E-cigarettes are the most commonly used nicotine product by teens. They are electronic devices that change a liquid "juice" into a chemical aerosol that is inhaled by the lungs.

They are also known as: Electronic Nicotine Delivery Systems (ENDS) *E-devices * E-pens * E-hookahs * Vape pipes * Vape pens * Dab Pens * Dab Rigs * JUULs * Mods * Pod Mods * Cigalikes

What are e-cigarettes?

E-cigarette aerosol is **NOT** just "water vapor"

**Prop 65** 
Chemicals in Vapor
- Acetaldehyde
- Formaldehyde
- Isoprene
- Toluene
- Lead
- Nickel
- Nicotine
- N-Nitrosonornicotine

**Metals in Vapor**
- Aluminum
- Chromium
- Copper
- Iron
- Manganese
- Nickel
- Lead
- Antimony
- Tin
- Zinc

**Carcinogens Found in the Urine of People Who Vape**
- Acrylonitrile
- Acrolein
- Propylene Oxide
- Acrylamide
- Crotonaldehyde

**FlavorDanger**
- Diacetyl
- Acetyl propionyl
- Acetoin
- 2,3 Pentanedione

* Proposition 65 (Prop 65) is the State of California's Safe Drinking Water and Toxic Enforcement Act of 1986, which requires the California to publish a list of chemicals known to cause cancer or birth defects or other reproductive harm.

**Sifting Through the Smoke**

**Poisoning**
Adults and children can be poisoned by vape juice by swallowing, breathing, or absorbing the liquid through skin and eyes.

**Labeling Problems**
Some products labeled as 0% nicotine actually had nicotine in them when tested in a lab.

**Higher Nicotine Absorption**
E-cigarettes are made to get more nicotine into the bloodstream, with less irritation, than regular cigarettes.

**Long-Term Health Effects of Nicotine**
Nicotine use by teens can lead to problems with attention and learning, mood disorders, impulse control, and addiction.

Watch a demo that shows the aerosol is not water vapor.
Could YOUR teen be vaping?
The number teens in the United States who have vaped at least once:

- **8th Graders**: 1 out of 4 (23.7%)
- **10th Graders**: 3.9 out of 10 (38.7%)
- **12th Graders**: 4.4 out of 10 (44.3%)

### RECOMMENDATIONS

- **Talk to your doctor or trusted health professional.**
- **Text “quit” to (202) 804-9884 for free support.**
- **Seek professional help from a therapist, health coach, or tobacco specialist.**
- **Contact your local PEHSU.**
- **Enroll in a smoking cessation program.**
- **Search online resources below.**

If you have concerns or if someone has ingested nicotine, especially a child, call the Poison Help hotline immediately at **1-800-222-1222**

### Online Resources
- **Pediatric Environmental Health Specialty Unit (PEHSU)** [www.pehsu.net](http://www.pehsu.net)
- **Healthy Children; American Academy of Pediatrics** [www.healthychildren.org](http://www.healthychildren.org)
- **American Lung Association** [www.lung.org](http://www.lung.org)
- **SmokeFree Programs** [www.smokefree.org](http://www.smokefree.org)
- **National Institute on Drug Abuse** [www.drugabuse.gov](http://www.drugabuse.gov)
- **Centers for Disease Control and Prevention (CDC)** [www.cdc.gov/tobacco](http://www.cdc.gov/tobacco)
- **American Association of Poison Control Centers** [https://aapcc.org/prevention/tobacco-liquid-nicotine](https://aapcc.org/prevention/tobacco-liquid-nicotine)
- **Truth Initiative** [https://truthinitiative.org](https://truthinitiative.org)

This factsheet was supported by the American Academy of Pediatrics (AAP) and funded (in part) by a cooperative agreement with the Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR). The U.S. Environmental Protection Agency (EPA) supports the PEHSUs by providing partial funding to CDC/ATSDR through an Inter-Agency Agreement. The findings and conclusions presented have not been formally disseminated by CDC/ATSDR or EPA and should not be construed to represent any agency determination or policy. Use of trade names that may be mentioned is for identification only and does not imply endorsement by the CDC/ATSDR or EPA.

This factsheet is offered for educational and information purposes only and is not to be used for any commercial purposes. The Material is not meant as a substitute for independent medical judgment or the advice of a qualified physician or healthcare professional. Users who choose to use information or recommendations made available by this factsheet do so at their own risk and should not rely on that information as professional medical advice or use it to replace any relationship with their physicians or other qualified healthcare professionals.

© 2023 Boston Children’s Hospital. All rights reserved.

Citations at [www.childrenshospital.org/pehc](http://www.childrenshospital.org/pehc). Data collected August 2021. More current information may be available.

[www.childrenshospital.org/pehc](http://www.childrenshospital.org/pehc)