

Daily coffee doesn't affect cancer risk

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Credit: QIMR Berghofer Medical Research Institute

Drinking coffee does not change a person's risk of being diagnosed with or dying from cancer, a new QIMR Berghofer study has found.

The research findings have been published in the *International Journal of Epidemiology*.

Senior author and head of QIMR Berghofer's Statistical Genetics Group, Associate Professor Stuart MacGregor, said the large Mendelian randomization study looked at data from more than 300,000 people and showed drinking coffee every day neither reduced nor increased a person's risk of developing any cancer.

"We know that coffee is one of the most popular drinks in the world, and there continue to be mixed messages about the role it plays in disease," Associate Professor MacGregor said.

"We also know that a preference for coffee is heritable.

"Our two-pronged research looked at whether cancer rates differed among people with different levels of self-reported coffee consumption, and whether the same trend was seen when we replaced self-reported consumption with genetic predisposition towards coffee consumption.

"We found there was no real relationship between how many cups of coffee a person had a day and if they developed any particular cancers.

"The study also ruled out a link between coffee intake and dying from the disease."

Coffee contains a complex mixture of bioactive ingredients, including substances such as caffeine and kahweol, which have been shown to display anti-tumor effects in animal studies.

Its potential anti-cancer effect on humans has not been established however, with studies to date producing conflicting findings for overall cancer risk and for individual cancers such as breast and prostate cancers.

The QIMR Berghofer study used cancer data drawn from the UK Biobank cohort for more than 46,000 people who had been diagnosed with most invasive cancer types, including about 7,000 people who died from the disease.

The genetic and preference information from the people with cancer was compared to data from more than 270,000 others who had never been

diagnosed with cancer.

QIMR Berghofer lead researcher, Jue-Sheng Ong, said the study also looked at some common individual cancers such as breast, ovarian, lung and prostate cancers and found drinking coffee did not increase or decrease their incidence.

"There was some inconclusive evidence about colorectal cancer, where those who reported drinking a lot of coffee had a slightly lower risk of developing cancer, but conversely examination of data from those people with a higher [genetic predisposition](#) to drink more coffee seemed to indicate a greater risk of developing the disease," Mr Ong said.

"The disparity in those findings would suggest more research is needed to clarify if there is any relationship between colorectal cancer and coffee."

Associate Professor MacGregor said the study had implications for public health messaging around the world.

"The health benefits of coffee have been argued for a long time, but this research shows simply changing your coffee consumption isn't an effective way of protecting yourself from cancer," he said.

- Australian Bureau of Statistics Health Survey figures show 46 percent of the Australian population consumed coffee (including coffee substitutes) in 2011-12.
- According to [Food Standards Australia New Zealand](#) there is no recognized health-based guidance value, such as an Acceptable Daily Intake, for caffeine.
- In an [August 2018 statement](#), the U.S. Food and Drug Administration said current science indicated that consuming [coffee](#) posed no significant risk of [cancer](#).

- The UK Biobank cohort study is a population-based cohort study consisting of approximately half a million participants recruited across the UK from 2006 to 2010. The QIMR Berghofer analysis was restricted to 438,870 White British participants with adequate genetic and [coffee consumption](#) data.

More information: Jue-Sheng Ong et al. Association between coffee consumption and overall risk of being diagnosed with or dying from cancer among >300 000 UK Biobank participants in a large-scale Mendelian randomization study, *International Journal of Epidemiology* (2019). [DOI: 10.1093/ije/dyz144](https://doi.org/10.1093/ije/dyz144)

Provided by QIMR Berghofer Medical Research Institute

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