Tobacco, Electronic Cigarettes and Emerging Products

Presented by: Heather Austin, Tobacco Free North Dakota
Adapted from “The Nicotine Trap” by Kristie Wolff
What is Nicotine?

Nicotine is a toxic colorless or yellowish oily liquid that is the chief active constituent of tobacco. Nicotine is also used as an insecticide.

Nicotine is a drug

Like heroin or cocaine, nicotine acts on the brain’s “reward pathways” to create feelings of satisfaction and pleasure.
What does nicotine do to the developing brain

The human brain reaches maturity at around age 25.

- A developing brain is especially vulnerable to nicotine.
- Many teens show signs of addiction even at low levels of nicotine exposure.
- Adolescent nicotine exposure can cause changes to the prefrontal cortex, the part of the brain that handles decision-making.
- As an adult, you may be more susceptible to other addictions (like to alcohol and drugs).
What does nicotine do to the body

• Restricts the production of a chemical pigment necessary for night vision. This can make driving at night dangerous.

• Causes blood vessels to constrict which decreases the levels of nutrients supplied to wounds. As a result, wounds take longer to heal which increases the risk of infection, after an injury or surgery.

• Constricting blood vessels also cause blood pressure to rise.

• Affect the way body digests sugar, leading to insulin resistance and an increased risk of type 2 diabetes.
Nicotine and Pregnancy

- Can cause premature birth and low birth weights
- Crosses the placenta exposing the baby to nicotine which can harm development of their lungs, brain, and cardiovascular system
- No amount of nicotine exposure is known to be safe during pregnancy
- After birth nicotine can be found in the mother breast milk.
Nicotine Products

Cigarettes

Hookah

Other Tobacco Products (OTPs)

Electronic Nicotine Delivery Systems (E-cigarettes)

JUUL, IQOS
The use of tobacco for smoking has been practiced for centuries. The tobacco plant has been grown in America since the 17th century and tobacco has been used in various forms since.
Cigarettes - We can learn from history

In 1865, a man named Washington Duke from North Carolina began to roll cigarettes and sell them to others for profit.

In 1883, James Bonsack invented a machine that could roll cigarettes and produce thousands per day founding the American Tobacco Company.

In the late 19th century cigarettes were being sold in packs for 5 cents each and marketed throughout the United States. Cigarette packages were made of paper with a small card inserted to reinforce the package. These cards were designed with attractive prints that served as a form of advertisement for the cigarette, and people began to collect and trade these cigarette cards, a practice called cartophily. The manufacturers of cigarette packs began to design cards specifically with the purpose of trading in mind, which in turn boosted their sales.
Cigarettes

Cigarette brands varied in their blends of tobacco and the advertising on their cards. Fragrant Rose cigarettes, sold in the 1880s, issued cards with romantic and flowery. Creole cigarettes, created by S. F. Hess and Company were known for issuing baseball cards for the Newsboys League in 1888.

Cigarette usage initially began as a habit for soldiers; but with the mechanization of cigarette production, followed by the popularity of cards due to advertising, many more people began to smoke cigarettes as a fun and even healthy activity.

The major cigarette companies that are still in production today have evolved into giants of the industry. Two of the largest producers, R. J. Reynolds Tobacco Company and Philip Morris have bought out many of the smaller industries throughout the last century, becoming international corporations with holdings around the world.

- Hookahs are water pipes that are used to smoke specially made tobacco
- Although many users think it is less harmful, hookah smoking has many of the same health risks as cigarette smoking.
- Hookahs vary in size, shape, and style.
- A one hour session = approximately 100 cigarettes!
Other health concerns with Hookahs

Hookah smoking is typically done in groups, with the same mouthpiece passed from person to person - this can spread multiple diseases and viruses over the course of a session.

If you think that’s completely safe, stand in a circle, lick a sucker and then pass it to your left....again and again until it’s gone!
Other Tobacco Products

- Smokeless Tobacco - Chew, Snuff
- Orbs
- Little cigars - Often flavored
- Cigarillos - Often flavored
- Nicotine Picks
- Flavored rolling papers
Electronic Nicotine Delivery Systems

Under Fire

Litigation over e-cigarette explosions claims lithium-ion batteries in some devices lack certain controls to prevent combustion. Industry advocates say that if used correctly, the batteries pose no more risk in e-cigarettes than they do in other products.

Battery

LED light

Simulates a burning cigarette’s glow when user puffs

Inhaler

Vaporizer

Atomizes the liquid nicotine by heating it up with a heating coil

Electronic components

Controls components like the airflow sensor and voltage control. When a user inhales, the components connect the battery to the vaporizer, with positive and negative wires.
E-cigarettes – Are They Safe?

- Current FDA regulations are not enough. In fact regulations on deck keep getting pushed back due to litigation from the industry and vape shops. 2022 is the new estimate for a decision.

- Unregulated manufacturing leads to increased safety risks and no standards for quality control - would you continue to visit your favorite restaurant if the health department didn’t monitor it and conduct regular inspections?

- We won’t know the long term effects of ENDS devices for years to come. Tragically, this current generation of youth will be the guinea pigs that build this data for us.
Safety Concerns cont.

- Some E-cigarettes may “claim” to be nicotine-free
- Inaccurate labeling - In fact, a recent NDSU study proved many inaccuracies, many with rather large discrepancies to the label.
- E-cigarette stores can legally mix their own e-juice - mix any strength of nicotine and other chemicals as desired. No standard or testing is required for strength or impurities.
Over 8000 Flavors on the market

FDA approved for INGESTION not INHALATION

Inhalation has been associated with lung problems, ranging from irritation to a rare but serious lung disease.

A butter-flavored chemical, has been linked to “popcorn lung” a life-threatening obstructive lung disease.
E-cigarettes – Propylene Glycol Allergy

- Sore throat (sometimes extreme)
- Sinus problems
- Headaches
- Nausea
- In extreme cases, numbness of the face and tongue and itchy hives on the upper body
E-cigarettes – Nicotine Poisoning

E-liquids are high concentrated nicotine product, nicotine is toxic.

Symptoms include nausea, vomiting, sweating, salivation, increased heart rate and blood pressure and in some cases death.
E-cigarettes – Poisoning

Eli James Hotaling, 18 months

Died in December 2014 after swallowing e-juice. Just $\frac{1}{2}$ to 1 tsp of liquid nicotine is a fatal dose for a toddler.

Ivy died from acute nicotine poisoning after chewing on an e-cigarette cartridge.

Poisoning Calls Related to E-Cigarettes Have Skyrocketed

Our Kids Can’t Wait

FDA: Finish the rule to regulate all tobacco products, including e-cigarettes.
E-cigarettes – Poisoning – Jamestown Incident

How Poisoning Occurs

- Ingestion
- Absorption through skin/eyes (spills)
- Leaking devices
- Overuse of device

If Poisoning Occurs

Call Poison control at 1-800-222-1222 or get immediate medical attention.
Explosions and Fires –

https://www.youtube.com/watch?v=VxiEZeFE2Zs

**Colorado vapers burned by exploding e-cigarettes**

University of Colorado Hospital Burn Center has seen four e-cigarette-related incidents since December.

By Monte Whaley
The Denver Post

**Man seriously injured by e-cigarette explosion**

A man is hospitalized in Colorado Springs with serious injuries after an electronic cigarette exploded in his face, his family says.

29-year-old Cordero Caples suffered a broken neck, facial fractures, burns to his mouth and shattered teeth in the explosion. According to an account posted by his sister on the fundraising site GoFundMe, Caples was using an e-cigarette made by Kangertech when it exploded on Friday. Kangertech has not yet responded to a request for comment by CBS News.

**EDMONTON — The Canadian Press**

Published Thursday, Jan. 28, 2016 8:47AM EST
Last updated Thursday, Jan. 28, 2016 1:16PM EST
E-cigarette blamed for house fire in Idaho, electronic cigarette battery overcharged and exploded

E-cigarette battery sparks Tipp City house fire

Concern grows over exploding e-cigarettes after 5 hospitalized in Seattle

Firefighters: E-cigarette charger sparked La Crosse house fire

Unattended electronic cigarette charger explodes, car catches fire

SEATTLE — In the growing cloud of vapor, there are troubling new questions about the safety of electronic cigarettes.

An explosion over the weekend involving an e-cigarette has doctors at Harborview Medical Center concerned.

Since October, trauma doctors in Seattle have treated severe facial burns and blast injuries to hands of five patients.
E-cigarettes - ND Minor Restriction Law

- HB1186 signed by Governor April 4, 2015
- Law went into effect August 1, 2015
- Allows sale to only those over age 18
- Illegal to purchase or provide e-cigarettes for minor
- Illegal for minors to purchase, possess or use
- Vending machine sales illegal in areas minors allowed
- Includes all parts components or accessories
- Allows city ordinances to be stricter than state law
- Local youth - seventh graders testified in support of this bill at the Capitol
Point of Sale – What Kids See
The Next Generation: JUUL
The Next Generation: JUUL

- Using the Tobacco Industry playbook - appealing to youth!

- Developed by graduate students at Stanford, now has 56.4% of e-cig market share!

- One JUUL cartridge has about 200 puffs which is equivalent to one pack of cigarettes!

- Generally, the JUUL device costs between $35 to $50 and a package of four JUUL pods costs $15.99. The pods come in “classic flavors” like Virginia tobacco, cool mint, fruit medley, creme brulee, and mango. At $4 a pod, that’s a bargain compared to a pack of cigarettes, which after years of hard-fought legislation and additional taxes to cover the health effects of smoking now can cost more than $10 a pack in places like New York City

- Available to purchase online - on the honor system!
JUUL - vaperwear

The Next Generation - Smok Badge, Sourin, and more!
The Next Generation - Stealth Vaping
The Next Generation
- Stealth Vaping

VAPE ANYTHING.
VAPE ANYTIME.

QUICK-ACCESS STEALTH
HOODIE ZIPPER

Low Vis Lqd
Invisi-Vapor
Clear Steam
Tobacco products are designed to look like everyday items like candy and school supplies. Don’t let the tobacco industry hook your kids for a lifetime of addiction.
The Next Generation

- Disguised to look like flashdrives or even sharpie pens

- Vaperwear clothing and backpacks for further e-cig stealth - https://www.youtube.com/watch?v=etd_P40dSFk

- National News Outlet Articles - We can’t punish away this problem. Our kids are already addicted - they need treatment.
IQOS
• Heat, not burn, technology - a hybrid of smoking and vaping. The tobacco in a cigarette burns at temperatures in excess of 600°C, reaching combustion. But IQOS heats tobacco to much lower temperatures, up to 350°C releasing tobacco vapor, or essence, containing the nicotine and chemicals.

• IQOS has been launched in key cities in Andorra, Bulgaria, Canary Islands, Canada, Colombia, Croatia, Curacao, Cyprus, Czech Republic, Denmark, France, Germany, Greece, Guatemala, Italy, Israel, Japan, Kazakhstan, Korea, Lithuania, Monaco, the Netherlands, New Zealand, Palestine, Poland, Portugal, Romania, Russia, Serbia, Slovak Republic, Slovenia, South Africa, Spain, Switzerland, Turkish Cyprus, Ukraine, the United Kingdom, and in some Duty Free shops.

• Under application for sales in the U.S. - FDA has currently denied it as a cessation device, still under review otherwise.
What can you do?

Lead by Example
Promote ND Quits
Educate Youth

Help Youth Use Their Voice
Be a champion
Advocate for e-cigs as tobacco products and so they are taxed as such.

ND Quits
1.800.QUIT.NOW
www.ndhealth.gov/ndquits
Be a Champion - Policies

Comprehensive Tobacco Free School Policies
Tobacco Free Parks
Tobacco Tax Increase

Stronger Local E-cigarette Policies
Age 21
Point of Sale
Questions?
References:

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https://www.tobaccofreekids.org/

https://e-cigarettes.surgeongeneral.gov/getthefacts.html

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