

US public largely unaware that cigarette smoke much more harmful than additives

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Credit: AI-generated image ([disclaimer](#))

The US public is largely unaware that the chemicals produced by a burning cigarette are much more harmful than the manufacturer's additives it contains, finds a study of more than 10,000 teens and adults, published online in the journal *Tobacco Control*.

Other misconceptions abound, including that [cigarette filters](#) effectively trap the toxic chemicals found in cigarette smoke, the findings show.

The Tobacco Control Act requires that information about the [harmful chemicals](#) contained in cigarette smoke is made publicly available, but how best to communicate this is not yet clear.

To glean the level of public understanding about the constituents of cigarette smoke, the researchers quizzed more than 9000 adults and 1100 teens in three phone/online surveys.

Respondents were asked which of tobacco, tobacco additives, or burning the cigarette contained most of the harmful chemicals associated with smoking, and to what extent filters successfully trapped these substances.

They were also asked if they had ever heard of 24 constituents found in [tobacco smoke](#); how harmful they considered them to be; and how much the presence of a particular substance would prompt them to stub out their habit.

The responses showed that 61-72% of adults wrongly thought that most harmful chemicals come from the additives introduced by the manufacturers rather than from burning the cigarette. And smokers were more likely than non-smokers to believe this.

Teens were evenly split on the perceived source of [harmful substances](#), with 43% opting for additives and 46% for the burning cigarette.

Between one in five (22%) and one in three adults (31%), and around one in four teens (27%) also wrongly believed that filters successfully trap harmful chemicals from cigarette smoke. Once again, this belief tended to be more common among the smokers.

Nearly all the respondents had heard of nicotine, and sizeable proportions had heard of carbon monoxide (59-70%), ammonia (39-53%), arsenic (42-66%) and formaldehyde (41-68%).

But awareness of nitrosamines, among the most deadly chemicals produced in [cigarette smoke](#), varied considerably.

Respondents were more likely to say that chemicals they had heard of, and ones that started with letters rather than numbers would tempt them to quit. But this enthusiasm was more common among non-smokers than it was among smokers, and those with higher levels of literacy and numeracy.

Meanwhile, chemicals ending in 'ine' were less likely to discourage smoking among smokers and non-smokers, possibly because they sound similar to nicotine, suggest the researchers.

They point out that some of the misperceptions may have their origins in [cigarette advertising](#).

"The tobacco industry has invested heavily in promoting 'additive-free' cigarettes. We speculate that exposure to this advertising may have contributed to the finding that people believe added chemicals, not chemicals inherent to the tobacco leaf and burning of cigarettes, are responsible for cigarettes' toxicity," they write.

More information: Public understanding of cigarette smoke constituents: three US surveys, [DOI: 10.1136/tobaccocontrol-2015-052897](#)

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