

## Nicotine Addiction

### I. Nicotine Overview

- A. Active ingredient in tobacco.
- B. Used by many Native American tribes – introduced it to European explorers.
- C. Extremely toxic
  - 1. Avg. cigar has enough to kill person
  - 2. Most destroyed by burning
- D. Tolerance develops quickly to toxic effects. (i.e., several hours vs. days for heroin, mos. for alcohol).

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### II. Methods of Administration

- A. Cigarettes
  - 1. Nicotine is most addictive drug when in form of cigarettes.
    - a) Harder to stop using than heroin
    - b) Few use in nonaddictive way for long.
  - 2. Nicotine reaches brain in seconds.
  - 3. Most smoke to maintain relatively constant level of nicotine in bloodstream.
  - 4. Leading cause of serious diseases of the lungs, heart, & blood vessels.

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- B. Pipes & cigars
  - 1. Less hazardous than cigs. – harsher smoke non inhaled as deeply.
  - 2. Deliver less nicotine & are slower acting – less addictive.
  - 3. Still involve risk: nicotine affects heart & circulation. Plus, higher rates of cancer of the lips, mouth & throat.

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C. Chewing tobacco & snuff

1. Tobacco placed in mouth w/o burning it.  
Nicotine into system via blood vessels in tongue & cheek.
2. Snuff is snorted or placed in mouth.
3. Results in higher doses of nicotine – nothing is lost to heat.
4. Rate of delivery is slower than smoking, so less addictive.

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**III. Physiological Effects**

- A. Acetylcholine agonist in muscular junctions (why overdoses lead to seizures).
- B. Stimulates medulla: nausea & vomiting
- C. Increases in heart muscle tone & heart rate.
- D. Increases blood pressure & constricts peripheral blood vessels.
- E. Increases metabolism.
- F. Decreases hunger.
- G. Affects hormone levels.

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**IV. Cognitive, Emotional & Behavioral Effects**

- A. Increased ability to concentrate.
- B. Increased positive mood (after nicotine deprivation).
- C. Reduced tension short-term.
- D. Elevates baseline stress level long-term.
- E. Linked to increased depression in teens.
- F. Withdrawal associated w/ irritability, difficulty concentrating, & sleep disturbance.

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**V. “Second Hand Smoke” (aka environmental tobacco smoke).**

- A. Sidestream smoke (from burning end of cig.) contains far higher concentrations of carcinogens than mainstream smoke (inhaled by smoker) because it is unfiltered.
- B. CDC estimates it causes more deaths per year than any other environmental pollutant. 50,000 deaths/year in U.S.
- C. Children of smoking parents have reduced lung functioning & far more respiratory infections, asthma, & ear infections.

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**VI. Cultural Aspects**

- A. Changing norms
  - 1. In U.S., smoking was common & fashionable for most of 20<sup>th</sup> century.
    - a) Advertising was very prominent.
    - b) Many film characters smoked.
  - 2. Attitudes have been changing.
    - a) Now viewed as addiction.
    - b) Seen as potentially harmful to individuals & society.
    - c) Restrictions on smoking in public areas are growing.

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- 3. Teen smoking decreasing.
  - a) From 1981 – early '90s: roughly 29% of 12<sup>th</sup> graders smoked in past mo.
    - In 1997: 38%.
    - 2001: 30%
  - b) Why the drop?
    - More see it as risky behavior.
    - More distrust of tobacco cos.
    - Seen as not attractive.
  - c) One demog. group not decreasing use:
    - Young, white females.

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B. Government has confusing roles

1. Tobacco costs govt. billions.
  - a) Smoking-related health costs.
  - b) Lost worker productivity.
  - c) Subsidizing tobacco farmers.
  - d) Smoking prevention/tx. programs.
2. Tobacco is significant source of income.
  - a) Taxes.
  - b) Tobacco co. lobbying.
  - c) Tobacco farmer lobbying.

Now in position of sending message tobacco is bad (e.g., lawsuits, prevention ads) while subsidizing its growth).

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