

Drinking coffee regularly after pregnancy may lower type 2 diabetes risk for women who had diabetes during pregnancy

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The prevalence of type 2 diabetes is projected to continue rising and one in three Singaporeans currently has a risk of developing diabetes in their

lifetime. Several early-life cardiometabolic complications make identifying high-risk populations and application of diabetes preventive strategies paramount.

Among the high-risk groups are women who experienced diabetes during pregnancy, commonly known as [gestational diabetes](#) mellitus or gestational diabetes. Compared to the general healthy female population, these women may face a ten-fold higher risk of developing type 2 diabetes.

Current known research has found that, instead of artificially and sugar-sweetened drinks, drinking two to five cups of either caffeinated or decaffeinated [coffee](#) a day is potentially a healthier substitute in delaying the onset or preventing type 2 diabetes.

This is likely due to the [bioactive components](#) in coffee, such as polyphenols, which are naturally-occurring plant micronutrients. Bioactive components are types of chemicals found in small amounts in plants and certain foods, such as fruits, vegetables, nuts, oils, and whole grains, and may promote [good health](#).

This common and popular drink appears to reduce the risk of type 2 diabetes in the general population. However, whether it may also be beneficial among women who had gestational diabetes remained unknown.

To investigate this, Professor Cuilin Zhang, Director of the Global Center for Asian Women's Health (GloW) and a professor in the Department of Obstetrics and Gynecology at the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine), with her team at GloW, in collaboration with the Harvard T.H. Chan School of Public Health and the National Institutes of Health (NIH), examined the roles of long-term [coffee consumption](#) after the complicated

pregnancy and subsequent risk of type 2 diabetes among women with a history of gestational diabetes.

The team further examined coffee consumption with type 2 diabetes by replacing commonly consumed [sugary drinks](#) with coffee. Findings from this study, "Habitual coffee consumption and subsequent risk of type 2 diabetes in individuals with a history of gestational diabetes—a prospective study" was recently published in *The American Journal of Clinical Nutrition*.

In their study, the researchers followed more than 4,500 predominantly white female participants who had a history of gestational diabetes, for over 25 years, and examined the associations of long-term coffee consumption with subsequent risk of type 2 diabetes.

The consumption of caffeinated coffee among women after their pregnancies, was discovered to have a linear inverse association with the risk of type 2 diabetes. Compared to those who did not drink caffeinated coffee at all, among those who drank one cup of caffeinated coffee or less, two to three cups, and four and more cups a day, the risk of type 2 diabetes was reduced by 10%, 17%, and 53% respectively.

Interestingly, decaffeinated coffee was not associated with the risk of type 2 [diabetes](#) in their study. However, this null finding might be due to the relatively small number of women who consumed [decaffeinated coffee](#), so that the study was not able to detect a significant association.

More importantly, replacing artificially sweetened and [sugar-sweetened beverages](#) with caffeinated coffee also reduces the risk, by 10% for a cup of artificially sweetened beverage, and 17% for a cup of sugar-sweetened one.

"Thus far, the overall findings suggest that caffeinated coffee, when

consumed properly (two to five cups per day, without sugar and whole-fat/high-fat dairy), could be incorporated into a relatively healthy lifestyle for certain population," noted Professor Zhang.

"The beneficial roles of coffee have been consistently suggested across diverse populations, including Asians. Coffee is a popular beverage choice in Singapore, but local coffee drinking culture and behaviors may vary among individuals, such as brewing methods, drinking frequency, and other condiments contained in the coffee. Thus, more studies are needed to examine the roles of coffee consumption in the local context with major health outcomes," concluded Professor Zhang.

Adding on to Professor Zhang's point, Dr. Jiayi Yang, the first author of the study and a postdoctoral research fellow at GloW and the Department of Obstetrics and Gynecology at NUS Medicine, said, "Although coffee presents as a potentially healthier alternative to sweetened beverages, the health benefits of coffee vary and much depend on the type and the amount of condiments, like sugar and milk, that you add into your coffee." Dr. Yang is currently leading the working group of Nutrition and Lifestyle at GloW.

However, concerns should be given when coffee is taken in excessive amounts. It also needs to be emphasized that certain groups should be careful about drinking coffee. Not much is known about the effects of coffee on pregnancies, fetuses and children.

More information: Jiayi Yang et al, Habitual coffee consumption and subsequent risk of type 2 diabetes in individuals with a history of gestational diabetes—a prospective study, *The American Journal of Clinical Nutrition* (2022). [DOI: 10.1093/ajcn/nqac241](https://doi.org/10.1093/ajcn/nqac241)

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