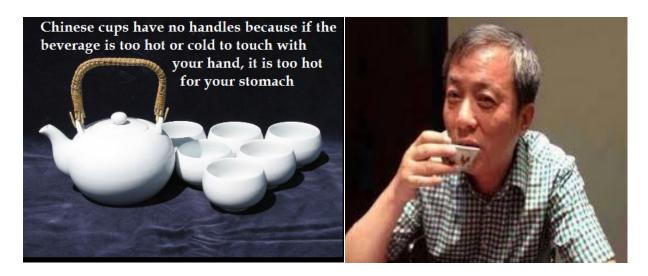
Very hot drinks are 'carcinogenic'

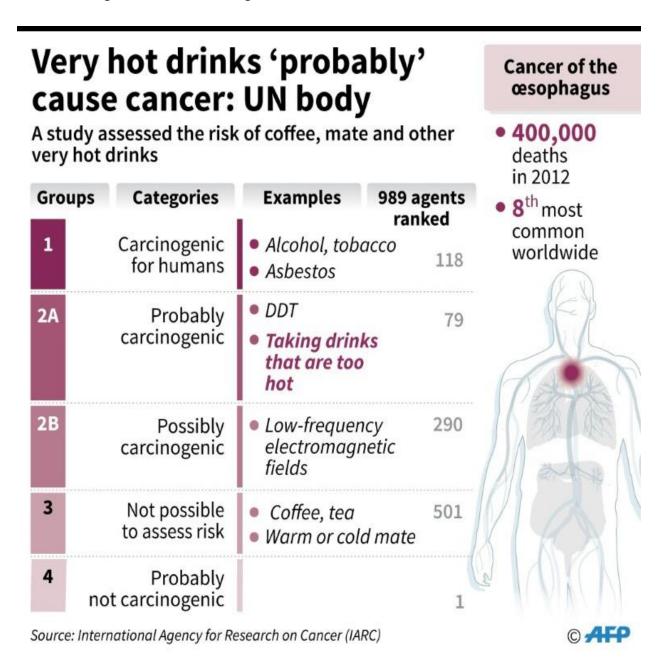
Anyone who likes to curl up with a steaming hot drink should consider letting some of that warmth subside; drinking it could increase their risk of developing cancer.



In a review published Thursday by the International Agency for Research on Cancer, the cancer agency of the World Health Organization, drinking very hot beverages was classified as "probably carcinogenic to humans."

More specifically, the review by a panel of global experts stated that drinking beverages at temperatures above 65 degrees Celsius — 149 degrees Fahrenheit — could cause people to develop cancer of their esophagus, the eighth most common form of cancer worldwide. Drinking tea, coffee or other hot beverages at this temperature can cause significant scald burns in the esophagus when they're consumed and has previously been linked to an increased cancer risk in this part of the body.

Warm beverages are not typically consumed this hot in Europe and North America, but are commonly served at, or above, this temperature in regions such as South America, the Middle East and East Africa — particularly when drinking teas. It's hotter than water coming out of sink faucets, which is typically no higher than 60 degrees Celsius, about 140 degrees Fahrenheit, but not as hot as boiling water. Water boils at 100 degrees Celsius, or 212 degrees Fahrenheit.



The 65 degree Celsius temperature noted by the cancer research agency is enough to burn your tongue and and according to the American Burn Association, skin contact with a liquid this hot can result in almost instantaneous burns if prolonged.



Getting hot

The findings come after a group of 23 international scientists analyzed all available data on the carcinogenicity of coffee, maté — a leaf infusion consumed commonly in South America and other regions — and a range of other hot beverages, including tea. They decided that drinks consumed at very hot temperatures were linked to cancer of the esophagus in humans.

The new classification puts consuming very hot drinks in the same risk group as exposure to substances such as lead, gasoline and exhaust fumes, which are also classified as "possibly carcinogenic" by the agency. Use of talcum powder on the perineal or anal regions of the body is also within this category.

Evidence for the findings was limited, but studies in China, Iran, Turkey and South America found positive associations between the risk of this form of cancer and temperatures at which drinks were consumed. Forms of tea, including the leaf infusion maté, are typically drunk at extremely high temperatures, above 70 degrees Celsius in these regions, according to the agency.

"These results suggest that drinking very hot beverages is one probable cause of esophageal cancer and that it is the temperature, rather than the drinks themselves, that appears to be responsible," said Dr. Christopher Wild, director of the International Agency for Research on Cancer.

Consumers in industrialized countries can stay calm, as they typically drink their beverages with less heat. "This is about 10 degrees (Celsius) higher than people in North America [and Europe] like their coffee," said Dana Loomis, deputy head of the monographs section at the cancer research agency that led the review.

Individually, coffee and maté did not have conclusive evidence for any cancer-causing effects when served at cool or warm temperatures, meaning the drinks themselves were not classified as carcinogenic.

Esophageal cancer was responsible for approximately 400,000 recorded deaths worldwide in 2012, about 5% of all cancer deaths.

Though smoking and drinking alcohol are major causes of esophageal cancer, particularly in high-income countries, the majority of cases globally for this form of cancer occur in parts of Asia, South America and East Africa.

"[Here], drinking very hot beverages is common, and the reasons for this high incidence of this cancer are not well-understood," Wild said.

The Tea Advisory Panel in the United Kingdom has responded to the classification by highlighting that tea is drunk at lower temperatures in the UK and that most people add milk.

"Tea drinkers in the UK can continue to enjoy tea in the traditional way with a drop of milk, which ensures that the temperature of tea sits within safe limits," said Tim Bond from the panel. "A study by UK burns doctors found that a cup of tea with 10 milliliters of milk cooled to less than 65 degrees Celsius within five minutes."

Re-classifying coffee

The International Agency for Research on Cancer classified coffee as "possibly carcinogenic to humans" in 1991, based on limited evidence, but the increased number of studies and evidence available since then led to its re-evaluation during the review.

The group analyzed more than 1,000 studies and decided there was inadequate evidence for any cancercausing effects linked to drinking coffee itself, away from the temperature at which it is served.

The report stated coffee was "not classifiable as to its carcinogenicity to humans."

"Many epidemiological studies showed that coffee drinking had no carcinogenic effects for cancers of the pancreas, female breast and prostate, and reduced risks were seen for cancers of the liver and uterine endometrium," the report said.

Evidence for any other cancers linked to drinking coffee was also inconclusive.

The National Coffee Association in the United States welcomed the new classification. "This is great news for coffee drinkers, and confirms evidence from an avalanche of studies by highly respected and independent scientists," said National Coffee Association President Bill Murray. "Today we can brew or buy a cup with even more confidence thanks to science."

The heat emanating from a coffee cup, or any hot drink, remains a risk and previous studies have suggested an optimal drinking temperature of 57.8 degrees Celsius — 136 degrees Fahrenheit — or below.

Consuming cancer

The findings come after a string of similar reports that link food and drink to cancer.

A 2015 study found that only 10% to 30% of cancers occur naturally in people's bodies, suggesting that most cancers are, in fact, a result of environmental factors.

In October, the WHO announced results from a report that linked people eating processed meat, such as sausages and ham, to cancer. Based on evidence from hundreds of studies, processed meat was classified as carcinogenic to humans.



Unprocessed red meat was classified as probably carcinogenic.

Recent studies have linked Western diets with increased risk of colon and prostate cancer. Men eating mostly a Western diet were found to have 2.5 times the risk of dying from prostate cancer. A Western diet is typically considered to be low in fiber and high in refined sugars, saturated fats and animal protein.

This week, the Environmental Working Group released findings that more than 400 known cancercausing chemicals have been found in the bodies of Americans during research studies.

After a review of more than 1,000 biomonitoring studies, the group found that up to 420 chemicals known or likely to cause cancer have been detected in blood, urine, hair and other human samples. Nine of these was identified to be above safety limits assigned by the U.S. Environmental Protection Agency and posing non-trivial cancer risks in most Americans, according to the review.

"The presence of a toxic chemical in our bodies does not necessarily mean it will cause harm, but this report details the astounding number of carcinogens we are exposed to in almost every part of life that are building up in our systems," said Curt DellaValle, a senior scientist at the Environmental Working Group and author of the report. "At any given time, some people may harbor dozens or hundreds of cancer-causing chemicals. This troubling truth underscores the need for greater awareness of our everyday exposure to chemicals and how to avoid them."

