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## **Electric and Gas Ovens Need Same CE as they release similar peak CO and NO2 in most polluting self-clean mode**

I am an independent consulting toxicologist and environmental health engineer who specializes in carbon monoxide poisoning. \*\*\* With funding from the HUD Healthy Homes program, I worked on a project organized by the U Maryland School of Nursing about 20 years ago in which we measured and tried to lower CO levels in the kitchens of Baltimore rowhouses with gas ranges by installing 100cfm range hoods with exhaust fans linked to CO detectors. This setup was not sufficient to cope with most cooking conditions, and especially not in the worst case scenario which turned out to be when ovens were in self-clean cycle (releasing over 1,000 ppm into the kitchen and raising the room CO level above ASHRAE and EPA limits of 9ppm for hours). This led me to study dirty electric ovens, finding that they ALSO release over 1000ppm of CO in the self clean cycle, as the oven stays on the maximum heat setting for hours, reducing all the spilled food to black carbon. The Singer 2017 study apparently did not study the self clean mode in either electric or gas ovens, only baking and broiling modes. \*\*\* To protect consumers from the highest potential levels of both CO and NO2 to which they may be exposed from the use of both gas and electric ovens (when cleaning a dirty oven), I recommend that Table 120.1-A be changed to require the same minimum Capture Efficiency and air flow for range hoods over electric ovens as for range hoods over gas ovens. While the self-clean cycle is not used as often as bake and broil, it is used when needed, and even a single exposure could cause symptoms in people at highest risk, namely infants and children. Submitted 10/16/2020 by Albert Donnay, Donnay Detoxicology LLC