E-CIGARETTES: PROS AND CONS

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Electronic cigarettes

• Type of electronic nicotine delivery system

• Battery-powered devices that heat a solution of humectants, nicotine, flavorings, which is then inhaled

• Hundreds of brands, thousands of flavors
Disposble e-cigarette

- Consists of a battery, atomizer, and cartridge containing solution
- Not rechargeable or refillable

Rechargeable e-cigarette

- Often contain element allowing regulation of puff frequency and duration

Pen-style, medium-sized rechargeable e-cigarette

- Can hold larger amounts of solution

Tank-style, large-sized rechargeable e-cigarette

- Often contain manual switches and battery casing to customize battery capacity
Leaders know freedom never goes out of style. Control when and where you want to smoke with blu electronic cigarettes. blu produces no smoke and no ash, only vapor, making it the ultimate gadget and the smarter alternative to regular cigarettes.

blucigs.com

No woman ever says no to Winchester.

Take a puff. Blow in her ear. And she'll follow you anywhere. Because one whiff of Winchester's sexy aroma tells her everything she ever wanted to know about you. But was afraid to ask. It tells her you're a man, but a man of taste. A taste for mildness. Lightness. She takes a puff. Winchester's filtered smoothness tells her it's not a cigarette. Not just another little cigar. It's a whole 'nother smoke. And she knows that you know where there's smoke, there's fire.

Winchester. It's a whole 'nother smoke.
Ever use of e-cigarettes (U.S. adults)

Reasons for Use

- Quitting/health: 90%
- Consideration of others: 70%
- Convenience: 60%
- Curiosity: 50%
- Flavoring: 40%
- Cost: 30%
- Simulation of cigarettes: 20%

Debate among public health and research communities

**Electronic Cigarettes: Smoke-Free Laws, Sale Restrictions, and the Public Health**

The Case in Favor of E-Cigarettes for Tobacco Harm Reduction

**Harm Reduction at the Crossroads**

The Case of E-Cigarettes

A fresh look at tobacco harm reduction: the case for the electronic cigarette
Are Electronic Cigarettes.....

HELPFUL

OR

HARMFUL
Factors affecting population health impact of e-cigarettes

Less toxic
Factors affecting population health impact of e-cigarettes

- Less toxic
- Used with cigarettes
Factors affecting population health impact of e-cigarettes

- Used to quit smoking
- Less toxic

- Used with cigarettes
Factors affecting population health impact of e-cigarettes

- Used to quit smoking
- Less toxic

- Lots of kids using it
- Used with cigarettes
Nicotine concentration of e-cigarettes

• Some are nicotine-free

• Nicotine delivery variable
  • Differences in devices and individual use patterns

• Experienced users may receive nicotine in comparable amounts to combustible cigarettes
Risks of flavors

• Diacetyl, found in sweet-flavored e-cigarettes at levels, associated with respiratory disease

• Benzaldehyde, found in cherry-flavored e-cigarettes, associated with respiratory irritation

Farsalinos et al. Nicotine and Tobacco Research. 2015; 17(2): 168-74
Injuries of the Face, Hands, and Thighs Caused by E-Cigarette Explosions.
E-cigarettes for smoking cessation

• Currently, evidence is lacking from clinical trials to show e-cigarettes to be an effective smoking cessation aid

• Observational studies have limited data on use patterns, varied definitions of e-cigarette use, and mostly rely on self-report

• May be differences in how e-cigarettes are used in the real world versus in a clinical setting
  • E-cigarettes are mass-marketed consumer products, not prescriptions

• May be differences in e-cigarettes for smoking cessation among different users
  • Daily vs nondaily users
  • Tank device users vs disposable e-cigarette users
E-cigarettes for tobacco harm reduction

• Harm reduction: substitution of cigarettes with lower-risk nicotine- or tobacco-containing products

• Reduction in cigarette consumption
  • Cardiopulmonary risk with even a few cigarettes/day
  • No reduction in overall mortality
  • Some who reduce later quit
Current (past 30-day) e-cigarette use - youth

Singh T et al. MMWR 2016. 65(14); 361-367.
Current cigarette and e-cigarette use among High School Students, 2011-2015

New FDA Regulations

• No sales to those <18 years old
• No vending machine sales except in adult-only venues
• No free samples

• Manufacturers cannot make unsubstantiated health/risk claims
• Manufacturers cannot make health/risk claims that aren’t proven to be true

• As of 2018, need warning on products/advertisements:
  • “WARNING: This product contains nicotine. Nicotine is an addictive chemical.”
Evolution of products, health risks, and use patterns

Population health effects will depend on (currently unknown) long-term e-cigarette health risks and use patterns
Balance of various factors

- Used to quit smoking
- Less toxic

- Lots of kids using it
- Used with cigarettes
Conclusions

• E-cigarette awareness and use is rising among adults and youth

• Will likely be years until long-term health effects of e-cigarettes are known

• Further research is needed to determine the efficacy of e-cigarettes for smoking cessation
Conclusions

• E-cigarette use is rising among adults and youth

• Will likely be years until we know what the long-term health effects of e-cigarettes are

• More research is needed to find out how useful e-cigarettes are to help people quit smoking
THANK YOU!
QUESTIONS?