

Q&A: Turmeric use in breast cancer treatment

November 11 2020, by From Mayo Clinic News Network



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DEAR MAYO CLINIC: I recently was diagnosed with breast cancer, and I will have surgery followed by chemotherapy. A friend told me that turmeric has anti-cancer properties. I have taken turmeric supplements

in the past for osteoarthritis. Can you tell me more about turmeric and if I can safely take it as a supplement along with conventional breast cancer treatment?

ANSWER: Turmeric, a bright yellow spice powder made from the root of a plant in the ginger family, is grown in many Asian countries and other tropical areas. It's a major ingredient in curry powders common in many Indian and Asian dishes, and it is used as a coloring for foods, fabrics and cosmetics. The root can be dried and made into capsules, tablets, extracts, powders or teas. Or it can be made into a paste to apply to the skin.

Turmeric's main active component—curcumin—is what gives the spice its yellow color. Curcumin has [anti-inflammatory properties](#), making it a potential treatment for a number of health conditions, including reduced pain and increased ease of movement in people with osteoarthritis. One study found that taking [turmeric](#) extract three times daily was comparable to taking a 1,200-milligram dose of ibuprofen daily for arthritis pain. However, more research is necessary to confirm these effects.

In addition to its anti-inflammatory properties, research suggests that curcumin has many other health benefits. Among them are antioxidant, metabolic-regulating, antimicrobial, immune-modulating, mood-enhancing, neuroprotective and anti-[cancer](#) effects.

Preclinical studies demonstrate curcumin stops the growth of [breast cancer](#) cells in the laboratory, but it's not known if this happens in humans since the body quickly breaks down curcumin, making it difficult to study. High-quality human studies are needed to confirm these findings, and guide effective and safe use of turmeric as a supplement.

When ingested as a superfood or when turmeric is used as a spice in culinary cuisine, the curcumin it contains appears to be generally safe among cancer patients. But dietary food sources are different than turmeric supplements or when it is taken as a pill. There is little research to ensure turmeric supplements are safe when used in combination with cancer treatments, including surgery, radiation and chemotherapy.

The use of supplements, like turmeric, among cancer patients undergoing cancer treatment can be a concern. Supplements are not standardized like prescription medications, meaning the dose is not regulated and purity cannot be guaranteed. What you get may differ from bottle to bottle and among brands, and there can be variables depending on what specific part of the plant is used. Many supplements that have powerful anti-inflammatory effects, like turmeric, have blood-thinning properties, which can increase the risk of bleeding and cause complications around the time of surgery.

In combination with chemotherapy, using supplements is worrisome because of potential drug-herb interactions. Laboratory studies have shown that two common chemotherapy drugs used to treat breast cancer—doxorubicin and cyclophosphamide—may have reduced effectiveness when used alongside turmeric, but the clinical significance is not yet known. Another commonly used chemotherapy drug for breast cancer, paclitaxel, when combined with turmeric may result in liver toxicity. The bottom line is that it's not known how turmeric affects chemotherapy and further research should be a guide. To reduce the risk of harm, clinician-guided [supplement](#) use is recommended.

It is best to talk with your cancer care team about the supplements you take to ensure they are safe, especially in combination with your cancer treatment. Oftentimes, marketing of supplements appears promising. However, high-quality research supporting these claims may be lacking and could pose harm. As a rule of thumb, there is no magic bullet. The

best option—one proven in studies time and time again—is to get all the antioxidants, phytonutrients, vitamins and minerals your body needs by eating a whole food plant-based diet rich in colorful vegetables and fruits, whole grains, beans, nuts and seeds.

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Citation: Q&A: Turmeric use in breast cancer treatment (2020, November 11) retrieved 8 May 2024 from <https://medicalxpress.com/news/2020-11-qa-turmeric-breast-cancer-treatment.html>

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