

Machine-Puffed E-Cig Yield Vapor Contain Basically Nicotine and Water

By Gil Ross — February 11, 2015



A [new study](#) ^[1] in *Regulatory Toxicology and Pharmacology*

reports on the chemical composition of e-cigarette vapor, and compares those results with cigarette smoke. The authors, Drs. Rana Tayyarah and Gerald A. Long, are employed by Lorillard Tobacco Co..

The authors used standardized machine-puffing to measure constituents of e-cig vapor; they found nicotine, propylene glycol or glycerin, water, and flavors. Aerosol nicotine was 85 percent lower than cigarette smoke.

Mainstream cigarette smoke (the same stuff a smoker inhales while smoking) had about 1,500 times more harmful and potentially-harmful constituents (HPHC) than e-cigarette aerosol, or puffing on room air. In sum: 1. HPHCs from e-cigs was equivalent to room air; 2. no cigarette-smoke-derived HPHCs were detected in e-cig vapor; 3. these results support those who advocate for the relative safety (reduced exposure to toxicants) of e-cigarettes, both for vapers and for bystanders.

You get out what you put in, and e-cigarettes by and large have only a few chemicals, so there is just not that much to breathe, either in or out. In my opinion, this study merely confirms the results [others have noted](#) ^[2] many times before.

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[1] <http://www.sciencedirect.com/science/article/pii/S0273230014002505>

[2] <http://www.biomedcentral.com/1471-2458/14/18/abstract>