

Research backs belief that tomatoes can be a gout trigger

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People who maintain that eating tomatoes can cause their gout to flare up are likely to welcome new University of Otago research that has, for the first time, found a biological basis for this belief.

Gout is a painful and debilitating form of [arthritis](#) that affects approximately three times more men than women. Four to five percent of European men in New Zealand suffer from [gout](#). Amongst Māori and Pacific Island men this figure rises to 10-15% due to a greater genetic risk in these people.

Once a person has gout, eating certain foods can cause their gout to flare up in a painful attack. A group of Otago Department of Biochemistry researchers noticed that a large number of gout sufferers believe

tomatoes to be one of these gout trigger foods.

The researchers surveyed 2051 New Zealanders with clinically verified gout. Of these people 71% reported having one or more food triggers. Tomatoes were listed as a trigger in 20% of these cases.

One of the study authors, Genetics PhD student Tanya Flynn, says that tomatoes were found to be the fourth most commonly mentioned trigger, after seafood, alcohol and red meat.

"We thought it important to find a biological reason for this to add weight to what gout patients are already saying," Miss Flynn says.

After determining tomatoes are a commonly cited trigger food, the authors pooled and analysed data from 12,720 male and female members of three long-running US health studies. This data showed that tomato consumption is linked to higher levels of [uric acid](#) in the blood, which is the major underlying cause of gout.

Miss Flynn says that while their research is not geared to prove that tomatoes trigger [gout attacks](#), it does suggest that this food can alter uric acid levels to a degree comparable to other commonly accepted gout trigger foods.

"We found that the positive association between eating tomato and uric acid levels was on a par with that of consuming seafood, red meat, alcohol or sugar-sweetened drinks," she says.

Miss Flynn emphasised that the most important thing that people with gout can do to prevent attacks is take a drug—such as Allopurinol—that is very effective at reducing uric acid levels.

"Avoiding tomatoes may be helpful for people who have experienced a

gout attack after eating them, but with proper treatment this doesn't have to be a long-term avoidance," she says.

The findings are published in a paper in the international journal *BMC Musculoskeletal Disorders*.

"Further intervention studies are needed to determine whether [tomatoes](#) should be added to the list of traditional dietary triggers of gout flares, but this research is the first step in supporting this idea," says Miss Flynn.

More information: "Positive association of tomato consumption with serum urate: support for tomato consumption as an anecdotal trigger of gout flares." *BMC Musculoskeletal Disorders* 2015, 16:196 [DOI: 10.1186/s12891-015-0661-8](#)

Provided by University of Otago

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