cytochrome P450 (CYP)1A2 and enhance CYP2A6.^[14]

In summary, research on induced seizures in animals suggests that turmeric or its constituent, curcumin, might have antiseizure effects. However, neither agent has been studied in patients with epilepsy.

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