The Addiction Begins: The History of Tobacco Use
Tobacco Plant

- Grows in North and South America
- In same family as pepper, potato, and poisonous nightshade
- As early as 1 B.C., American Indians were using tobacco plant in religious and medicinal practices
Tobacco History

- Christopher Columbus was offered tobacco from American Indians and brought it back to Europe
- Europeans came to believe tobacco was a cure-all
- In 1571, a doctor named Nicholas Monardes wrote a book about medicinal plants, claiming tobacco could cure 36 health problems
Tobacco History

- During the 1600s, tobacco was frequently traded/used as money
- The dangerous effects of tobacco were beginning to be realized
- In 1760, Pierre Lorillard establishes company to process tobacco, cigars, and snuff
Tobacco History

- During the Revolutionary War, tobacco was used to finance loans from France to Americans
- 1826, the pure form of nicotine was discovered
- Soon after, it was discovered that nicotine is a poison
Tobacco History

• In 1836, Samuel Green from New England discovers tobacco is a poison and can kill users
• Phillip Morris and J.E. Ligget and Brother are established
• Soldiers bring cigarettes back to England from Russian and Turkish soldiers, causing them to gain popularity
Tobacco History

• In the U.S., cigarettes were being created from scraps leftover after production of chewing tobacco
• R.J. Reynolds Company was established to produce chewing tobacco in 1875
• In the early 1900s, cigarettes became the major tobacco product sold
Tobacco History

- In 1902 Phillip Morris starts producing Marlboro brand cigarettes
- 1913 R.J. Reynolds begins producing Camel brand cigarettes
- Use of cigarettes greatly increased during World War I
Tobacco History

- Cigarette companies begin marketing towards women as well.
- Smoking rates among American female teens triple between 1925-1935.
- During World War II, cigarettes were included in soldier’s rations causing veterans to be loyal customers after the war.
Tobacco History

- In the 1950s, more information discovered that cigarette smoking was linked to lung cancer.
- Tobacco industry denied harmful claims and promoted more filtered cigarettes with less tar.
- In 1954, Dr. Ernest Wynders discovered that placing cigarette tar on mice causes tumors.
Tobacco History

• In 1964, Surgeon General released it’s “Smoking and Health” report, calling for the government to regular the tobacco industry
• In 1966, health warnings began being printed on cigarettes
• The negative press causes tobacco companies to expand into other industries (Reynolds aluminum foil and Phillip Morris into Miller Brewing!)
Tobacco History

- In 1971, cigarette ads are no longer played on television.
- In 1979, Surgeon General releases report on women and smoking due to rise in female cigarette use (thought to be in part due to enticing advertisement of Virginia Slims).
Tobacco History

- In 1980s, there were many lawsuits against tobacco industry regarding health effects of smoking
- In 1982, Surgeon General reports second-hand smoking is linked to cancer
- Smoking in many public places becomes restricted
Tobacco History

- In 1985, lung cancer beats out breast cancer as #1 killer of women
- Tobacco companies were adept at maneuvering around law suits regarding cancer deaths
Tobacco Today

- Laws hold tobacco manufacturers liable for effects of their products
- Anti-smoking campaigns are a major health promotion program success
Tobacco Today

Yet, more than 45 million American adults still smoke, 8 million are living with a smoking-caused health condition, and over 480,000 Americans die prematurely each year from tobacco use.

Source: Center for Disease Control
Tobacco

- Currently grown in 16 U.S. states
  - Kentucky and North Carolina produce 71% of nation’s tobacco
- Tobacco leaves
  - Shredded and smoked in cigarettes, cigars, or pipes
  - Ground into snuff
  - Cured for chewing tobacco
  - Moistened and ground into dip

Source: HHS.gov
Cigarette Smoking Facts
What happens when you smoke?

• When you first take a puff, a mix of gasses accumulate around your mouth and nose.
• Your eyes may water, nose can run, throat may feel irritated.
• Your cilia (tiny hairs) clear your bronchial tubes and lungs of foreign matter.
  - Smoking paralyzes and can kill the cilia.

[Image: Diagram of respiratory system]
What happens when you smoke?

- In the lungs, the smoke damages the cells trying to remove particles from the lung’s alveoli (air sacs)
- Most of the inhaled smoke turns to tar
  - 30% of the tar is sent back for exhalation
  - The rest sticks to throat and lungs
What happens when you smoke?

• The chemicals from the inhaled smoke are quickly absorbed in bloodstream, go to your heart and then are pumped through your body.

• Heart rate increases to up to 10-25 beats per minute faster (smoking can cause arrhythmia, or irregular heart beat)
What happens when you smoke?

- Carbon monoxide enters bloodstream and oxygen level is reduced, heart has to go into overtime to supply more to cells.
- When nicotine reaches adrenal glands, body gets a surge of energy that raises blood pressure.
- When nicotine reaches brain, nerve cells release dopamine which produces a good feeling.
There is no risk-free amount of second-hand smoke exposure

- Tobacco smoke contains more than 70,000 chemicals; hundreds of these are toxic and 70 cause cancer
- Since 1964, there have been over 2,500,000 non-smoker deaths from secondhand smoke

Source: Center for Disease Control
Secondhand Smoke

Effects of secondhand smoke in children

- Ear infections
- Increased asthma attacks
- Respiratory infections (i.e. bronchitis, pneumonia)
- Greater risk for Sudden Infant Death Syndrome (SIDS)

Source: Center for Disease Control
Secondhand Smoke

Effects of secondhand smoke in adults

• Heart disease
  ○ There are immediate harmful effects upon exposure to non-smokers heart and blood vessels

• Lung cancer
  ○ Secondhand smoke exposure caused more than 7,300 lung cancer deaths during 2005-2009 for non-smokers

• Stroke
What is Nicotine?

A naturally occurring chemical (alkaloid) made by plants such as tobacco

- In the nightshade family
- Also used to be used as an insecticide
- One of 4,000 chemicals in tobacco products
Nicotine Effects

Has many effects on body:

• Boosts mood and feeling of well-being
  ○ Produces dopamine release
  ○ When the “buzz” wears off, users will feel sluggish or down

• Increases alertness

• Decreases appetite
  ○ Dulls taste buds so foods do not taste as pleasant
Nicotine Effects

- Pharmacologic effects
  - Increases heart rate
  - Increases blood pressure
Nicotine Effects

Addiction – nicotine is highly addictive!

- When you discontinue use of nicotine, you can experience withdrawal symptoms such as:
  - Cravings
  - Irritability
  - Difficulty paying attention
  - Anxiety
  - Depression
  - Sense of emptiness
  - Mood swings
Nicotine Effects

- After inhaling tobacco smoke, nicotine takes 8-20 seconds to cross blood-brain barrier.
- How much nicotine enters body depends upon:
  - If smoke was inhaled
  - Type of tobacco being used
  - If a filter is used and what kind
Smokeless Tobacco
Smokeless Tobacco

- Including dip, chewing tobacco, snuff, and dissolvable tobacco
- Nicotine is absorbed through lining of mouth
  - The level of nicotine in bloodstream from smokeless tobacco depends on the type of tobacco, the cut size of tobacco, the PH of the tobacco product and other factors
  - Smokeless tobacco contains more nicotine than cigarettes
Diseases Caused by Smokeless Tobacco

- Cancer (mouth, tongue, cheek, pancreatic, and esophageal)
- Gum disease
- Precancerous oral lesions
- Heart disease
- Tooth decay/tooth loss/tooth abrasion
Can smokeless tobacco help you quit smoking?

No! All forms of smokeless tobacco are very addictive and have many health risks.
Electronic Cigarettes

- Also known as e-cigarettes
- Battery powered cigarettes that turn nicotine and other chemicals into vapor
- Not regulated by the FDA
  - No way to know if they’re safe
  - Amount of nicotine contained and delivered is not standardized
Tobacco Cessation
Where to Start?

Determine nicotine dependence
• How much do you smoke?
• How often?
• Fagerstrom Test
Fagerstrom Test

Answer the following 6 questions for yourself, tallying your points.
1. How soon after you wake up do you have your first cigarette/dip/chew?
   a) Within 5 minutes (3 points)
   b) 6-30 minutes (2 points)
   c) 31-60 minutes (1 point)
   d) After 1 hour (0 points)
Fagerstrom Test

2. Do you find it difficult to refrain from smoking in places where it is forbidden? (i.e. church, library, etc)
   a) Yes (1 point)
   b) No (0 points)
Fagerstrom Test

3. Which cigarette would you most hate to give up?

a) First one in the morning (1 point)
b) All others (0 points)
4. How many cigarettes a day do you smoke?

a) 10 or less (0 points)

b) 11-20 (1 point)

c) 21-30 (2 points)

d) 31+ (3 points)
Fagerstrom Test

5. Do you smoke more frequently during the first hours after waking than during the rest of the day?

a) Yes (1 point)
b) No (0 points)
Fagerstrom Test

6. Do you smoke when you are so ill that you are so ill that you are in bed most of the day?
   a) Yes (1 point)
   b) No (0 points)
Fagerstorm

Total your points

7-10 points = highly addicted
4-6 points = moderately addicted
Less than 4 points = minor addiction
Tobacco Cessation Methods

“Cold Turkey”

- Usually arises suddenly due to urge to quit or health concern
- Can cause intense cravings due to withdrawal
- Often said to be one of hardest ways to quit
Tobacco Cessation Methods

Tapering

- Gradual reduction in use of tobacco to wean yourself away from nicotine
- Delaying time of first cigarette
- Increasing time between each cigarette
Tobacco Cessation Methods

Tapering

- Allows smoker to adjust to *psychosocial* aspect of less smoking
Nicotine Replacement Therapy

Available in various forms, nicotine replacement therapy (NRT) allows tobacco users to wean themselves off of nicotine while avoiding harmful tobacco.
Nicotine Replacement Therapy

- Often designed in a “step down” system
- Helps control cravings and avoid nicotine withdrawal
- Treats the chemical addiction of tobacco use
Nicotine Replacement Therapy

Potential Side effects

- Skin irritation at application site (with patch)
- Dizziness
- Nausea/Vomiting
- Diarrhea
- Headache
- Vivid dreams
- Mouth ulcers

- Dental pain (gum, lozenge)
- Oral irritation (gum, lozenge)
- Increased heart rate
- Increased blood pressure
- Heartburn
- Nasal tissue burning (inhaler)
Tobacco Cessation Methods

Nicotine Replacement Therapy (NRT)

5 U.S. Food & Drug Administration (FDA) approved forms

1. Patch
2. Gum
3. Nasal spray
4. Inhaler
5. Lozenge

Source: Cancer.org
Tobacco Cessation: Nicotine Patch

• Transdermal nicotine replacement – nicotine is absorbed through skin
• Maintains steady amount of nicotine in body to avoid cravings
• Available with or without a prescription
Tobacco Cessation: Nicotine Patch

- 24 hour patches in three dosing sizes
- Available in 21 mg, 14 mg, and 7 mg doses for gradual weaning off of nicotine
Tobacco Cessation: Nicotine Gum

- Available in 2mg and 4mg doses
- Used by chewing then “parking” the gum for the nicotine release
- Designed to be used “as needed” for cravings
Tobacco Cessation: Nasal Spray

- Sprayed into nostrils when cravings occur
- Prescription-only
Tobacco Cessation: Nicotine Inhaler

- Cartridges of nicotine that are inhaled in 4mg doses
- Prescription only
Tobacco Cessation: Lozenge

- Nicotine lozenges dissolve in mouth
- 2mg and 4mg dosage
- Take 20-30 minutes to dissolve
Tobacco Cessation

Pros of Nicotine Replacement

• Eases discomfort of nicotine withdrawal
• Inhaler gives user something to do with hands/lips
• Most sources are discrete, able to use anywhere
• Many are cheaper than cigarettes
Tobacco Cessation

Cons of Nicotine Replacement

- Potential to prolong addiction
- Side effects (i.e. vivid dreams, nausea, etc)
- Willpower still necessary to quit
Tobacco Cessation: Prescription Medication

Bupropion (brand names: Aplenzin, Zyban, Wellbutrin)

- Extended release anti-depressant to help control nicotine withdrawal symptoms
- Does not contain nicotine
- Usually started 1-2 weeks before quitting smoking
- Potential side effects: dry mouth, trouble sleeping, irritability, tiredness, headaches

Source: American Cancer Society
Tobacco Cessation: Prescription Medication

Varenicline (brand name: Chantix)

- Interferes with nicotine receptors in brain
  - Lessens pleasure of smoking
  - Reduces nicotine withdrawal symptoms
- Usually started 1 week before quit date
- Potential side effects: sleep problems, unusual dreams, nausea, weakness, dry mouth, headache

Source: American Cancer Society
Preparing to Quit
Where to Start

Track tobacco usage

• Note when you have first cigarette/chew
• How often you smoke/chew
• Certain times of day
• How many cigarettes daily and weekly you are smoking
Where to Start

Set a quit date

- Avoid choosing a day where you will be stressed or busy
- Avoid choosing a day where you will be tempted to smoke (i.e. a party, hanging out with other smokers)
Where to Start

Tell family and friends you are quitting

• Ask them to help with accountability
• Plan smoke-free activities
• If they smoke, ask them to avoid smoking around you
Where to Start

Get rid of cigarettes

- Remove ash trays from home
- Throw out cigarettes and matches
- Remove the cigarette smell
  - Clean car interior
  - Wash curtains, bedding, etc
Where to Start

Choose your method

- Tapering?
- Cold turkey?
- Nicotine replacement therapy?
- Medication? See your primary care physician
Problems that Arise When Quitting
Cravings

• Find other activities to keep your hands busy when facing a craving
• Ride out the craving – remember that they are temporary
Facing the Morning

*If you are used to smoking first thing in the morning, this can be tough*

- If using nicotine patch or gum, use accordingly so you wake up and have a dose of nicotine
- Try a different wake-up routine (walk, eat breakfast, hot tea, etc)
- Take your attention off of smoking immediately in the morning
Driving or Riding in Cars

You may have developed the habit of lighting up when getting in the car or smoking when driving on certain roads

- Clean out car’s ash tray
- Try alternative routes to work, store, etc
- Take apples with you in the car (a crunchy, energizing snack)
Boredom

You may find that you don’t know what to do after meals or during breaks at work.

• Try taking a walk during breaks
• Carry crossword puzzles, magazines if waiting for something
• Plan activities
Being Around other Smokers

*Being around other smokers may trigger you to smoke.*

- Try to spend more time with friends and family who are non-smokers
- If friends light up, excuse yourself until they’re finished
- Don’t buy or hold cigarettes for others
Handling Stress Without Smoking

Nicotine withdrawal symptoms can cause anxiety, nervousness, and restlessness. Additionally, you may be used to lighting up when stressed.
Handling Stress Without Smoking

Add more exercise to your day
- Releases “feel good hormones”
- Keeps you busy during a craving
- Helps prevent weight gain
- Try yoga - incorporates physical activity with breathing exercises
Handling Stress Without Smoking

Plan ahead

- Wake up 15 minutes earlier to avoid being late
- Do unpleasant tasks earlier in the day
- Be realistic about your time
- Try not to procrastinate
Handling Stress Without Smoking

Develop tobacco-free stress relieving habits

- Read more books/magazines
- Try herbal tea
- Soak in a hot bath
- Get enough sleep
- Watch a funny TV show or movie
- Listen to music

better together
Preventing Weight Gain

- Tobacco use increases metabolism by ~200 calories per day
- Tobacco use decreases appetite
- Sense of taste is decreased when using tobacco – food is less appealing
Preventing Weight Gain

Examine diet

• Try tracking your intake to see how many calories you eat on average per day

• Free calorie tracking phone apps/ websites
  ○ My Fitness Pal
  ○ Lose It
  ○ My Net Diary
Preventing Weight Gain

• To prevent weight gain, try to add in exercise or eat 200 calories less per day.
• Begin walking ½ mile per day. Increase it to 1 mile next week, then 1 ½ miles the next.
Preventing Weight Gain

Tracking calories

• Keep tabs on what you’re eating
• My Fitness Pal/Lose It will recommend a personalized calorie goal for you
  ◦ Stay within calorie goal to lose/maintain weight
  ◦ Hold yourself accountable or everything you eat
Preventing Weight Gain

May notice a feeling of sluggishness mid-morning or mid-afternoon when you usually smoked

• Avoid reaching for a sugar-fix when this occurs
• Build in healthy snacks between meals
  o Apple with peanut butter
  o Whole grain cereal bar
  o Greek yogurt with fruit
  o Dried fruit and nuts
Preventing Weight Gain

Monitor your weight

• If weight goes up a few pounds, increase exercise or cut out some calories

• If you do not have scale or prefer not to use one, pay attention to the way your clothing fits or use tape measure around waist
Remaining Tobacco Free
What Happens When you Quit

Within 20 minutes... blood pressure and pulse rate drops, temperature of hands and feet decreases to normal.

8 hours after quitting... carbon monoxide and oxygen level in blood returns to normal.

24 hours after quitting... chance of heart attack decreases.
What Happens When You Quit

48 hours after quitting...ability to smell and taste is enhanced

2 weeks to 3 months after quitting...circulation is improved, walking is easier, 30% increase in lung function

1 to 9 months after quitting...coughing, fatigue, congestion, shortness of breath decreases, risk of infection decreases, energy increases
What Happens When You Quit

1 year after quitting… excess risk of coronary artery disease is half that of a smoker

5 years after quitting… stroke risk reduced to that of a nonsmoker 5-15 years after quitting, risk of mouth, throat, esophageal cancer is half that of a smoker

Source: Center for Disease Control
What Happens When you Quit

10 years after quitting... lung cancer death rate half that of a smoker’s, precancerous cells replaced, risk of mouth, throat, esophageal, bladder, kidney, pancreas cancer decreases

15 years after quitting... risk of coronary heart disease is that of a nonsmoker
Help Yourself Stay Tobacco Free

Seek support

• Inform everyone that you are tobacco-free
• Talk to a friend or family member when tempted to relapse
Help Yourself Stay Tobacco-Free

Avoid risky situations
- Avoid others when smoking
- Avoid situations where you know you’ll be tempted
- Leave a situation if you feel an urge to smoke
- Refuse offers of cigarettes
Help Yourself Stay Tobacco Free

Keep telling yourself:

I do not smoke!
Help Yourself Stay Tobacco Free

*Focus on all of the benefits!*

One of the BEST things you can do for your health

- Greatly decreases cancer risk
- Decreases heart disease risk
- Lowers blood pressure
- Extends your life!
Help Yourself Stay Tobacco Free

So much money saved!

1 Pack of cigarettes in Kentucky: $5.40 (average)
1 Pack of cigarettes in Ohio: $6.03 (average)
Smoking 1 pack daily = $162-$181 per month or $1971-$2200 per year!!

Reward yourself for staying tobacco free!
Help Yourself Stay Tobacco Free

You can do so much more!

• Don’t have to worry about finding a place to smoke in public
• More free time in the day that you previously spent smoking
• Feel more physically capable
Help Yourself Stay Tobacco Free

*Improved sense of taste and smell!*

- Food tastes and smells better
- Additionally, you smell better to other people!
Tobacco Cessation Apps

- **LiveStrong MyQuit Coach** – helps you quit with nicotine replacement or cold turkey by analyzing tobacco usage and tracking cravings
- **Quit It Lite** – motivates by tracking money saved and the tar and nicotine that do not enter body
- **My Last Cigarette** – points out how much longer you can live without smoking and calculates money saved
Tobacco Cessation Apps

- **Quit Smoking** – features games that can distract you during a craving; also has a built-in community of smokers and non-smokers.

- **Craving to Quit** – allows smokers to develop goals and check in daily. Includes audio and visual instruction.
Thank you for reviewing this PowerPoint!

Please use the information to complete the corresponding Tobacco Education quiz.