Drinking tea and coffee piping hot raises cancer risk, study finds

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Drinking very hot tea and coffee triples the risk of developing cancer of the gullet, the world's largest study of the link between them has found.

The findings show that people should let very hot drinks cool down, until they are comfortable to consume, to reduce their risk of the disease, cancer experts said.

Both the temperature of the drink and the number of very hot drinks consumed increased the risk of getting oesophageal squamous cell carcinoma (SCC), the study found.

Study participants were asked how they preferred to consume hot drinks. Available answers included "very hot", "hot" or "warm".

People consuming six or more very hot drinks a day had the greatest risk of developing SCC – 3.4 times higher than drinking them warm.

"Consumption of drinks at a 'very hot' versus 'warm' temperature was associated with a three-fold greater SCC risk," according to the study, which is published today in the International Journal of Cancer.

"Daily consumption of six or more hot drinks was associated with a 71% increase in SCC risk [compared with warm drinks]," the researchers, led by Dr Keren Papier, a senior nutritional epidemiologist at the Oxford Population Health department of Oxford University, wrote.

The risk of getting adenocarcinoma (AC), the other form of oesophageal cancer, was not affected.

The findings are based on an analysis of the consumption of hot drinks by almost 980,000 people in the UK.

Participants were followed for 14 years to give a long-term picture of their habits and health. The conclusions are based on people's estimation of how hot the drinks were rather than their exact temperatures.

The study produced conclusions for a western European population that mirror similar findings already seen in studies conducted in from Asia, Africa, South America and the Middle East. These found that drinking tea or mate – a caffeinated herbal drink popular in South America – at or above 70C increases the risk of oesophageal cancer.

The International Agency for Research on Cancer, part of the World Health Organization, has previously said hot drinks are "probably carcinogenic to humans" and "one probable cause of oesophageal cancer".

They are thought to heighten the risk of the disease by causing heat damage to the cells that line the oesophagus, which is the body's foodpipe. Alcohol and smoking are other major risk factors.

"The fact that we observed a clear trend in risk across self-reported temperature categories suggests that further limiting the temperature at which individuals consume their drinks to something well below average for this population may well avoid an even greater proportion of SCC cases," the scientists reported.

“This large UK study of middle-aged adults, amongst whom hot drinks are widely consumed, provides clear evidence that temperature and frequency of hot drink consumption represent useful targets for SCC prevention.”

Fiona Osgun, the head of health information at Cancer Research UK, which funded the study, said: “It’s difficult to put an exact time on how long a hot drink should be left to cool. But if you’re worried, we’d suggest just waiting until it’s comfortable to drink rather than drinking it while it’s still very hot.”