

Tobacco Addiction, Why is It so Powerful?

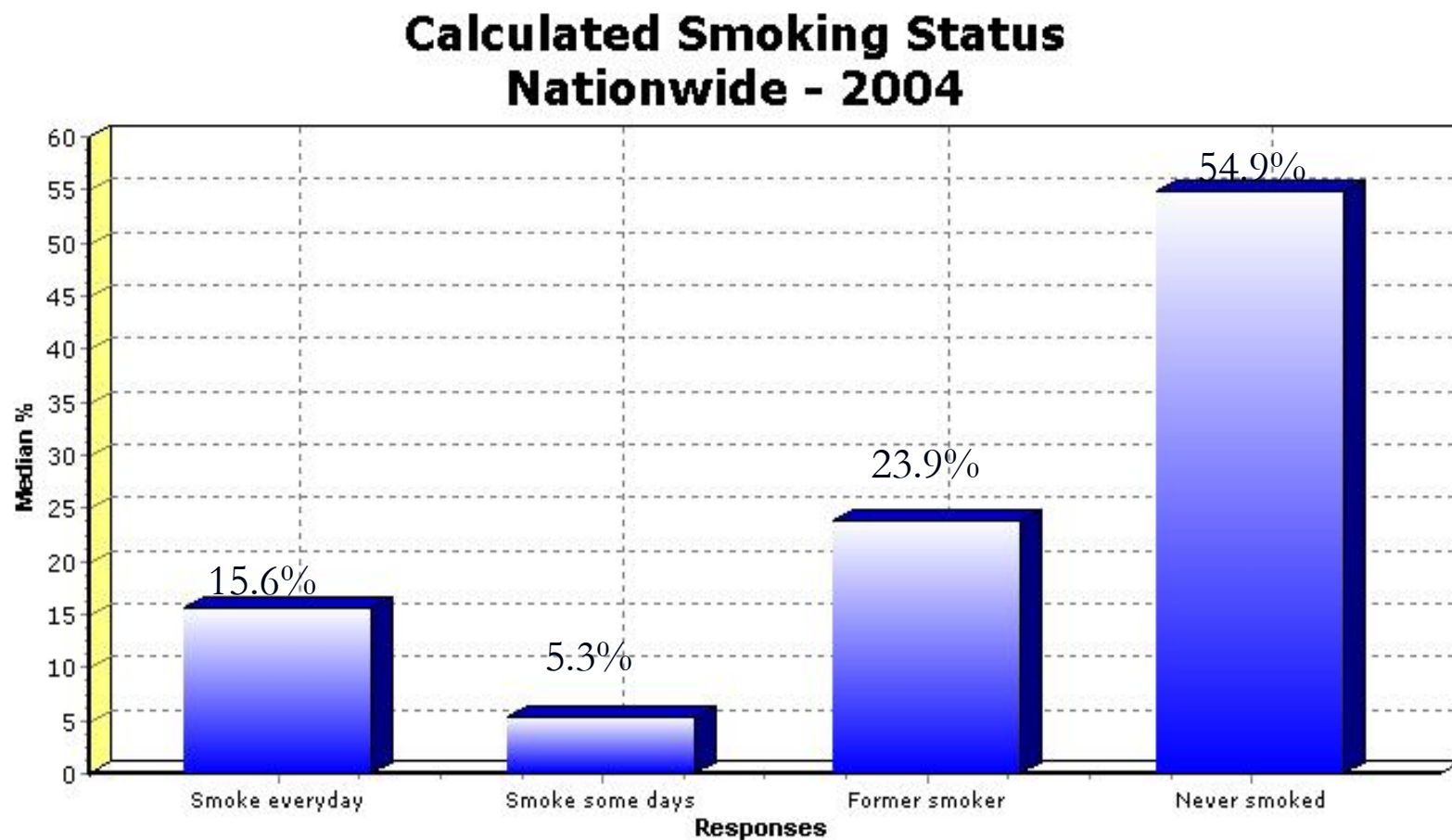
Gaylene Mooney, M.Ed, RRT-NPS

Points to Cover

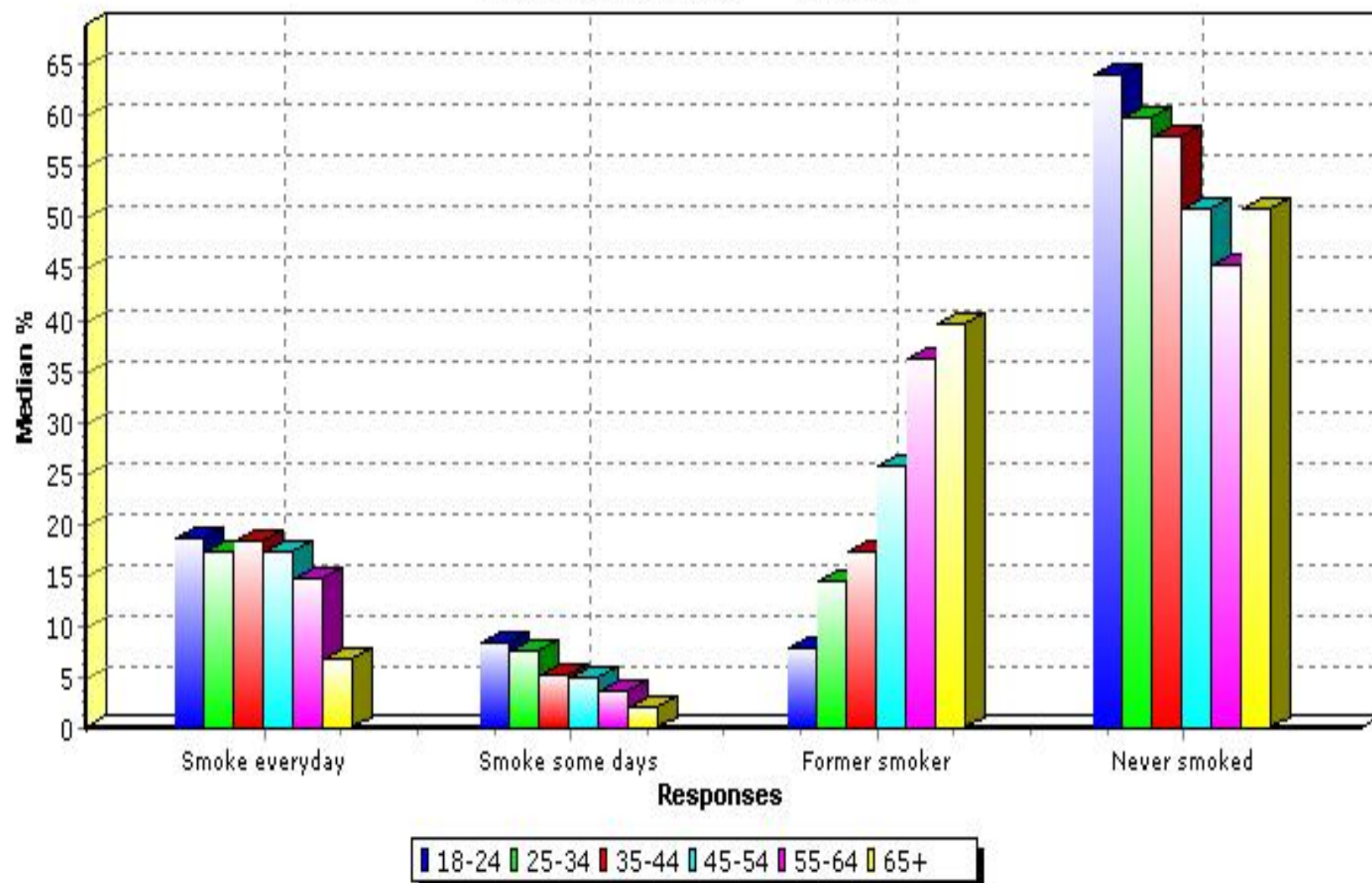
- Tobacco Use Statistics
- Two Forms of Nicotine
- Monoamineoxidase (MAO)
- Definition of Addiction
- Maslow's Hierarchy of Needs
- Triangle of Addiction
- Neurobiology of Addiction
- Stages of Change
- The Association for the Treatment of Tobacco Use and Dependence (ATTUD)
- Brief discussion of the new Medicare reimbursement

Tobacco Use Stats

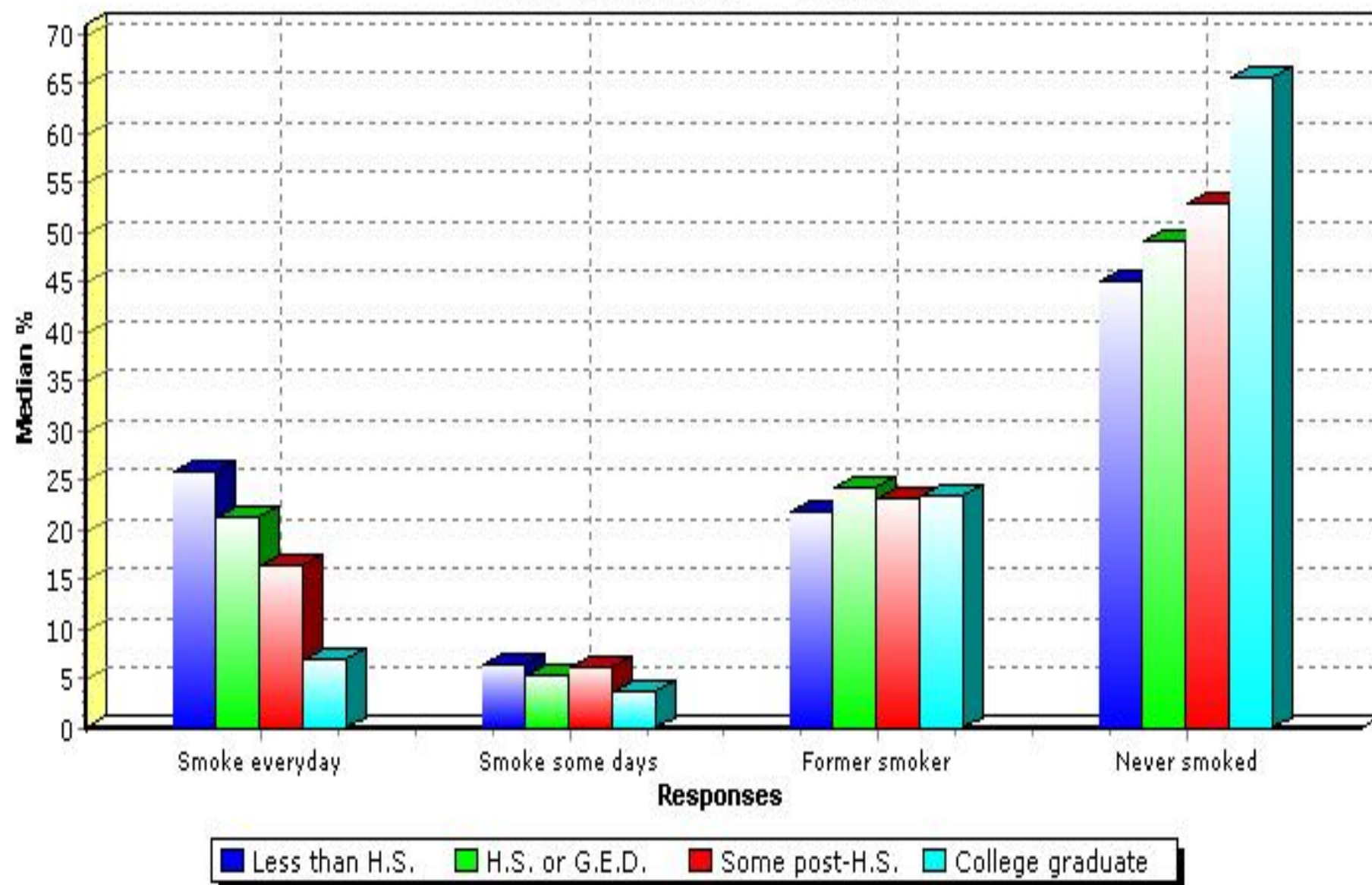
- 46 Million Adults



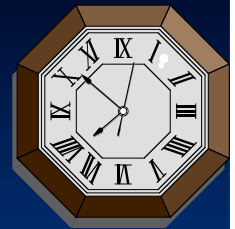
Calculated Smoking Status Nationwide - 2004



Calculated Smoking Status Nationwide - 2004

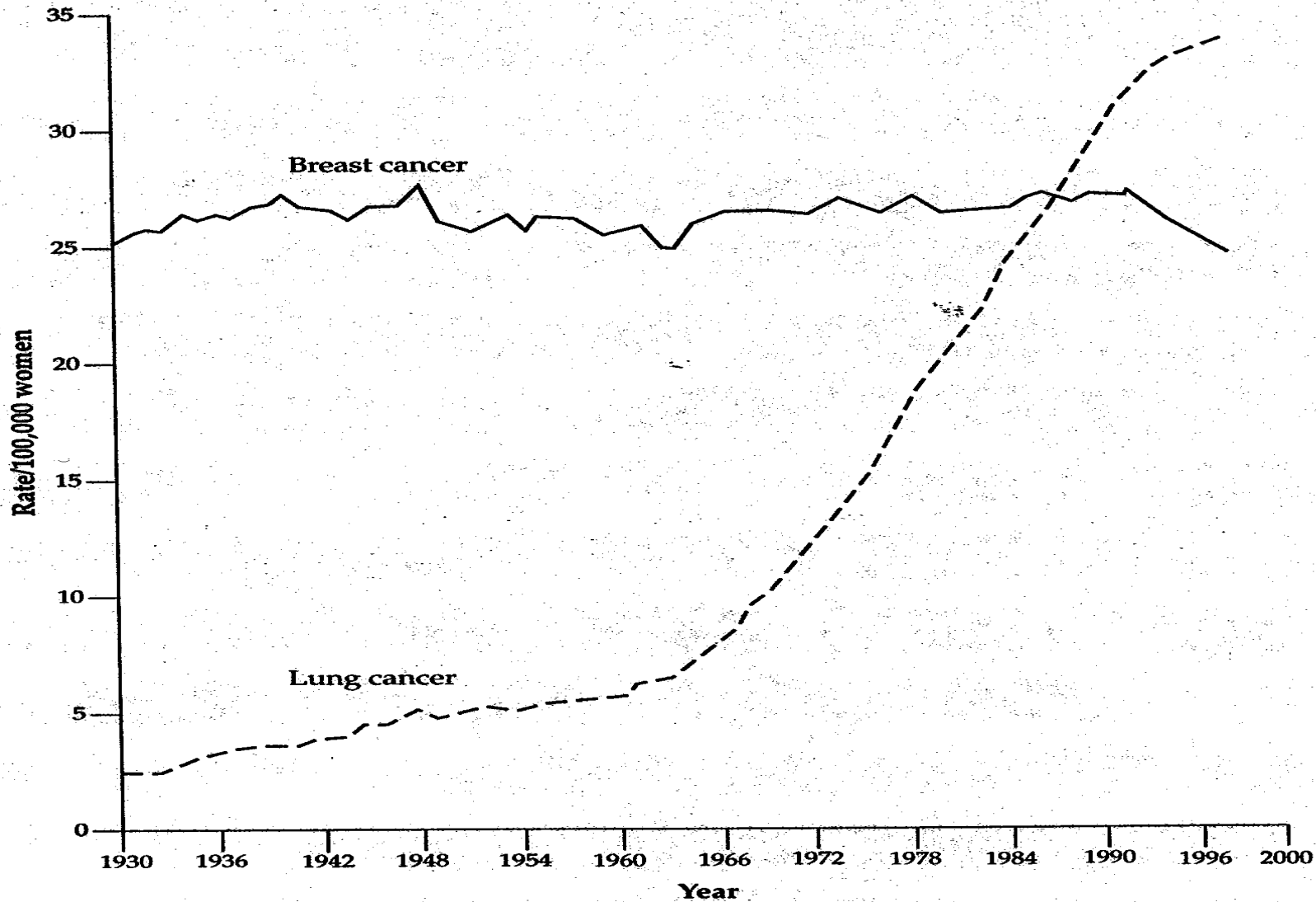


One Approximately Every Two Minutes

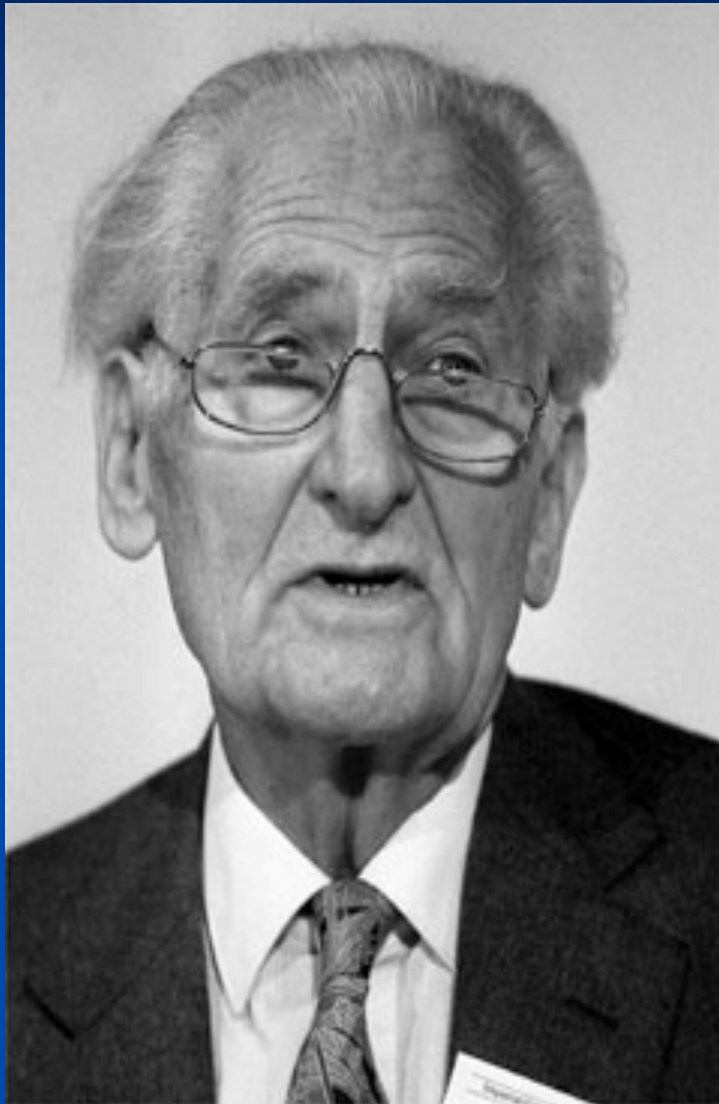


[Http://phil.cdc.gov/Phil/default.asp](http://phil.cdc.gov/Phil/default.asp) >430,000 (1178/day)

It Isn't Breast Cancer?



Sir Richard Doll



- Died in June at age 92
- 1950 study linking smoking to lung cancer
- 1954: Doll and Hill published “The Mortality of Doctors and Their Smoking Habits” in BMJ (lead to most M.D. giving up smoking)
- Follow-up study in 2004
 - $\frac{1}{2}$ - $\frac{2}{3}$ of all individuals who begin smoking in youth will die because of it

Two Forms of Nicotine

- Bound to tobacco leaf
- Free (altered by pH of the smoke)
 - Results when ammonia is added
 - Immediate impact
 - More satisfaction
- http://tobaccodocuments.org/product_design/00044522-4523.html
- pH
 - Cigarette: 5.5 – 6.0 (filter & carbon actually increases pH, verified by tobacco documents)
 - Spit: up to 8.3 (Source: CDC)
 - Cigar: 6.2 – 8.2
- http://cancercontrol.cancer.gov/tcrb/monographs/9/m9_6.PDF

Absorption of Nicotine

- Rate of Absorption
 - Cigarette : fastest route
 - Cigar : slower than cigarettes
 - Spit : slowest rate

http://cancercontrol.cancer.gov/tcrb/monographs/9/m9_6.PDF

How much Nicotine?

- 10mg of nicotine/cigarette
 - 1 to 2 mg of nicotine/cigarette absorbed
- 10 puffs over 5 minutes
- 1 ½ pack/day = 300 hits
- Cigar = up to 1 ½ packs of cigarettes
- Spit = 1 can = 3 packs of cigarettes

<http://www.nida.nih.gov/researchreports/nicotine/nicotine2.html>

When is it Addiction?

Three or more of the following:

- Preoccupation with getting tobacco
- Compulsive use
- Difficulty with controlling intake
- Persistent, even with health problems
- Relapse
- Tolerance
- Withdrawal

References: World Health Organization

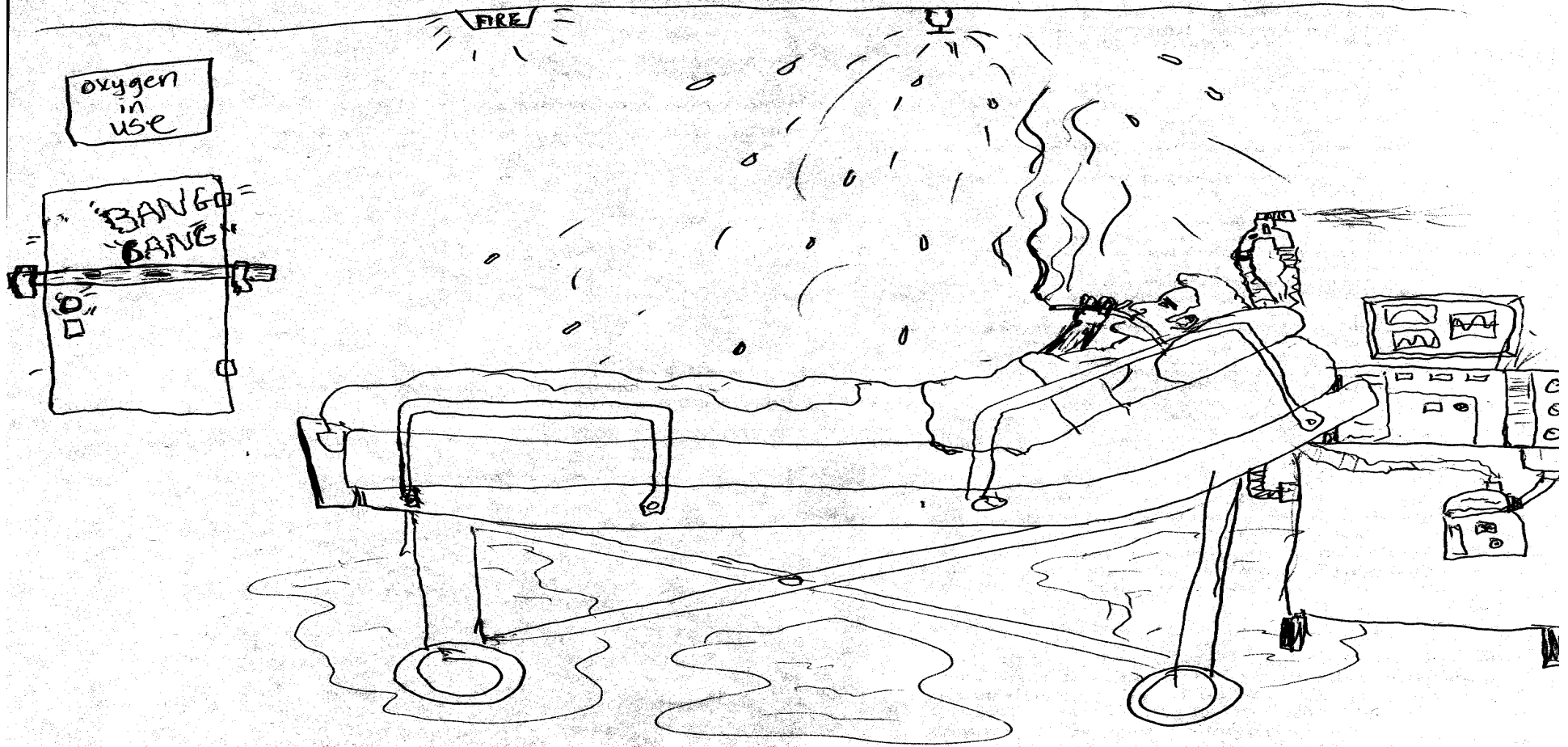
Diagnostic and Statistical Manual - IV (DSM-IV)

How long does it take to become dependent?

- Can be after the first cigarette!

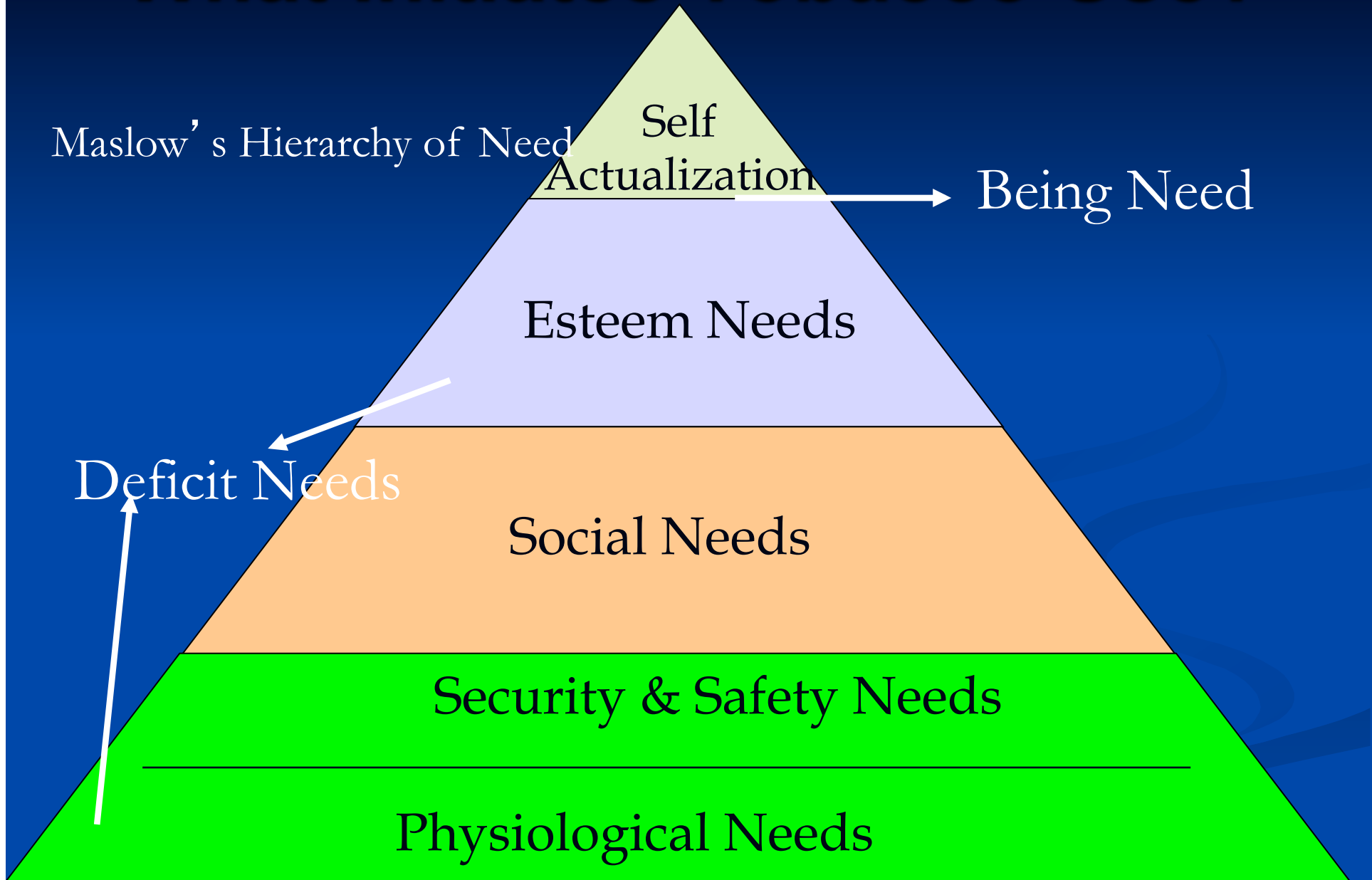
http://cancercontrol.cancer.gov/tcrb/monographs/9/m9_6.PDF

A TRUE ADDICT



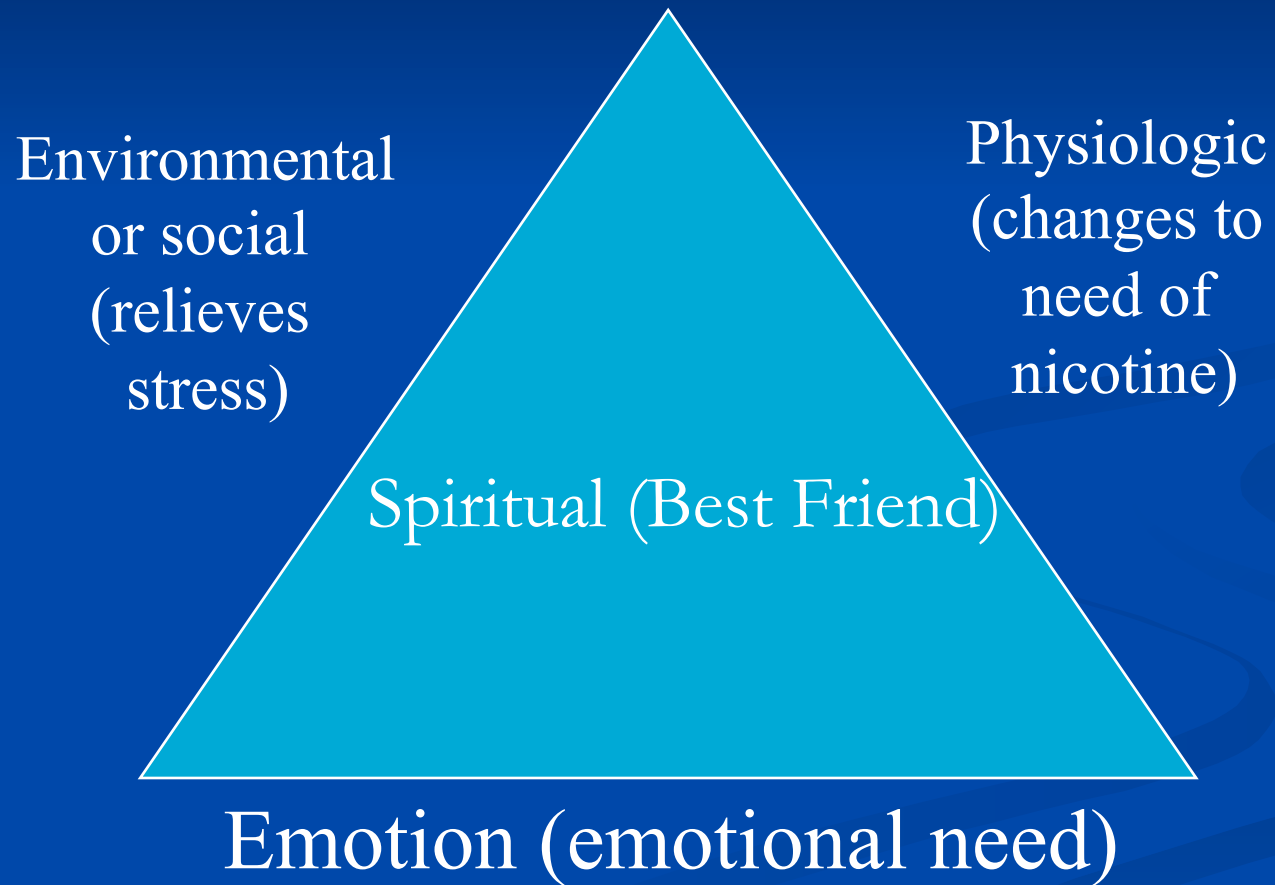
R. Ruffin 12/4/00

What Initiates Tobacco Use?



A. H. Maslow. *A Theory of Human Motivation*. Psychological Review, 50, 370-396. (1943)

Triangle of Addiction



Other Risk Factors for Initiation

1. Children of Moms who smoke regularly
2. Risk of nicotine addiction increased more if smoked during pregnancy
3. Co-Twin (within two years)
4. Same Sex Sibling who smokes
5. Older Sibling who smokes
6. Adolescents more vulnerable to addiction

Eur Addict Res. 2003 Jul;9(3):120-30 Twin Res. 2003 June;6(3):209-17

J Adolesc Health. 2003 Jul;33 (1): 25-30

J Neurosci. 2003 Jun 1;23(11):4712-6

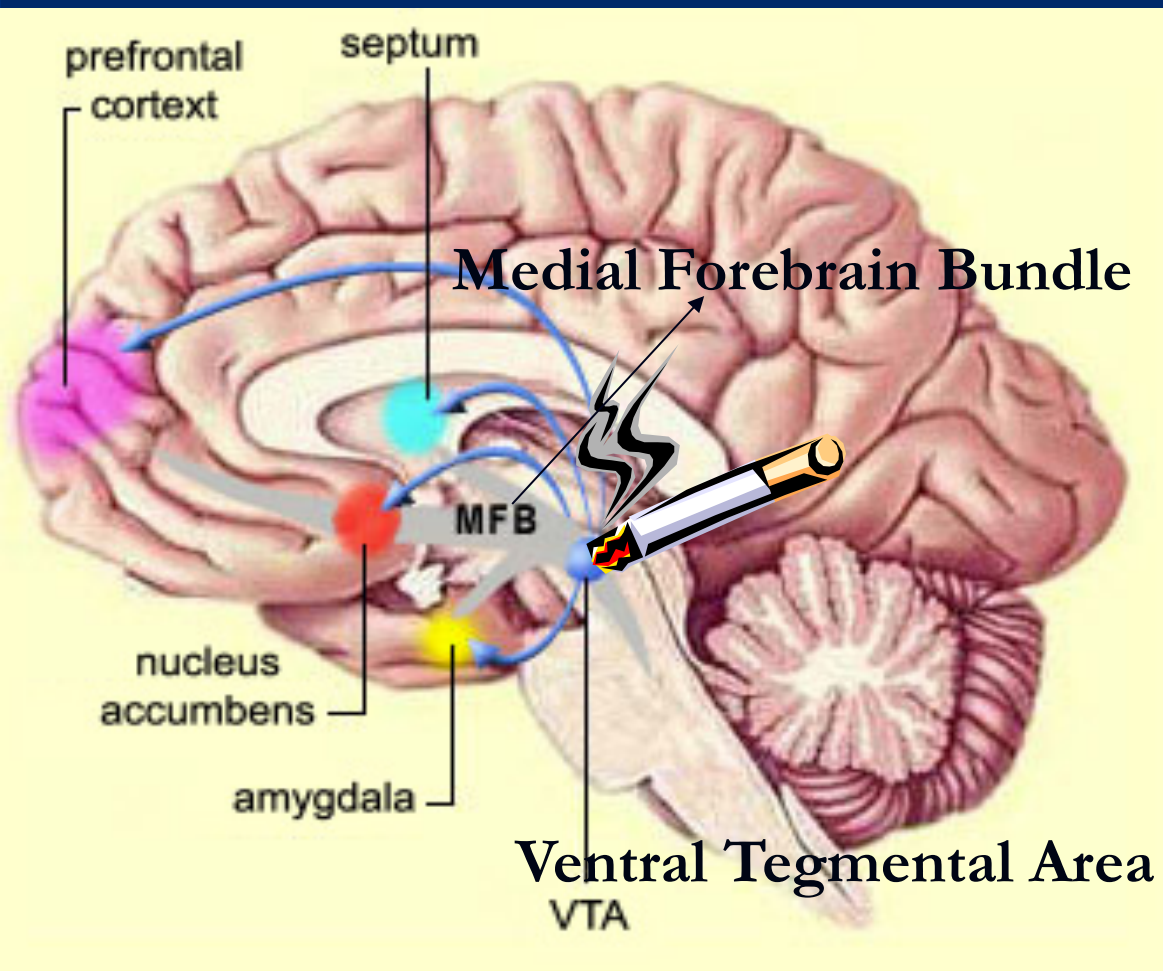
Can School Outcome Predict Smoking Behavior?

- Low grades
- Poor teachers' prognoses
- Early unemployment

Scand J Public Health.2003;31 (3):229-32

Risk Factors for Initiation

Count Down from Ten

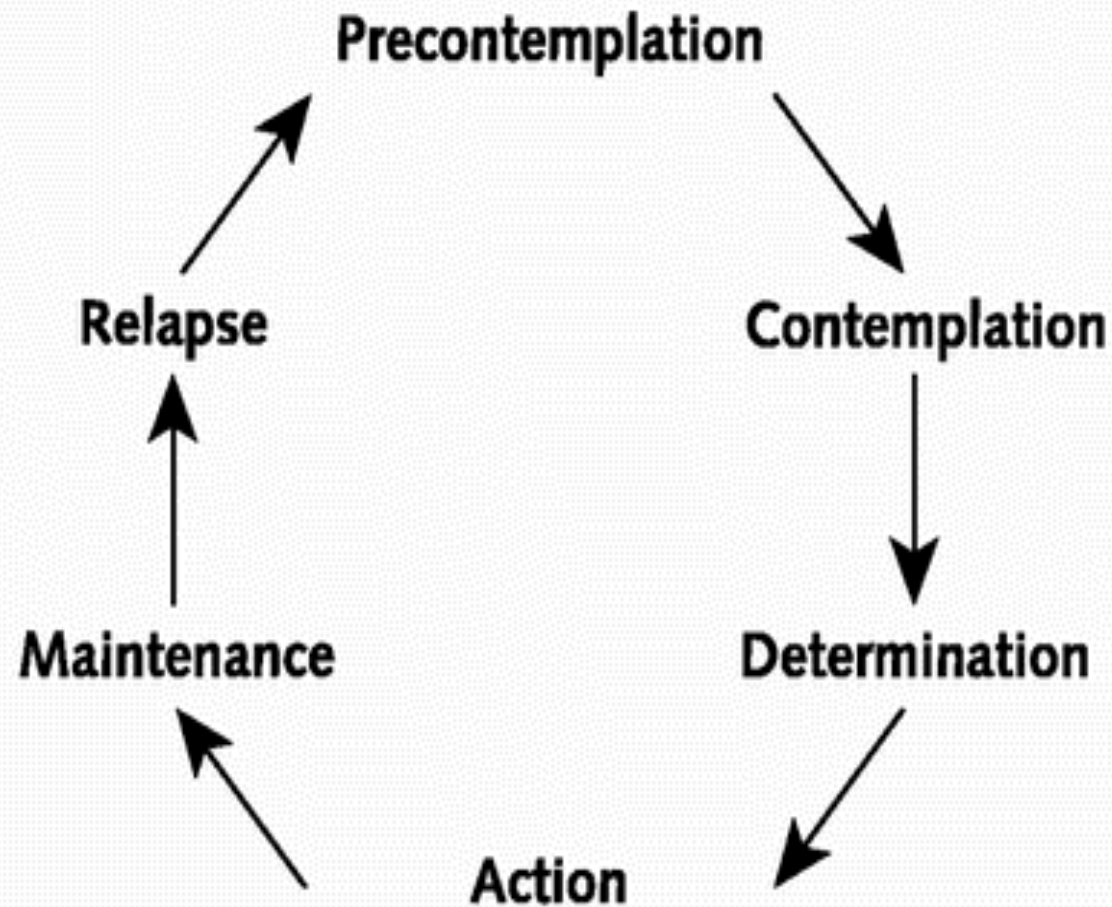


- Dopamine
“I feel good”
- Acetylcholine
- Serotonin
Anti-depressant
- Epinephrine
Adrenal gland

Is Nicotine the Only Chemical Causing the Addiction?

- Marked reduction of Monoamineoxidase (MAO)
 - Enzyme that breaks dopamine down
 - Something other than nicotine causing the change in MAO

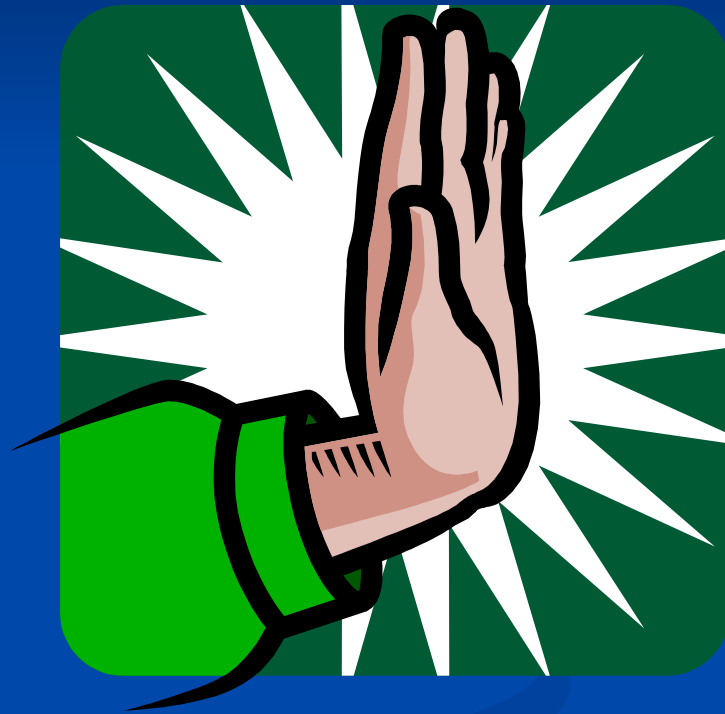
Stages of Change Model



Prochaska, J. & DiClemente, C. (1983). Stages and processes of self-change in smoking: Toward an integrative model of change. *Journal of Consulting and Clinical Psychology*, 51, 390-395.

Pre-Contemplation Stage

- Not ready to quit
- Not interested in changing
- Are defensive
- “I can’t quit”
- “It will not happen to me”
- “I enjoy it to much”



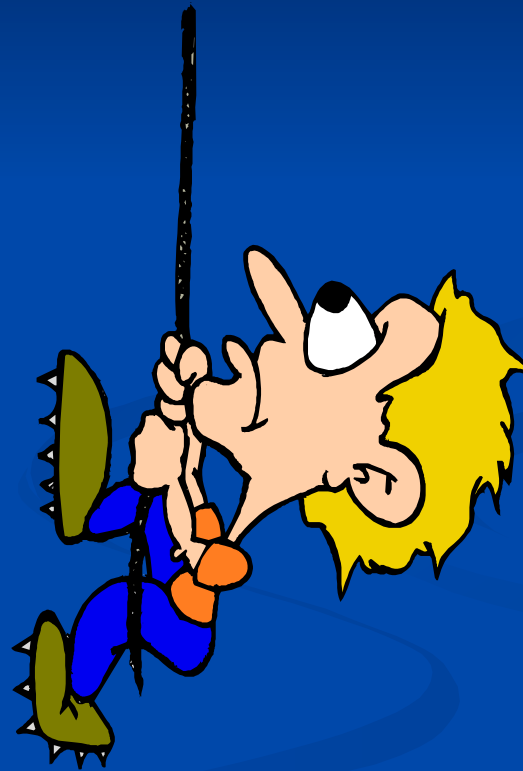
Contemplation & Determination Stages

- Seriously thinking about changing
- Aware of the need to quit
- Taking small steps to quit
- “I know I need to quit”
- “You know, I should quit”
- “I want to quit within the next 30 days”



Action Stage

- Ready for change
- Prepared mentally to change
- “I am going to quit smoking”
- “I want to live to see my grandchildren”
- Attends class or calls a quitline
- Quits smoking
- Last approximately 6 months



DSM-IV Criteria for Nicotine Withdrawal (APA, 1994)

- A. Daily use of nicotine for at least several weeks.
- B. Abrupt cessation of nicotine use, or reduction in the amount of nicotine used, followed within 24 hours by four (or more) of the following signs:
 - (1) dysphoric or depressed mood
 - (2) insomnia
 - (3) irritability, frustration, or anger
 - (4) anxiety
 - (5) difficulty concentrating
 - (6) restlessness
 - (7) decreased heart rate
 - (8) increased appetite or weight gain
- C. The symptoms in Criterion B cause significant distress or impairment in social, occupational, or other important areas of functioning.
- D. The symptoms are not due to a general medical condition and are not better accounted for by another mental disorder.

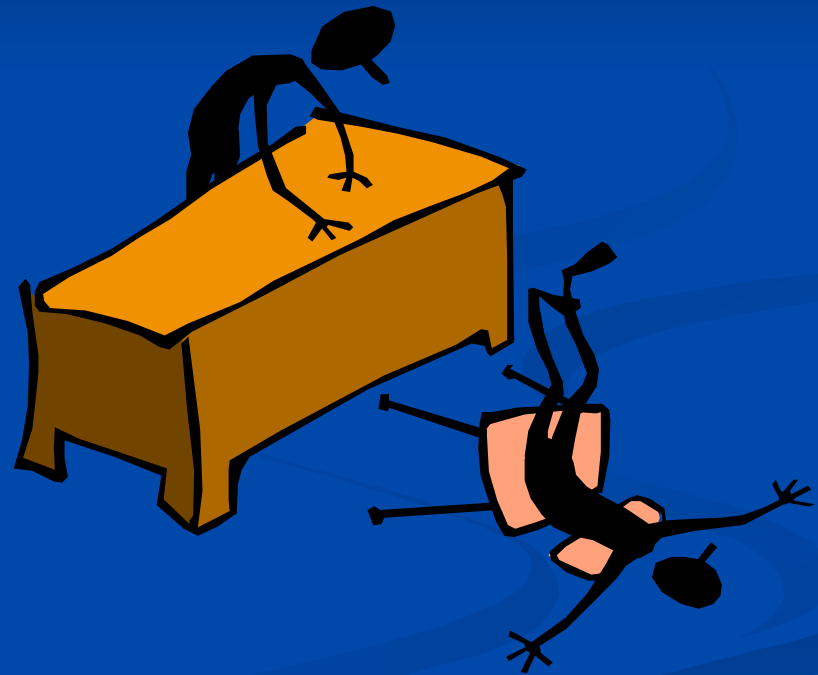
Maintenance Stage

- Has quit smoking
- Prepares for stress
- Handles temptation
- Reminds themselves of what they have accomplished
- Continues to be smoke-free



Relapse Stage

- Most experience
- Sees oneself as a failure
- A normal event
- A person may go through the stages of change several times before complete cessation.

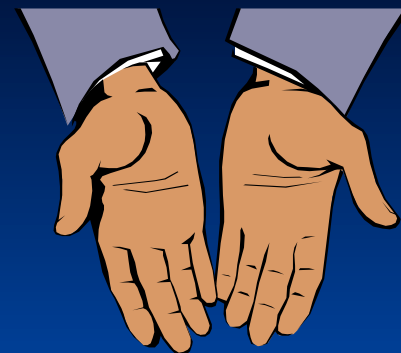


Symptoms of Nicotine Overdose

- upset stomach
- stomach pain
- salivation
- vomiting
- diarrhea
- cold sweat
- bad headaches
- dizziness
- blurred vision
- hearing difficulties
- weakness
- fainting
- mental confusion

Source: TobaccoFreeKids.org

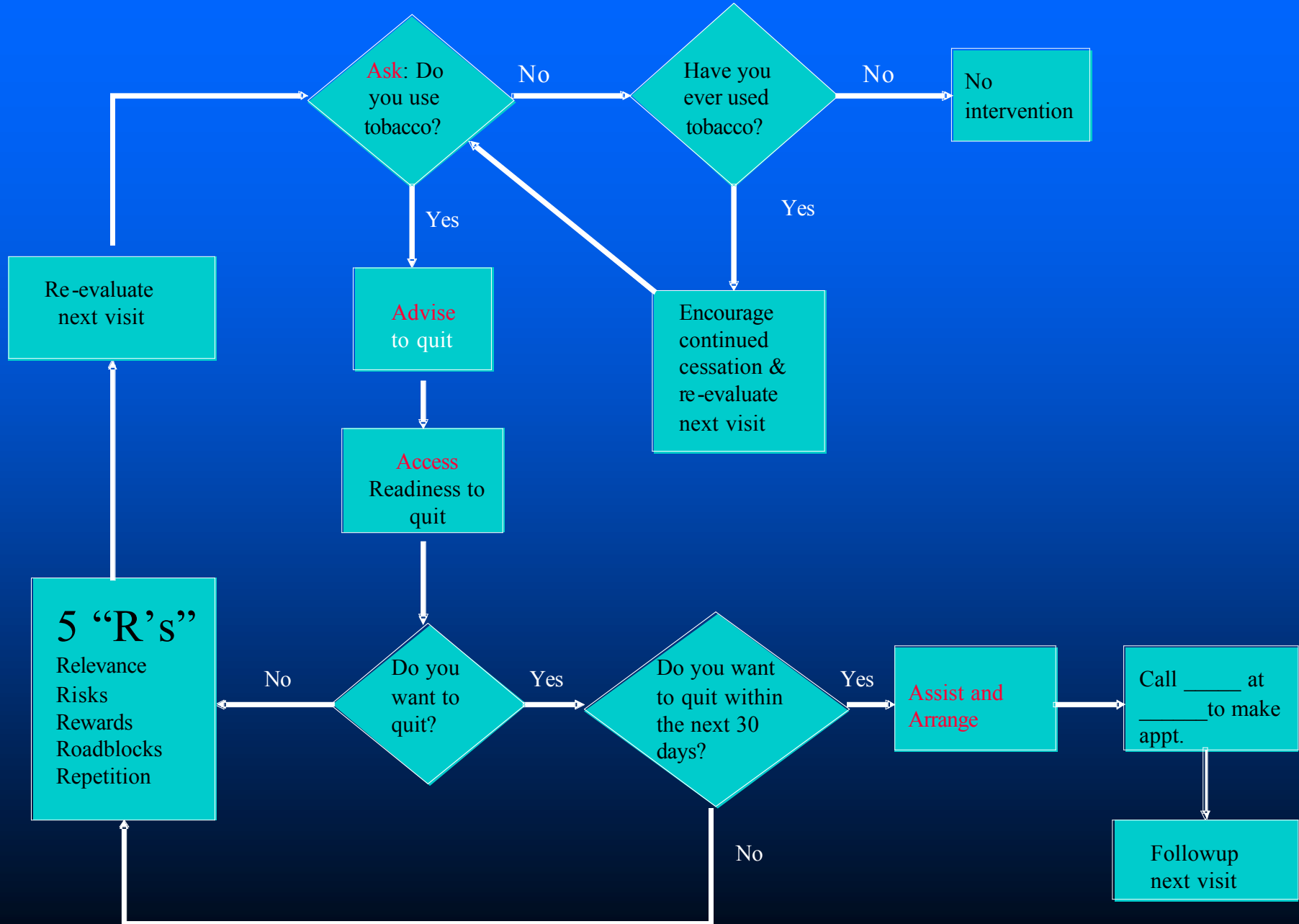
We
Must
Break
The
Cycle



Not a



Tobacco Use Assessment Protocol



The Association for the Treatment of Tobacco Use and Dependence (ATTUD)

■ Goals

- Build and maintain an organization representing providers dedicated to the treatment of tobacco use and dependence.
- Establish standards for core competencies, for training, and for credentialing of tobacco treatment providers.
- Establish multiple forums (e.g., annual meeting, listserv, and journal) for information exchange on best practices, innovations in treatment, and gaps in the empirical base of tobacco treatment.
- Serve as an advocate and voice for tobacco users to promote the awareness and availability of **effective** tobacco treatments.
- Serve as a **reliable and respected resource of evidence-based tobacco use and dependence treatment** for the health care community, regulatory agencies, private foundations, and especially tobacco users.
- Promote the implementation of and increased access to **evidence-based practice** across the spectrum of treatment modalities via policy, funding, and system changes.

The New Medicare Policy

- AARC review
- Who is covered?
- What is covered?
- What is not covered?
- Who can charge for services?
- Billing Codes

Summary

- Be more empathetic
- Understand, it IS all in the head
- It is part of your job
- Advise, Assess, & Assist
- Every patient, every time
- Remember, with open hands and not pointing fingers
- RT as Tobacco Treatment Specialist'

- Do you want to have fun, while reducing stress and improving your cardiovascular health?
- Go Ballroom Dancing! 300 – 400 calories/hour

