What is Secondhand Aerosol from E-Cigarettes?

E-cigarettes produce an aerosol by heating a liquid that usually contains nicotine and other harmful chemicals. When the aerosol is exhaled by the user, bystanders can involuntarily breath in this aerosol.5

What are the harmful effects of secondhand e-cigarette aerosol?
Scientific evidence indicates that the aerosol emitted by e-cigarettes may expose nonusers, including children and infants, to aerosolized nicotine and other potentially harmful substances which are not as safe as clean air.1

Who is exposed?
- In 2017, more than half (55.1%, 14.3 million) of U.S. middle and high school students reported exposure to secondhand tobacco product emissions in indoor or outdoor public places.²
- According to the 2015 and 2017 National Youth Tobacco Survey, the following individuals were more at risk to the exposure of e-cigarette emissions:
  - Female students versus male students
  - High school students versus middle school students
  - Current e-cigarette users versus nonusers
  - Students who reported that a household member used tobacco products²
  - Aerosol emissions have increased with newer developed devices putting anyone exposed to greater health risks.⁷

How toxic are emissions from e-cigarettes?
In 2016, the Surgeon General concluded that secondhand emissions contain, "nicotine; ultrafine particles; flavorings such as diacetyl, a chemical linked to serious lung disease; volatile organic compounds such as benzene, which is found in car exhaust; and heavy metals, such as nickel, tin, and lead."³,⁴ Other chemicals found in secondhand aerosol include:
- Propylene Glycol
- Glycerin
- Formaldehyde
- Acetaldehyde⁸

How can the public be protected from secondhand emissions?
- Include e-cigarettes in smokefree policies for indoor and outdoor public places.⁴
- Advocate for all states to pass comprehensive smokefree laws and policies.
- Urge the federal government to help protect those living in public and subsidized housing.⁶
- Provide education on the harmful effects from using e-cigarettes.⁷

References

1-800-LUNGUSA | Lung.org/ecigs