

# Secondhand Aerosol Exposure

*E-cigarette aerosol is **NOT** harmless water vapor.*

**PROBLEM:** Emissions from electronic smoking devices are not harmless water vapor; the aerosol emitted can contain nicotine, ultrafine particles and other harmful toxins known to cause cancer.

- **Aerosol toxins:** At least 10 chemicals identified in the aerosol emitted by electronic smoking devices (ESD) are on California's Proposition 65 list of carcinogens and reproductive toxins. The compounds that have already been identified in mainstream (MS) or secondhand (SS) ESD aerosol include: Acetaldehyde (MS), Benzene (SS), Cadmium (MS), Formaldehyde (MS,SS), Isoprene (SS), Lead (MS), Nickel (MS), Nicotine (MS, SS), N-Nitrosornicotine (MS, SS), Toluene (MS, SS).<sup>1,2</sup>
- **VOCs:** E-cigarettes are a new source of Volatile Organic Compounds (VOCs) and ultrafine/fine particles being emitted into the environment.<sup>3</sup> VOCs are a group of hazardous chemicals which may cause cancer and damage to major organs; ultrafine particles may exacerbate respiratory ailments, such as asthma, as well as cause cardiovascular changes which could trigger a heart attack.
- **Respiratory distress and disease:** Exhaled e-cigarette aerosol contains elements known to cause respiratory distress and disease. The concentrations of at least nine toxic elements were found to be higher than or equal to the corresponding concentrations in conventional cigarette smoke.<sup>2</sup>
- **Substantial risk:** A June 2014 report by the American Society of Heating, Refrigerating and air-conditioning Engineers (ASHRAE) Journal concluded that e-cigarette use is associated with substantial health risks and that e-cigarettes emit harmful chemicals into the air and need to be regulated in the same manner as tobacco smoking.<sup>4</sup>
- **Disrupts smoke-free policies:** The increasing popularity of electronic smoking devices combined with gaps in existing tobacco control laws, have the potential to renormalize tobacco use.<sup>5</sup> Certain types of electronic smoking devices are often hard to distinguish from conventional cigarettes, and the confusion that results from inconsistently allowing their use in places where smoking is prohibited can have a detrimental effect on enforcement of smoke-free laws.<sup>6</sup>

**SOLUTION:** Some local governments have taken the opportunity to protect citizens from the potential harms of secondhand aerosol exposure from electronic vaporizing devices by regulating e-cigarettes the way that cigarettes and other tobacco products are currently regulated, including adding vaporizing to their smoke-free policies, and regulating how e-cigarettes can be sold.<sup>7</sup>

- ⇒ According to the Centers for Disease Control and Prevention's (CDC) Office on Smoking and Health, with respect to e-cigarettes, "The standard for protecting health should be clean air, free of toxic secondhand smoke as well as the aerosol from electronic smoking devices."<sup>8</sup>
- ⇒ As of February 2016, eight states (Connecticut, Delaware, Hawaii, Maine, North Dakota, New Jersey, Oregon and Utah) and more than 477 local jurisdictions (including 15 Colorado communities) have laws that prohibit the use of e-cigarettes in certain public places.<sup>9</sup>
- ⇒ For jurisdictions that already have a local smoke-free law, one way to protect citizens from secondhand aerosol exposure from vaporizing any substance, is to amend the definitions of "smoke" and "smoking" in the law to explicitly include "electronic smoking device vapor" and "electronic smoking device use."<sup>10</sup>



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## Citations:

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