

Study debunks caffeine-tinnitus myth

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(Medical Xpress)—An apple a day may keep the doctor away. But what fun is that? A study led by Schulich School of Medicine & Dentistry resident researcher Dr. Jordan Glicksman shows higher caffeine intake from coffee was associated with a reduced risk of hearing loss, or tinnitus, a condition characterized by ringing, swishing or other noises that appear to be originating in the ear or head.

Not normally a dangerous or serious problem, tinnitus is usually a symptom of some other underlying condition. Age-related hearing loss, ear injury, foreign objects in the ear and circulatory system problems, for example, may cause the condition.

Glicksman, a resident in Otolaryngology (Head and Neck Surgery), got interested in this work while he was preparing to start a Master's of



Public Health at Harvard University, and was offered to do research evaluating risk factors for tinnitus.

"Caffeine has long been thought to be a risk factor, or an exacerbating factor, for tinnitus, but I could not find any good evidence to support this idea," he said. "I wanted to see if any association really did exist, since this is a rather mainstream belief, but the origin of the purported association was unclear."

Using data from the U.S.-based Nurses' Health Studies II, a database of the largest and longest-running investigations of factors that influence women's health, Glicksman studied more than 65,000 women, aged 30-44 years, who had completed questionnaires about lifestyle and medical history every two years, and food frequency questionnaires every four years, since 1991.

For the group, <u>caffeine intake</u> was found to be an average of 242.3mg, or about two to three cups of coffee each day. After 18 years of follow-up, 5,289 incident cases of tinnitus were reported, showing a significant inverse association between the amount of caffeine intake and the incidence of tinnitus.

"We looked at caffeine from a wide variety of food and beverage sources, but coffee happened to be the biggest contributor in terms of sources of caffeine intake," said Glicksman, adding caffeine contributors also looked at pop, tea and chocolate. "As a result, we looked to see if decaffeinated coffee had a similar association, and it did not. This suggests the association is due to caffeine, rather than another component of coffee."

With this being the first study Glicksman is aware that specifically looked at caffeine and the onset of tinnitus – and since the database was composed only predominantly Caucasian women – it is unknown



whether the findings can apply to men or other racial groups.

"That being said, I can't think of a good reason why the association would be different," he said.

While such findings are interesting, and will likely open the door to further questions, Glicksman stressed increasing caffeine intake is, in no way, a cure for tinnitus. The precise pathophysiology underlying subjective tinnitus remains unknown.

"It is very important to emphasize this," he said. "We don't have a good explanation as to why caffeine would be protective, and have been very careful to use the word 'association' rather than other stronger language.

"We know that plenty of women (including in our study) develop tinnitus despite very high caffeine consumption. What I think is most interesting is our study seems to dispel a longstanding medical belief that caffeine causes or exacerbates <u>tinnitus</u>."

Provided by University of Western Ontario

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