

Curcumin proved effective at combating cancer

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WA scientists have helped re-affirm that curcumin, a chemical compound found in turmeric, is a safe and promising treatment for most cancers and other inflammation-driven diseases.

The international review considered past clinical trials using [curcumin](#) to

treat [cancer](#) patients and concluded curcumin was a safe and effective molecule to treat cancer.

Curtin University adjunct research fellow Gautam Sethi says most diseases, including cancer, are caused by the deregulation of multiple genes.

"To treat cancer you need multi-targeted agents, better than mono-targeted agents, which have been used for the past few years," Associate Professor Sethi says.

"Multi-targeted agents are those that target more than one deregulated oncogenic signaling cascades—they are more effective in treating cancer as it has been found that several genes are mutated in a given cancer.

"We can modulate several of such oncogenic genes, which are deregulated in cancer using curcumin."

A/Prof Sethi says curcumin is exceptionally effective for multiple myeloma patients and those suffering from the particularly lethal [pancreatic cancer](#), for which there are no drugs.

However, curcumin was not found to be as effective in breast [cancer patients](#) being treated with the chemotherapeutic agent cyclophosphamide.

According to the research, curcumin can counteract the effect of cyclophosphamide.

Curcumin safe in high doses

A/Prof Sethi says curcumin is possibly the only drug that can be given at high doses—up to 12g—without any toxicity.

"It can target most of the oncogenic proteins like NF-kB, STAT3, AP-1," he says.

A/Prof Sethi says the only known side effect of the agent is blood thinning, and therefore advises against taking curcumin if undergoing surgery.

He recommends people use turmeric more often in everyday cooking.

A/Prof Sethi says it would be ideal to combine curcumin with other drugs or natural compounds, like piperine, an alkaloid found in pepper to increase its bioavailability.

"If we combine it with piperine we see viability increase by 2000 per cent 45 minutes after administering the curcumin," he says.

A/Prof Sethi says there is a lack of data to explain the underlying mechanism of its effect, however, it is known for its anti-inflammatory effects.

"It has been shown that most chronic diseases, including cancer, are caused by inflammation and can be treated by anti-inflammatory agents."

He says more work needs to be done to improve curcumin's viability, as body tissues quickly absorb it.

Curcumin is sold over the counter at pharmacies.

More information: "The multifaceted role of curcumin in cancer prevention and treatment." *Molecules*. 2015 Feb 5;20(2):2728-69. [DOI: 10.3390/molecules20022728](https://doi.org/10.3390/molecules20022728).

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