

## What are Second and Third-hand Smoke and Vaping Aerosols?

Secondhand smoke and vaping aerosols come from burning or heating tobacco through a cigarette, cigar, pipe, hookah, or electronic cigarette. They also come from the air a smoker exhales while smoking. Third-hand smoke is the smoke that stays in carpets, walls, furniture, clothing, hair, toys, etc. A person, car, or room can continue to smell of smoke long after a cigarette is put out.



### Do smoke or vaping aerosols enter our bodies?

Yes, second and third-hand smoke and vaping aerosols contain harmful, toxic and cancer-causing chemicals that can be breathed in. They can go into the body through the skin. These chemicals can be swallowed, as many children put their hands or other objects into their mouths.

### Why do we worry about second and third-hand smoke and vaping aerosols?

The smoke from cigarettes and the aerosols from e-cigarettes are dangerous. Tobacco smoke can cause:

- cancer
- heart disease
- lung damage
- asthma

For the pregnant woman and her baby, tobacco smoke is especially dangerous and can increase the risk for:

- premature birth (the baby is born too early in the pregnancy)
- still birth (the baby is born dead)
- Sudden Infant Death Syndrome (crib death)

While we are still learning about the effects of aerosols produced from e-cigarettes, the initial research suggests that the aerosol produced is not safe. For example, secondhand aerosol can lead to more asthma attacks. They expose non-users to harmful and potentially cancer-causing chemicals.

### How can I protect my children and myself from tobacco smoke and electronic cigarette aerosols?

The best way to protect your loved ones is stop smoking and stop using electronic cigarettes.



Cigarettes and electronic cigarettes are highly addictive. This makes it very hard to stop without help. There are medicines that can help you to stop tobacco and e-cigarettes. Nicotine replacement in the form of a patch, gum or lozenge are available over the counter. There are also other medicines available by prescription. For free help to stop smoking, call 1-800-QUITNOW (1-800-784-8669) or visit [smokefree.gov](http://smokefree.gov). Find more information on how to stop smoking from the American Thoracic Society at <http://www.thoracic.org/patients/patient-resources/topic-specific/tobacco-use.php>.

**Authors:** Harold J Farber, MD, MSPH; Pat Folan RN, DNP; Hasmeena Kathuria, MD; Christine Fardellone, RN, DNP; Andrea Spatarella, FNP-BC, DNP; Theo Moraes, MD, PhD, FRCPC; Tierney A. Fisher, DNP, CRNP; and the Tobacco Action Committee of the American Thoracic Society.

**Reviewer:** Marianna Sockrider MD, DrPH



## Rx Action Steps

### Keep Your Home and Car Smoke Free

- Do not allow smoking or vaping in your home or car! The harmful chemicals stay there long after the smoker or e-cigarette user has gone.
- Tobacco smoke and e-cigarette aerosols go everywhere the air goes, even through closed doors.
- Air cleaners do not remove all chemicals and are not enough to keep the air clean.
- Avoid places where smoking or vaping are allowed.

**Healthcare Provider's Contact Number:**

---

### Resources:

#### National Cancer Institute

- [SmokeFree.Gov](http://SmokeFree.Gov)

#### Campaign for Tobacco Free Kids

- [www.tobaccofreekids.org](http://www.tobaccofreekids.org)

#### American Academy of Pediatrics

- <https://www.healthychildren.org/English/health-issues/conditions/tobacco/Pages/Dangers-of-Secondhand-Smoke.aspx>

#### American Non-Smokers Rights Foundation

- [no-smoke.org](http://no-smoke.org)

#### Reports of the Surgeon General, U.S. Public Health Service

- <https://betobaccofree.hhs.gov/>

This information is a public service of the American Thoracic Society. The content is for educational purposes only. It should not be used as a substitute for the medical advice of one's healthcare provider.