Editorial

A Link Between Caffeinated Beverages and Gout

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According to preliminary research, gout may be precipitated by excessive intake of caffeine.

"We found that overall, as the number of servings of caffeinated beverages increased, so too did the chance of having recurrent gout attacks," says Tuhina Neogi, MD, PhD, associate professor of medicine at Boston University School of Medicine. For example, drinking four servings of caffeinated beverages in the previous 24 hours was associated with an 80% increased risk of recurrent gout attacks, compared with having no caffeinated drinks.

Drinking more than six servings of caffeinated beverages in the previous day was associated with a 3.3-fold higher risk of a flare-up, the study of 663 gout patients suggests. When habitual and occasional caffeine drinkers were looked at separately, the link was only observed in people with gout who typically drink less than two caffeinated beverages a day, Neogi tells WebMD, "As little as three servings a day could do it for these people," she says.

"In contrast, in people with gout who usually have two or more caffeinated beverages a day, increasing caffeine intake doesn't appear to raise the risk of gout attacks," Neogi says. The study does not prove cause and effect, just that there appears to be an association between higher caffeine intake in the past 24 hours and an increased risk of gout attacks. People with gout who drink a lot of revved-up beverages may share some other characteristic that makes them more prone to flare-ups, researchers say.

The findings were presented at the American College of Rheumatology's annual meeting. Gout occurs when two much uric acid, a normal byproduct of DNA metabolism, builds up in the body. This leads to crystal formation. The crystals deposit in the joints, causing painful swelling. Previous research has shown that, over the long term, caffeine intake is associated with lower levels of uric acid in the body and a lower risk of developing gout among people who do not have the arthritic condition, Neogi says.

The chemical structure of caffeine is very similar to that of a mediation called allopurinol, which is commonly used to lower uric acid levels in people with gout, she says. Although effective at controlling gout in the long term, allopurinol can precipitate a flare-up among patients taking it for the first time, she says. "Given the potential conflicting effects of caffeine on gout attack risk, we evaluated whether caffeinated beverage intake was associated with the risk for recurrent flare-ups," Neogi says.

The researchers turned to the internet to recruit 633 participants who had experienced a gout attack within the past year. Medical records were used to confirm their gout diagnosis. Participants were asked to log on after having their next attack and answer an extensive questionnaire about medication, foods, and drinks they had consumed in the 24 hours prior to the attack.

Three months after being free of flare-ups, they were asked to answer the same questions. The researchers asked about all types of caffeinated beverages, including coffee, tea, soft drinks, and high energy drinks such as Red Bull as well as non-caffeinated beverages.

Participants were predominantly white (80%), male (78%), and college educated (58&). The link between increased intake of caffeinated beverages in the prior 24 hours and a higher risk for recurrent gout attacks was present even after accounting for other fluid intake. In contrast, non-caffeinated coffee, tea, soda and juices were not associated with an increased risk of gout attacks, Neogi says. The researchers did not ask participants about the amount of sugar in their beverages. Therefore, the findings cannot be compared to that of another study presented at the meeting showing that women who drink one or more servings of sugary soda a day may be increasing their risk for developing gout, she adds.

Using the internet to recruit patients for a study is not ideal, as it results in a self-selected sample that is interested in the topic, says John S. Sunday, MD, PhD, a gout expert at Duke University Medical Center in Durham, N.C. Also, the group as a whole would be expected to be better educated and of higher socioeconomic status than people drawn from the general population, he notes. That said, "It is a way to accumulate a large number of patients in a short period of time. It is good for generating hypotheses" that can then be tested in more rigorous clinical trials, Sundy tells WebMD. Neogi defends the use of the internet for studies like this, pointing out that it allows each person's caffeine intake prior to an attack to be compared to her intake when she is attack-free.