

Review of: "Population estimates of biomarkers of exposure to carbon monoxide, nicotine, and NNK in smokers and non-smokers"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

Definitions

Cigarette

Defined by Addiction Ontology

This paper illustrates why it is important not to censor research from tobacco industry sources as a matter of principle but instead to evaluate it using criteria that one should use with any research output, including evaluation of the potential for bias arising from financial or other conflicts of interest.

This particular study provides potentially useful estimates of biomarkers of ingestion of toxins from [cigarettes](#). The review methods look to be reasonable. It should be borne in mind that the estimates are dependent on the representativeness of the samples in the studies included. This will vary from population to population and over time, so using these estimates as benchmarks must acknowledge this.

Because of the direct potential conflicts of interest of the authors, which are rightly acknowledged, users of the findings should bear in mind that conscious or unconscious biases may have played a role in decisions made during the course of the review. Pre-registration of all study methods and analysis plans can provide greater confidence in the robustness of findings and is highly recommended.

I would also recommend the use of ontological definitions of terms^[1], as has been used in this review for 'cigarettes', to ensure clarity.

References

1. [^] Susan Michie, Robert West, Janna Hastings. (2019). *Creating ontological definitions for use in science*. Qeios. doi:10.32388/ygif9b.