PROTECTING THE YOUTH OF CALIFORNIA FROM E-CIGARETTES

What You Need to Know

Safe Kids California | California Department of Public Health
January 2016
INSIDE THE E-CIGARETTE

Cartridge stores nicotine in a chemical solution of either propylene glycol or glycerine and water

Atomiser

Battery

Microprocessor activates the LED

LED illuminates as you inhale

Mouthpiece

A heating element vaporises the liquid delivering a hit of nicotine straight into the lungs as the smoker inhales

What do they look like?

- E-cigs
- E-hookahs
- Hookah pens
- Vapes
- Vape pens
- MODs
- Tanks
- Advanced Personal Vaporizers (APVs)
What do they look like?

• The look of e-cigarettes is customizable

• “Vaping” is common term for use, not ‘smoking’
Is it harmless water vapor?

Aerosol

- Nicotine
- Flavoring agents
- Propylene glycol or vegetable glycerin
- Ultra fine particulate matter
- Heavy metals and contaminants

Fuoco, 2014; Goniewicz, 2014
IT'S NOT JUST "HARMLESS WATER VAPOR"

E-cigarette aerosol contains at least 10 chemicals on California’s Prop 65 list of chemicals known to cause cancer, birth defects or other reproductive harm.


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E-LIQUIDS

- Nicotine
- Propylene Glycol or Vegetable Glycerin
- Flavorings
Why are we concerned about flavorings?

Flavorings = Chemicals

- Ethylpyrazine
- Dimethylpyrazine
- Trimethylpyrazine
- Tetramethylpyrazine
- Coumarin
- Acetylpyrazine
- Piperonal
- Damascenone
- Eleutheroside
- Rhodinol
- Trimethylcyclohex-2-butene-4-one
- Beta-Ionone
Eating and inhaling are not the same. Some chemicals that are safe to eat can be harmful when inhaled.
Diacetyl = Chemical Flavoring

Approved food flavoring
- Popcorn butter flavoring
- Buttery taste in chardonnay

Workplace standards
- "Popcorn lung" due to aerosol exposure of diacetyl

https://www.osha.gov/dts/shib/shib10142010.html
Do flavors attract kids?

Flavored cigarettes were “starter products” for youth and thus, Congress banned them in 2009, with the exception of menthol.

Top reasons teens report trying e-cigarette:
• Curiosity (54%)
• Appealing flavors (44%)
• Peer influences (32%)

Kong et al., 2014
CA youth use e-cigarettes at higher rate than cigarettes, 2013-2014

California Department of Education, California Healthy Kids Survey, 2013-2014
Lung Inflammation
Eye, Throat, and Lung Irritation
Blood Vessel Constriction
Exposure to the nicotine in e-cigarettes can harm brain development in teens.

May have permanent consequences:

- Impair attention
- Impair memory
- Increase risk taking behavior
What is the impact of fetal exposure to nicotine?

- Pre-term delivery
- Low birth weight
- Stillbirth
- Sudden Infant Death Syndrome
- Life-long reduced lung function
- Cleft palate and other congenital malformations

Expanding your family?

www.istockphoto.com
In 2014, poisonings to children tripled in one year, making up more than 60% of all e-cigarette poisoning calls.
First Child's Death From Liquid Nicotine Reported as 'Vaping' Gains Popularity

By GILLIAN MOHNEY • Dec 12, 2014, 5:40 PM ET
Man Injured, Bed Catches Fire After E-Cigarette Explodes

San Diego Man Burned in E-Cigarette Explosion: Officials | NBC Bay Area

Man Critically Injured After E-Cigarette Explodes In His Face

Exploding e-cigarette burns California man, starts fire

Published: Tuesday, March 10, 2015 10:04 p.m. CST
WHO OWNS WHAT

Some of the biggest, most widely available e-cigarette brands are owned by tobacco companies. Here's a snapshot of the tobacco giants' family tree, including their newest babies – e-cigarettes (aw, so sweet!).

TOBACCO COMPANY
- Reynolds (Lorillard/RJ Reynolds)
- Altria (Philip Morris)
- Imperial Tobacco

CIGARETTE BRANDS
- Camel
- Pall Mall
- Newport
- American Spirit
- Marlboro
- Parliament
- Virginia Slims
- Winston
- Salem
- Kool
- Maverick

E-CIG BRANDS
- VUSE
- GREEN SMOKE
- MARK TEN
- BLU
# Laws and Regulations

<table>
<thead>
<tr>
<th>Federal</th>
<th>State (California)</th>
<th>Local</th>
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<td>FDA rule to regulate e-cigs like tobacco products – pending</td>
<td>Illegal to sell e-cigs to minors &lt;18</td>
<td>168 cities/counties include e-cigs in smoke-free laws</td>
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| Child Nicotine Poisoning Prevention Act of 2015 - approved | Legislation to require child-resistant packaging, and include e-cigs in smoke-free laws – pending | 114 cities/counties require e-cig retailers to have tobacco retail licenses
  • Some prohibit sale of flavored e-cigs |
What can you do?

- Talk to your kids
- Be a role model
- Set expectations
- Remove the threat
- Get involved
Resources

TobaccoFreeCA: http://tobaccofreeca.com/

CDPH Wake Up Campaign: http://stillblowingsmoke.org/
https://www.youtube.com/watch?v=iaMqWUBPeHY
https://www.youtube.com/watch?v=icFgRPEiQGE

CDPH E-Cigarette Brochure for Parents: https://www.cdph.ca.gov/programs/tobacco/Documents/Resources/Fact%20Sheets/E_Cigs_Brochure_English%20102914.pdf


Additional Information


CDC Notes from the Field: Calls to Poison Centers for Exposures to Electronic Cigarettes — United States, September 2010–February 2014: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6313a4.htm?s_cid=mm6313a4_w

American Association of Poison Control Centers: http://www.aapcc.org/alerts/e-cigarettes/

Children’s Safety Network Infographic on E-Cigarette Poisoning: http://www.childrenssafetynetwork.org/infographics/e-cigarette-poisoning
References


5. California Department of Public Health; California Tobacco Control Program: TobaccoFreeCA. http://tobaccofreeca.com/


