

Connecticut Department of Public Health Fact Sheet

Tobacco Control Program | August 2024

SECONDHAND SMOKE, THIRDHAND SMOKE, AND AEROSOL

Definitions and Facts

SECONDHAND SMOKE is the combination of smoke emitted from a combustible tobacco product, like cigarettes, and the smoke exhaled by the person smoking. There is no safe level of exposure to secondhand smoke.¹ Secondhand smoke contains over 7,000 chemicals, hundreds of which are toxic and at least 70 are known to cause cancer.² Chemicals found in secondhand smoke include:³

- **Cadmium** – used in batteries
- **Benzene** – found in gasoline
- **Toluene** – used in industrial solvents
- **Ammonia** – found in household cleaners
- **Butane** – used in lighter fluid

THIRDHAND SMOKE is the chemical residue from tobacco smoke or aerosol. Residue can linger in dust and on household surfaces and be left on carpets, furniture, and clothes.⁴

AEROSOL is the byproduct of heating up a liquid, usually containing flavorings, nicotine, and other chemicals, in an electronic vaping device and is exhaled by the person vaping. Aerosol is not water vapor. Aerosols can contain potentially harmful substances like nicotine, formaldehyde, and metals.⁵ Chemicals found in aerosol can include:

- **Diacetyl** – a chemical that can cause the development of a rare, life-threatening form of non-reversible lung disease.^{6,7}



- **Nicotine** – an addictive substance that changes brain chemistry and function.^{6,8}
- **Ultrafine Particles** – pollutants that persist in the air and can be inhaled deeply into the lungs.^{6,9}
- **Benzene** – a carcinogen found in car exhaust and secondhand smoke.⁶

The 2023 Connecticut Youth Risk Behavior Survey found that in the past seven days nearly 54,000 high school students had breathed the smoke, vapor, or aerosol from someone who was smoking or vaping a tobacco or marijuana product.

Health Impact

Exposure to secondhand smoke can cause cardiovascular disease, lung disease like chronic obstructive pulmonary disease, and an increased risk of cancer. Children exposed to secondhand smoke can experience shortness of breath, coughing, sneezing, recurrent ear infections, asthma, respiratory infections, damage to eyes and teeth, and sudden infant death syndrome (SIDS).¹⁰

Thirdhand smoke can harm genetic material, affect the way cells function, inhibit the body's ability to fend off infections, and impair entire organ systems in the human body. It can also make pre-existing conditions worse.¹¹

Data and Statistics

Adults and children in Connecticut continue to be exposed to secondhand smoke. In 2022, over 700,000 adults breathed the smoke or aerosol from someone who was smoking or vaping a tobacco or cannabis product in the past seven days. Secondhand smoke exposure disparities also exist. LGBT adults, adults who reported poor mental health, and adults aged 18-34 were more likely than their counterparts to be exposed to secondhand smoke.¹²

Secondhand Smoke Policy

Smoke-free policies are a best-practice and have been shown not only to prevent exposure to secondhand smoke, but also prevent tobacco use and youth initiation of tobacco products. Connecticut has a comprehensive Clean Indoor Air Act (CIAA) that regulates smoking of tobacco products, hemp, and cannabis. It also regulates electronic nicotine, cannabis delivery systems or vapor products. The CIAA was last updated in 2021 and restricts smoking or vaping in:

- All workplaces, large and small
- Any hotel, motel or similar lodging, or in any area of a correctional facility or halfway house
- Any area of school buildings or on the grounds
- Within 25-feet of any doorway, operable window or air intake vent
- Nearly all places open to the public (with a few exceptions)



- The Connecticut Department of Public Health's Tobacco Control Program provides education and information that support smoke-free spaces including resources for:
 - [Smoke-Free Housing Policy](#), and
 - [Smoke and Tobacco-Free Colleges & Universities](#).
- For additional information on thirdhand smoke, please visit the Thirdhand Smoke Resource Center at www.thirdhandsmoke.org.

For More Information, Contact:

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