E-Cigarettes: Craze or Crazy?

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Teens Who Use Electronic Cigarettes

RACE
- WHITE
- Asian
- Black
- Hispanic

GENDER
- Female
- Male

MORE LIKELY TO HAVE MOOD PROBLEMS
Late 1800’s

Heroin cough syrup was a “safe” over-the-counter children’s medicine…

Early 1900’s

Cocaine was an ingredient in Coca-Cola…a “safe” way to cure depression and indigestion…
Rationale for Development

• Hon Lik developed in 2003.
• His father died of lung cancer from smoking.
• He wanted to provide a safer alternative and reduced the fire hazard of traditional cigarettes.
E-Cigarettes & Vaporizers
Why vape?

- No offensive odors
- Cheaper than smoking cigarettes (save 50-75%)
- Can vape in more places
- Seen as cool
- Seen as a safe alternative to traditional tobacco products
- Reduce cigarette cravings and nicotine withdrawal symptoms
- For adolescents, the primary reason is curiosity
Critical Examination
ARE E-CIGARETTES SAFE?

**TOBACCO CIGARETTE**

- Acetone (solvent)
- *Naphtylamine (used as rocket fuel)
- Methanol (used as rocket fuel)
- Naphtalène (moth-repellent)
- Pyrene
- Nicotine (used as a herbicide and insecticide)
- *Cadmium (used in batteries)
- Carbon monoxide (found in exhaust fumes)
- Vinyl chloride (used in plastic materials)
- Cyanhydric acid (was used in the gas chambers)
- Ammoniac (detergent)
- *Urethane
- Toluene (industrial solvent)
- Arsenic (lethal poison)
- *Dibenzacridine
- *Polonium 210 (a radioactive element)
- DDT (insecticide)
- Known carcinogenic substances

**E-CIGARETTE**

- Battery
- E-Liquid
  - Nicotine
  - Natural Flavoring
- Atomizer
- Cartridge

**E-CIGS VS TOBACCO CIGARETTE**

- TOXIC CHEMICALS
- 3600-5000
- 20-50
Dangerous Components/Emissions

- Formaldehyde and acetaldehyde
- Acrolein (eye & respiratory irritant)
- Diacetyl – popcorn lung disease
- Heavy metals
- Ethylene glycol
WHAT’S IN YOUR E-CIG?

At Mistic, we understand that you care about what you put in your body, so here’s the lowdown. Mistic e-cigs contain only 4 ingredients: water, flavoring, nicotine, and propylene glycol.

- Pure, clean water
- Traditional tobacco or fresh menthol flavoring
- Nicotine: available in 0.0%, 1.2%, 1.8%, and 2.4%
- Propylene glycol (a common preservative)

Unlike traditional cigarettes, which contain hundreds of harmful ingredients, Mistic E-Cigs contain only ingredients you can understand – just water, flavoring, nicotine, and a preservative.
E-liquid is primarily composed of a combination of...

1. Propylene glycol
2. Vegetable glycerin
3. Nicotine (from 42 to 0 mg/mL)
4. Artificial flavorings
The World Health Organization (WHO) does not consider e-cigarettes to be a legitimate therapy to quit smoking. The percentage of people who quit smoking after trying e-cigarettes:

Start Vaping - Stop Smoking
Switch to an Electronic Cigarette today!
Nicotine
- It takes 8 seconds to reach your brain and start making changes
- Most addictive substance
- One drop of pure nicotine would kill you
- Nicotine is used in pesticides
- The typical tobacco user spends over $2,000 a year on products
- Smoking slows lung growth and reduces lung function
- Causes heartbeat to be 3 times faster and breathing problems
- Causes cancer & chronic lung disease
- Arrests brain development

(5) (-)-Nicotine
Juul advertises the use of nicotine salts that contain over 50% mg of nicotine per pod.
Why We Are So Attached to Nicotine

- Smoke
  - Rapid Release Adrenaline
  - Release Glucose Stores
    - Release of Endorphins
      - Release of Dopamine & Glutamate
        - Increase in Acetylcholine
          - Increase Basal Metabolic Rate
            - Release Insulin
Teen smokers are 9 times more likely to abuse or become dependent on alcohol and 13 times more likely on illegal drugs. That is why it is called a GATEWAY DRUG.
DO YOU KNOW WHAT YOU'RE PUTTING IN YOUR LUNGS?

SMOKING vs VAPORIZING

WHY SMOKING MARIJUANA ISN'T IDEAL
RESPIRATORY HAZARDS OF SMOKE ARE DUE TO TOXIC BY-PRODUCTS OF COMBUSTION, NOT THE ACTIVE INGREDIENTS IN THE PLANT also known as cannabinoids.

WHY VAPORIZING MARIJUANA IS BETTER FOR YOU
VAPORIZING MARIJUANA EMITS A VAPOR THAT IS 95% SMOKE AND CARCINOGEN FREE. Vaporizers heat a substance to a precise temperature - releasing active ingredients in vapor form without ever igniting the substance.

THE SWEET SPOT
Marijuana Extracts

**Dabbing:** Smoking Hash Oil resins extracted from the marijuana plant made with butane.

*Wax, Ear Wax, Oil, Honey Bowl, Butter, Dabs, Shatter*
Chart 21. Potency Monitoring Program
Average THC Percent of all Submitted Hash Oil Samples
1995 - 2013

*Percentage likely to change as more samples are tested
Source: Potency Monitoring Program, Quarterly Report 124
“Fake weed” is a mixture of leafy-looking herbs and spices that are sprayed with a chemical, then smoked. The mixture comes in several flavors; watermelon, cotton candy, and pine-apple express.

Sold as incense or potpourri and labeled “not for human consumption”
Synthetic cannabis is an herbal and chemical product which mimics the effects of cannabis.

Cannabicyclohexanol
JWH-018
JWH-073
HU-210
When bound, this receptor produces euphoria.

When bound, this receptor reduces pain and swelling.
“It’s about 10 times more active than THC,” the active ingredient in marijuana. It’s like playing Russian roulette. You don’t know what it’s going to do to you.”

- John Huffman
# Effects of E-Cigarettes

## Pros

1. No dizziness, coughing or nausea during first uses
2. Substantially reduced levels of measured carcinogens and toxins relative to smoking only combustible cigarettes.
3. No tar to clog lungs

## Cons

1. More likely to become addicted sooner
2. More likely to use cigarettes and other drugs
3. Causes heart problems and respiratory illness
4. Decrease lung function & capacity
5. Causes hyper-bronchiodilation (asthma) & chronic bronchiatic symptoms
6. Causes irreversible lung damage
7. Increased risk of cancer, cardiopulmonary disease (COPD), and cancer
8. Slows lung’s ability to clear mucous
9. Irritation to eyes
10. Causes damage to our DNA
11. Illegal under the age of 18
12. Nicotine poisoning – skin contact/toxic
We are learning...

Current use: United States Middle School Students

Current use: United States High School Students
Surgeon General E-Cig Video
References


References

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