What Are Secondhand Tobacco Smoke and Aerosol...

SECONDHAND TOBACCO SMOKE
is the combination of smoke emitted from any type of combustible tobacco product, like cigarettes, cigars, pipes and hookahs, and the smoke breathed out by the smoker

AEROSOL
is the byproduct from heating up a liquid, usually containing flavorings and other chemicals, in an electronic vaping device, like e-cigs, mods and tanks, and emitted when the user exhales

Dangers of Secondhand Smoke: The US Surgeon General has determined there is no safe level of exposure to secondhand smoke. Even brief exposure can be harmful to the health of nonsmokers. Tobacco smoke contains over 7,000 chemicals, hundreds that are toxic and at least 70 that are known to cause cancer.

Toxic Chemicals Found in Secondhand Smoke:
The following are some of the toxic chemicals found in tobacco smoke:

- CADMIUM – used in batteries
- BENZENE – found in gasoline
- TOLUENE – used in industrial solvents
- AMMONIA – found in household cleaners
- BUTANE – used in lighter fluid

In 2021, about 1 in 3 Connecticut high school students reported exposure to secondhand tobacco smoke or aerosol in the past seven days
Adults might experience:
• Cardiovascular disease like high blood pressure, atherosclerosis, heart attack or stroke
• Lung problems like COPD (chronic obstructive pulmonary disease) and asthma
• Increased risk of lung cancer and cancers of the brain, bladder, stomach, breast and more

Children are more likely to have:
• Coughing, sneezing, shortness of breath or other breathing problems
• Recurrent ear infections
• Frequent and more severe asthma attacks
• Respiratory infections, such as bronchitis or pneumonia
• Damage to eyes and teeth
• Learning and behavior problems
• SIDS (sudden infant death syndrome)

Dangers of Aerosol: Many people believe that secondhand aerosol (also referred to as vapor) from electronic nicotine delivery systems (ENDS), such as e-cigarettes (or cig-a-likes), vape pens, mods, pods and tanks, is only water. They are wrong. The aerosol emitted when an ENDS user exhales contains a mixture of toxins and harmful substances, which might include:

- **DIACETYL** – a chemical that can cause the development of a rare, life-threatening form of non-reversible obstructive lung disease\(^6,7\)
- **NICOTINE** – an addictive substance that fundamentally changes brain chemistry and function\(^6,8\)
- **ULTRAFINE PARTICLES** – pollutants that persist and travel in the air and can be inhaled deeply into the lungs\(^6,9\)
- **BENZENE** – a carcinogen found in car exhaust and tobacco smoke\(^6\)

Secondhand Cannabis Smoke Risks: There is a misconception that the smoke produced from burning cannabis, also referred to as marijuana, weed, pot or dope, is harmless. This is not true. There are significantly higher levels of toxic compounds, such as ammonia and hydrogen cyanide, in secondhand cannabis smoke than are found in tobacco smoke.\(^10\)

Cost of Tobacco Use and Secondhand Smoke Exposure: Annual healthcare costs for diseases related to tobacco use and secondhand smoke exposure are currently estimated at more than $2 billion in Connecticut, and about $521 million of those expenditures are for Medicaid.\(^11\)
Connecticut has a comprehensive Clean Indoor Air Act that regulates where tobacco products can be smoked or used. New legislation was added in 2021 to further protect people from the dangers of secondhand smoke and aerosol. The update incorporates language for cannabis, hemp and tobacco, and covers vaping in addition to smoking. Beginning on October 1, 2021:

- All workplaces, large and small, must be smoke- and vape-free
- Large employers are no longer allowed to designate smoking rooms
- Smoking or vaping within 25-feet of any doorway, operable window or air intake vent is prohibited
- Smoking and vaping are not allowed in any a hotel, motel or similar lodging, or in any area of a correctional facility or halfway house

In 2021, about 374,000 or 15% of adults in Connecticut reported being exposed in the past seven days to the smoke or aerosol from someone who was smoking or vaping a tobacco product.

For More Information, Contact:
Connecticut Department of Public Health | Tobacco Control Program
410 Capitol Avenue, PO Box 340308, MS #11HLS
Hartford, CT 06134-0308
Call: 860-509-8251 or visit: www.ct.gov/DPH/Tobacco

Last updated: November 25, 2022
References: