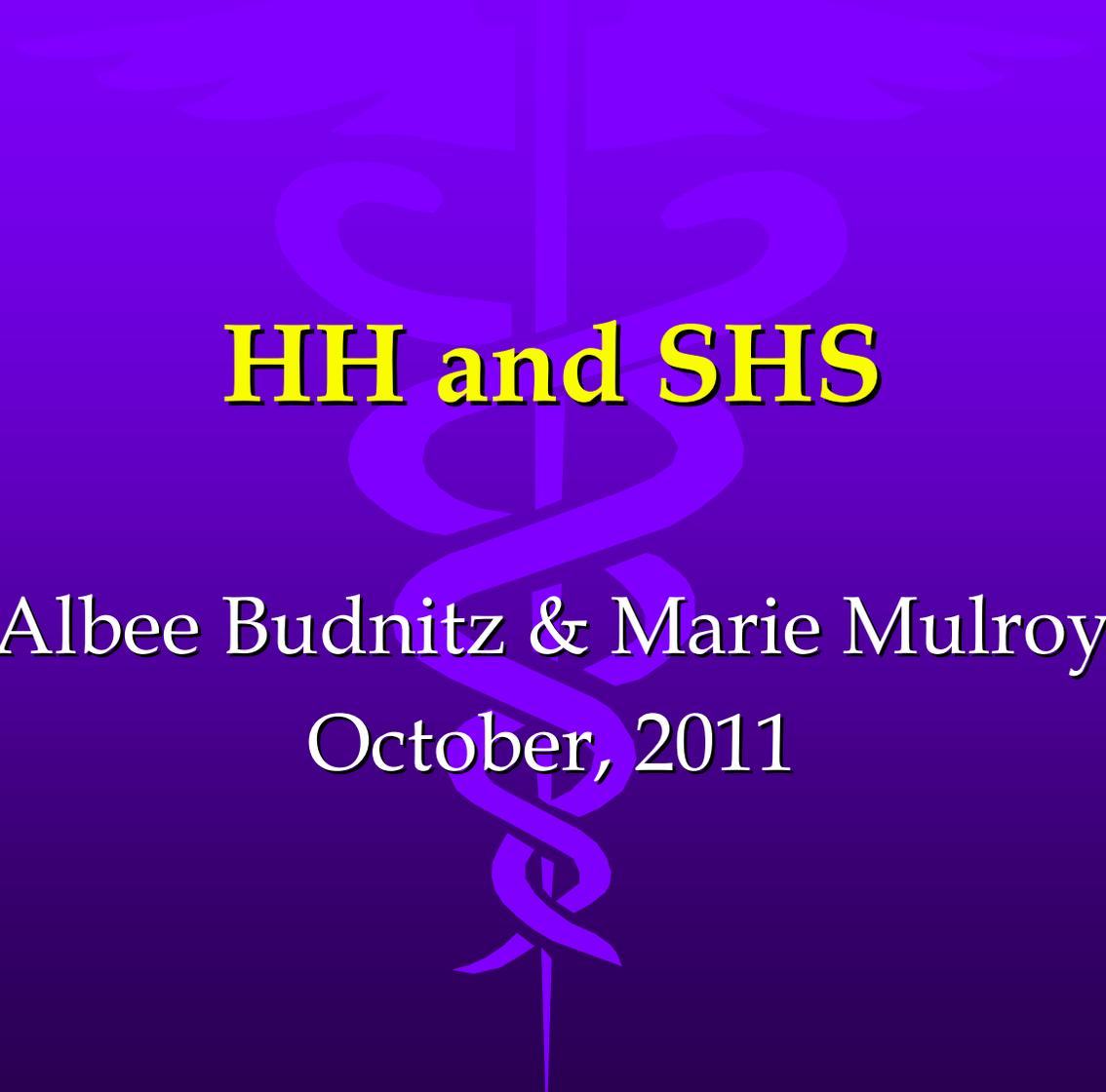


**The real reason dinosaurs became extinct.**



# HH and SHS

Albee Budnitz & Marie Mulroy

October, 2011

# OUTLINE

- Brief tobacco history
- Epidemiology
  - health cost
  - economic cost
- Pediatric Disease (nicotine dependence disorder)
- SHS
- HH & SHS



*"This secondhand smoke is killing me!"*

**“Cigarette smoking is the chief, single avoidable cause of death in our society and the most important public health issue of our time.”**

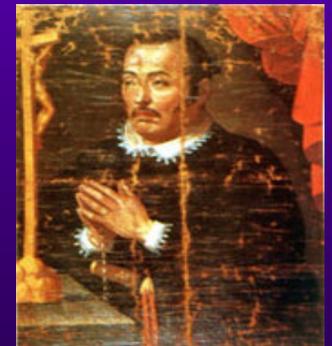
**C. Everett Koop, M.D.  
U.S. Surgeon General, 1981-1989**

# History

- c. 6000 BC: first appearance of tobacco plant in Americas
- c. 1 BC: widespread use of tobacco in Americas (smoking, chewing, hallucinogenic enemas)
- 1492: Columbus given dried tobacco leaves as gift by indigenous Arawaks
- Mid 1500's – popular use of tobacco in Europe
- 1652 – first commercial crop in Virginia by Englishman John Rolfe



Columbus



John Rolfe

# King James

I (of England) VI (of Scotland)

“A Counterblast to Tobacco”

- “Smoking is a custome loathsome to the eye, hateful to the Nose, harmful to the braine, dangerous to the Lungs, and in the black stinking fumes thereof, nearest resembling the horrible Stygian smoke of the pit that is bottomless”
- To his thinking, “...a smoker and non-smoker could not be equally free in the same room...” - 1604

# History

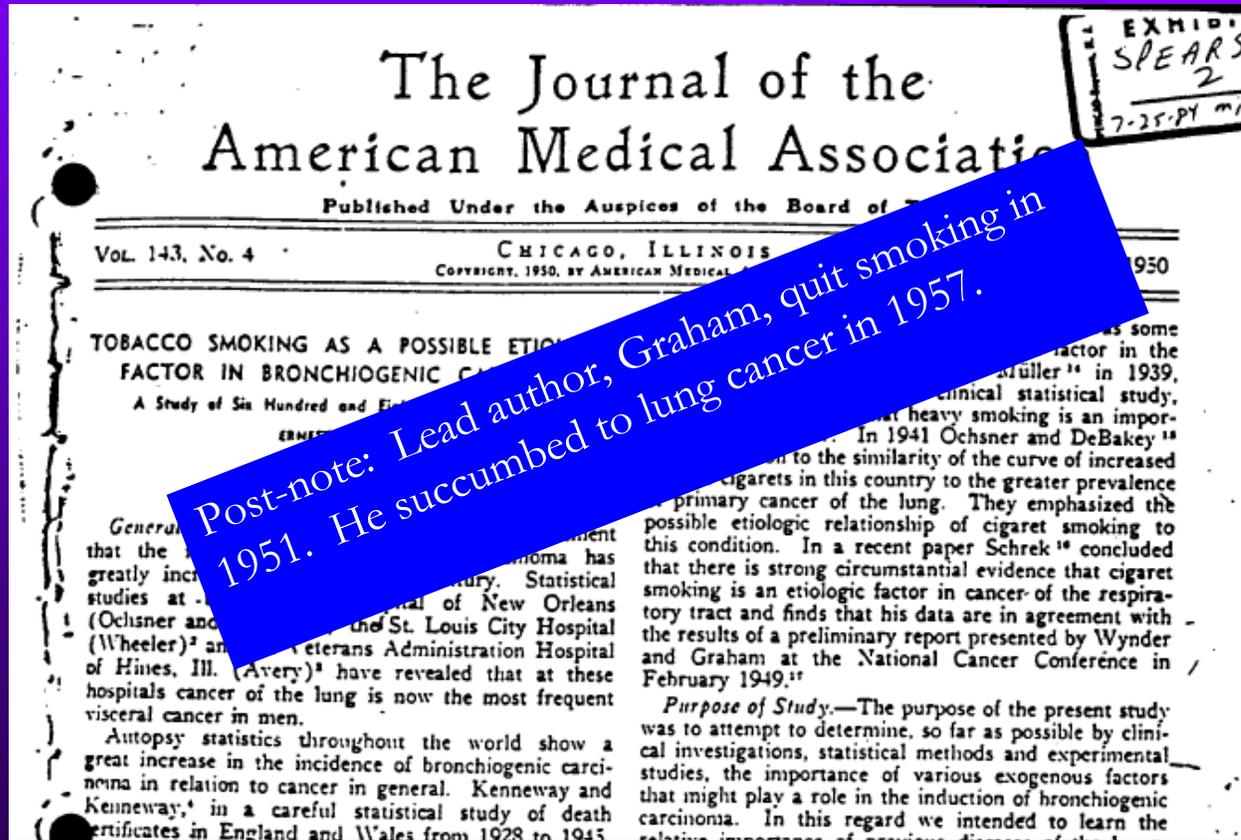
- Early 1800's – cigars become popular
- Post Civil War – popularity of cigarettes
- 1930 – relationship between cigarette smoking and cancer from researchers in Cologne, Germany
- 1940's – widespread dissemination of cigarettes to WWII soldiers



WWII Rations

# History

## Landmark Study of Wynder and Graham in 1950



RR: 13.6!

“Excessive and prolonged use of tobacco, especially cigarettes, seems to be an important factor in the induction of bronchiogenic carcinoma”

JAMA, May 27, 1950

# History

Recent medical researches on the relationship of smoking and lung cancer

## Cancer by the Carton

Condensed from *Christian Herald*

Ray Norr

**F**OR THREE DECADES the medical controversy over the part played by smoking in the rise of bronchiogenic carcinoma, better known as cancer of the lung, has largely been kept from public notice. More than 26 years ago the late Dr. James Ewing, distinguished pathologist and leading spirit in the organization of the American Association for Cancer Research (now the American Cancer Society), pleaded for a public educational campaign.

"One may hardly aim to eliminate the tobacco habit," he wrote in his famous essay on cancer prevention, "but cancer propaganda should emphasize the danger signs that go with it."

No one questions that tobacco smoke irritates the mucous lining of the mouth, nose and throat, or that it aggravates hoarseness, coughing, chronic bronchitis and tonsillitis. It is accepted without argument that smoking is forbidden in cases of gastric and duodenal ulcers, that it interferes with normal digestion; that it contracts the blood vessels,

increases the heart rate, raises the blood pressure. In many instances of heart disease, the first order from the doctor is to cut out smoking immediately.

But what gives grave concern to public-health leaders is that the increase in lung-cancer mortality shows a suspicious parallel to the enormous increase in cigarette consumption (now 2500 cigarettes per year for every human being in the United States).

The latest study, which is published in *The Journal of the American Medical Association* (May 27, 1952), by a group of noted cancer workers headed by Dr. Alton Ochsner, former president of the American Cancer Society and director of the famous Ochsner Clinic in New Orleans, discloses that, during the period 1920 to 1948, deaths from bronchiogenic carcinoma in the United States increased more than ten times, from 1.1 to 11.3 per 100,000 of the population. From 1938 to 1948, lung-cancer deaths increased 144 percent. At the present time

Christian Herald (October, 1952); copyright 1952 by Christian Herald Assn., Inc., 47 E. 19 St., New York 16, N. Y.

7

Reader's Digest 1952

*The*  
Reader's Digest

41ST YEAR

JUNE 1962

An article a day of enduring significance, in condensed permanent booklet form



## Lung Cancer and Cigarettes

### Here Are the Latest Findings

Britain's Royal College of Physicians examines the effect of smoking on health and issues a clear and stern warning

By LOIS MATTON MILLER

**O**UT OF London last March came a chill blast which sobered cigarette smokers and jolted the tobacco industry on both sides of the Atlantic. The venerable 444-year-old Royal College of Physicians, which never deals with trivia or sensationalism, completed an exhaustive study and published a fact-filled report, *Smoking and Health*, "intended to give to doctors and others, evidence on the hazards of smoking so that they may decide what should be done."

The Royal College report stated unequivocally:

- "Cigarette smoking is a cause of lung cancer and bronchitis, and probably contributes to the development of coronary heart disease and various less common diseases."

- "Cigarette smokers have the greatest risk of dying from these diseases, and the risk is greater for the heavier smokers."

- "The many deaths from these diseases present a challenge to medicine; insofar as they are due to smoking they should be preventable."

- "The harmful effects of cigarette smoking might be reduced by efficient filters, by leaving longer

45

Reader's Digest 1962

# History

## 1964 Surgeon General's Report

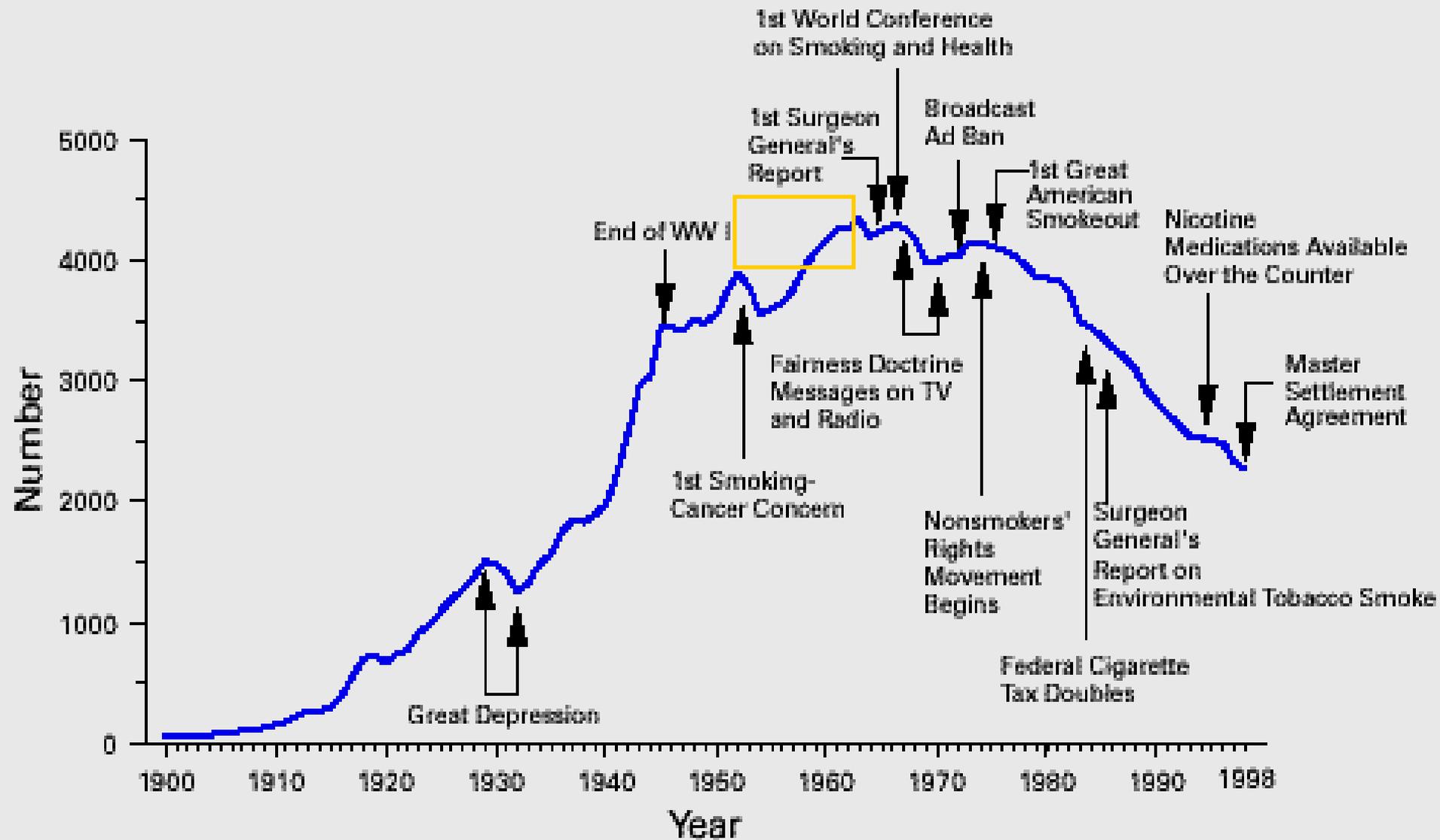
### **SMOKING *and* HEALTH**

**REPORT OF THE ADVISORY COMMITTEE  
TO THE SURGEON GENERAL  
OF THE PUBLIC HEALTH SERVICE**



**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
Public Health Service**

**FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998**



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

# Why is it even relevant today to talk about what FDA did in the 1990s?

- Marketplace today
- New generation of products...same old intent
- It's all about the nicotine
- Willing to part with \$246 billion

# What did FDA learn from its two year investigation?

- Sources of information
  - Confidential informants
  - The companies themselves
  - **Internal documents**

## Brown and Williamson (1963)

- “Nicotine is addictive. We are, then, in the business of selling nicotine – an addictive drug.”



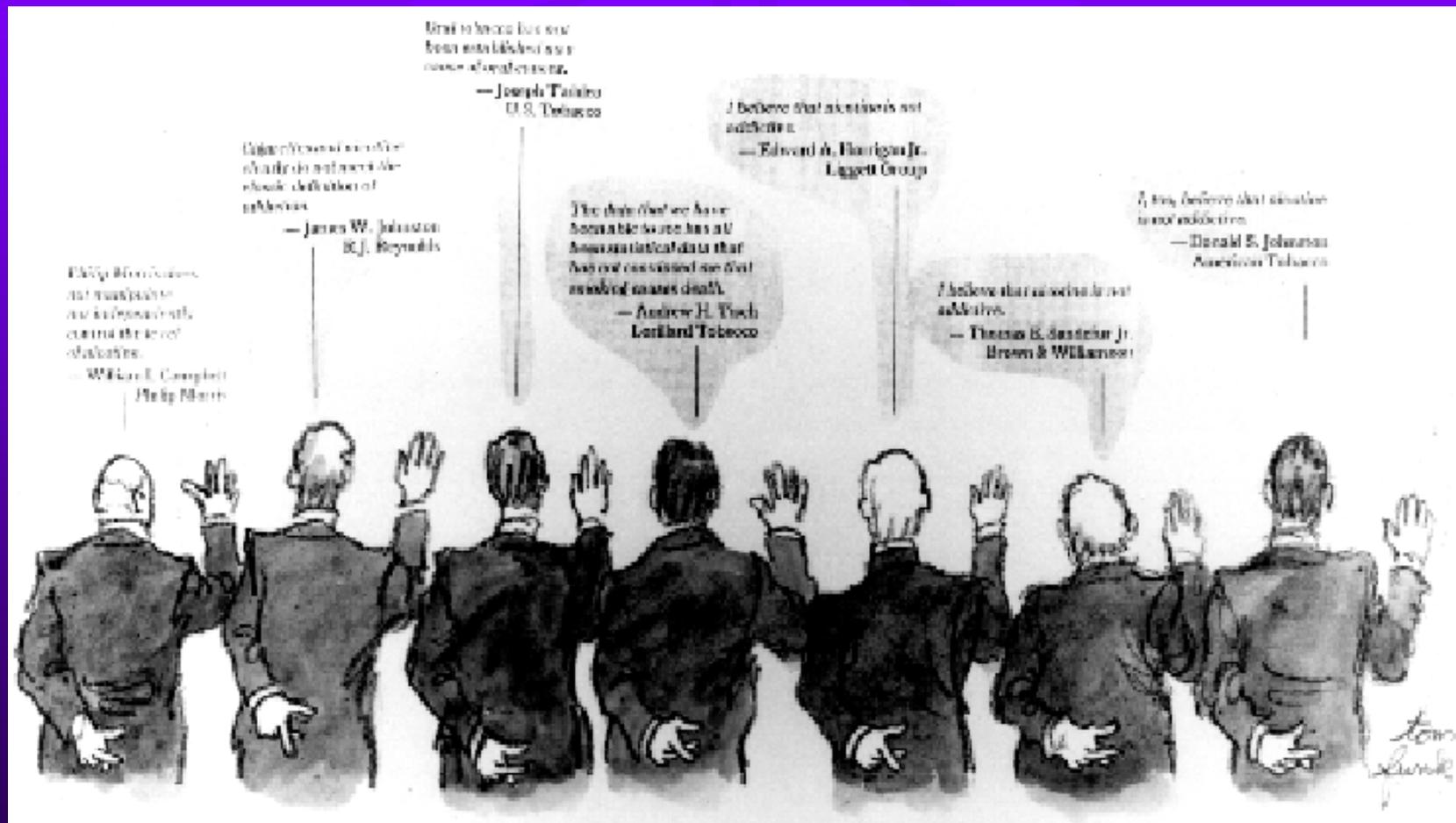
# R. J. Reynolds (1972)

- “In a sense, the tobacco industry may be thought of as being a specialized, highly ritualized, and stylized segment of the pharmaceutical industry. Tobacco products uniquely contain and deliver nicotine, a potent drug with a variety of physiological effects.”

# British American Tobacco (1980)

- “BAT should learn to look at itself as a drug company rather than as a tobacco company.”

# Honest and Truthful Tobacco Executives Under Oath? (1990's)



# 1998

Dave Barry on North Carolina's decision to use three-quarters of its annual MSA payments to improve tobacco production and marketing

Like "using war-on-terrorism funds to buy flying lessons for al-Qaeda."

# Key Provisions in the New Law

Family Smoking Prevention  
and Tobacco Control Act

June 22, 2009

**WARNING:  
Tobacco  
smoke can  
harm your  
children.**



**Health warnings for U.S. Food and Drug Administration proposed regulation  
"Required Warnings for Cigarette Packages and Advertisements"**



**WARNING: Tobacco smoke causes fatal lung disease in nonsmokers.**

Health warnings for U.S. Food and Drug Administration proposed regulation  
"Required Warnings for Cigarette Packages and Advertisements"

## HISTORY

- 1960's: 44% population smoked
- Smoking was viewed as a habit
- No scientific data for tobacco treatment
- Tobacco dependence not addressed within health care delivery
- 1996: "Smoking Cessation Clinical Practice Guideline"
- 2000: PHS Clinical Practice Guidelines "Treating Tobacco Use and Dependence"
- 2002 JCAHO requirement to use evidence-based tobacco treatments for patients presenting with MI, CAP, CHF
- May 2008: Release of updated PHS Clinical Practice Guidelines "Treating Tobacco Use and Dependence"

**1-800- QUIT – NOW : Resource Center**

# Indonesian Tsunami 2004



# 180,000 Deaths



# Hurricane Katrina



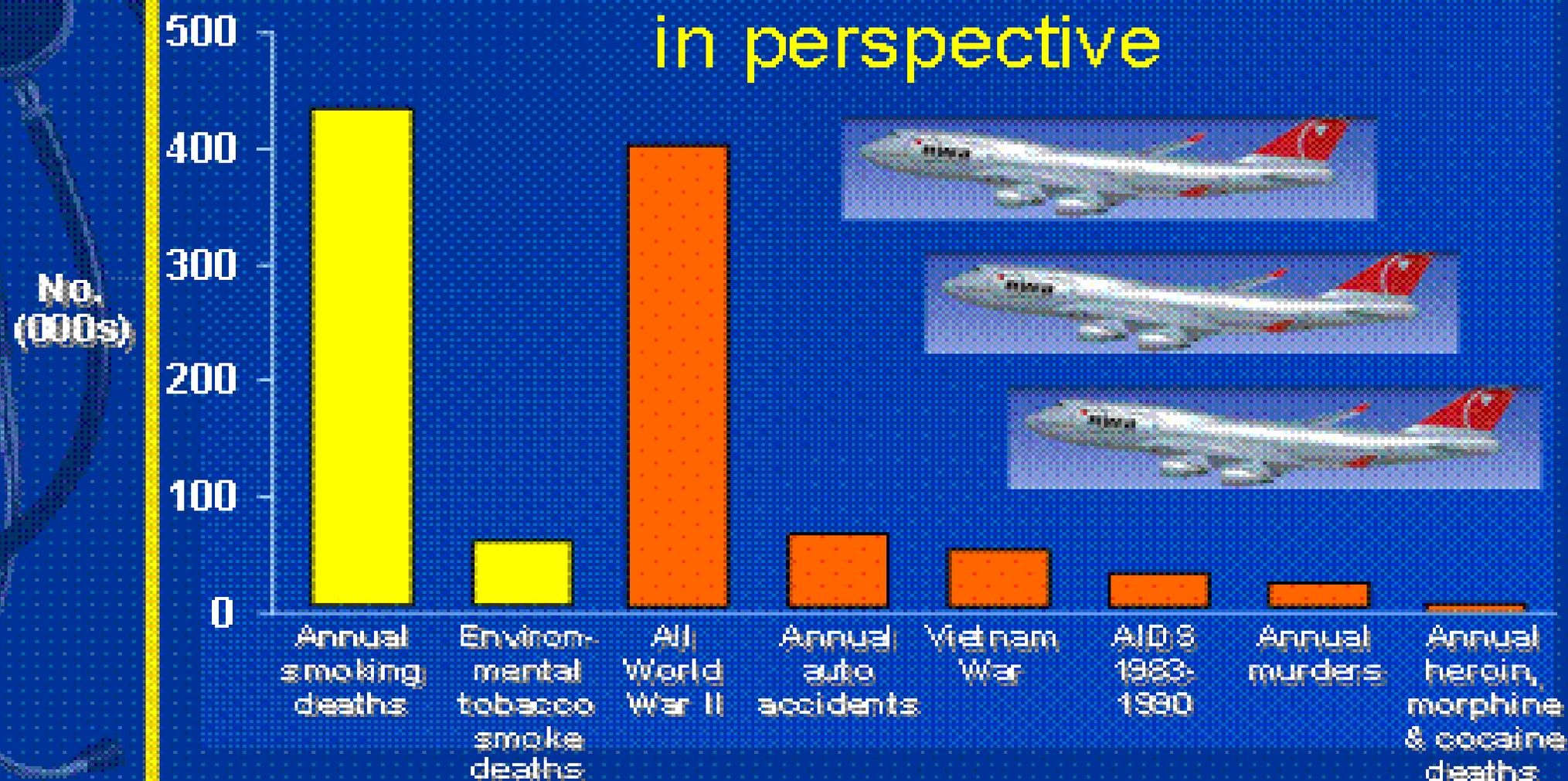
1300+ Dead



# A Deadly Product in the USA

- 400,000 + annual deaths by users
- 53,000 annual deaths by those exposed but not directly using
- Causes more deaths than alcohol, handguns, AIDS, auto accidents, illegal drugs, and suicides combined

# The cigarette death epidemic in perspective



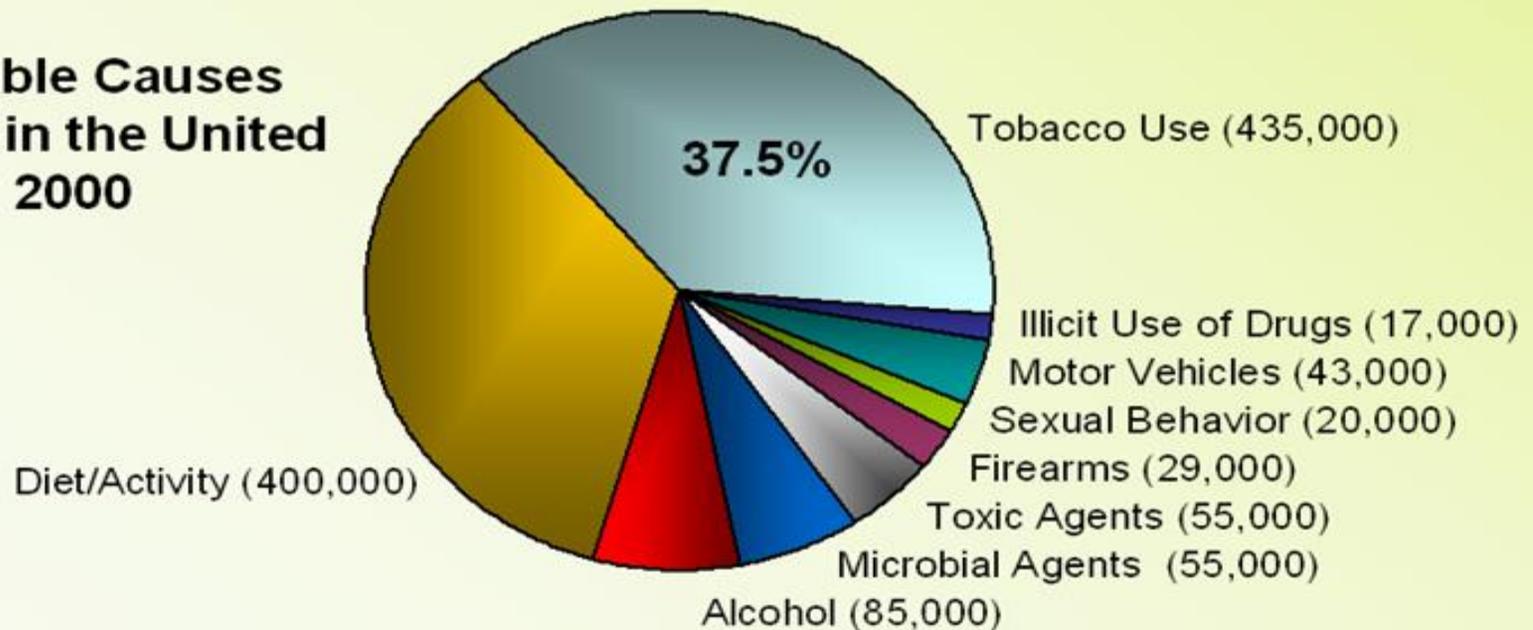
American Academy  
of Family Physicians

Ask and Act

# Tobacco Use Contributes to Preventable Causes of Death

- 18% of total deaths and 37.5% of preventable causes of death in the United States are tobacco-related
- According to the US Department of Health and Human Services, 1/3 of all tobacco users in this country will die prematurely from tobacco-related diseases, shortening their own life span by an average of 13.2 years in men and 14.5 years in women

## Preventable Causes of Death in the United States in 2000



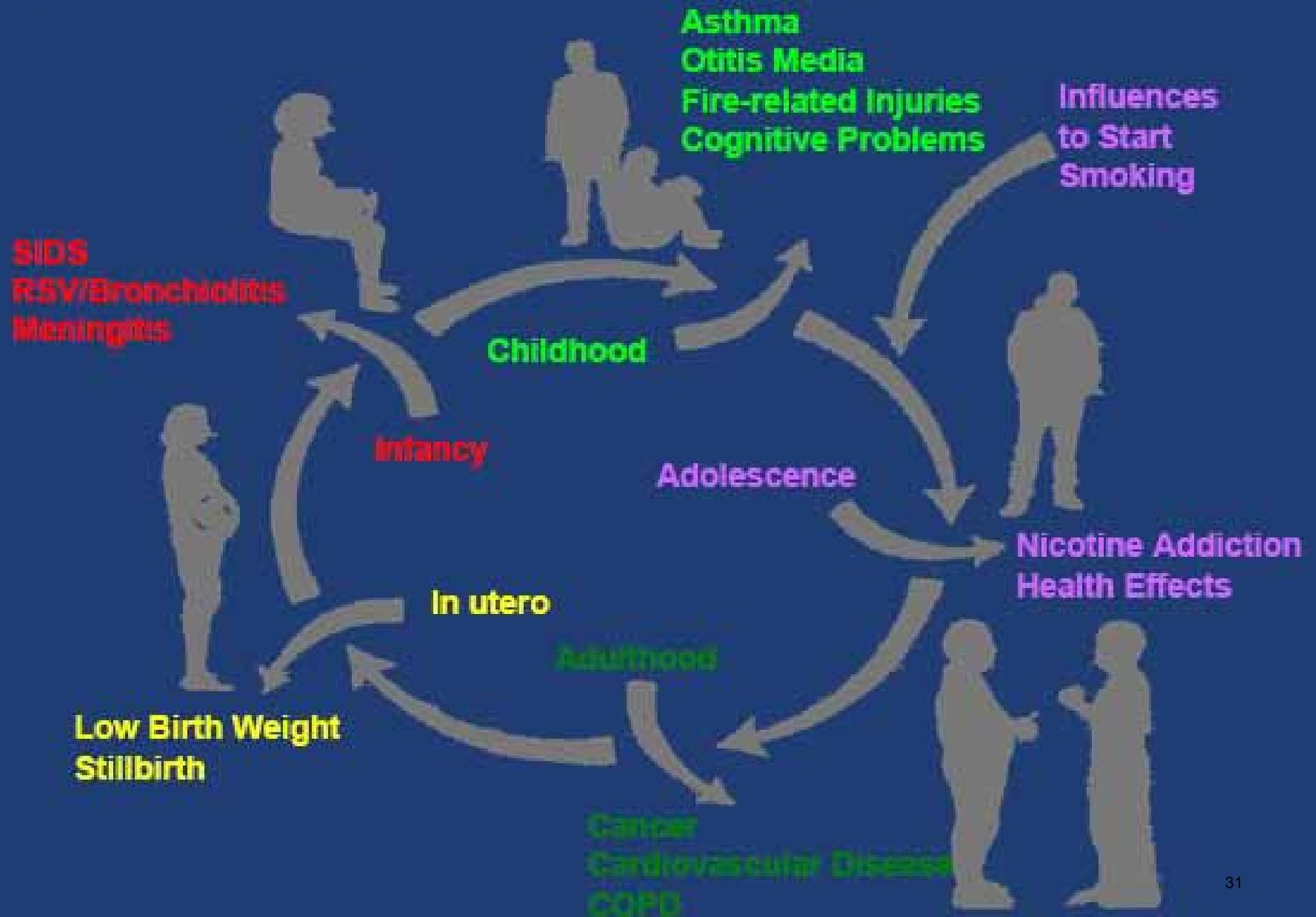
1. Adapted from Mokdad AH et al. *JAMA*. 2004;291:1238-1245.

2. Fiore MC et al. *U.S. DHHS, U.S. Public Health Service*, 2000. 3. CDC. *MMWR*. 2004;53:427-431.

# More Epidemiology

- Remains the #1 preventable cause of death
- Cessation reduces health risk – even after chronic disease develops
- Nicotine addiction is a chronic disease that deserves treatment
- Onset ages 7-9; addiction age 14!
- 40% succeed with best treatment
- Only 20% of those trying to quit seek help

# The Life Cycle Effects of Smoking



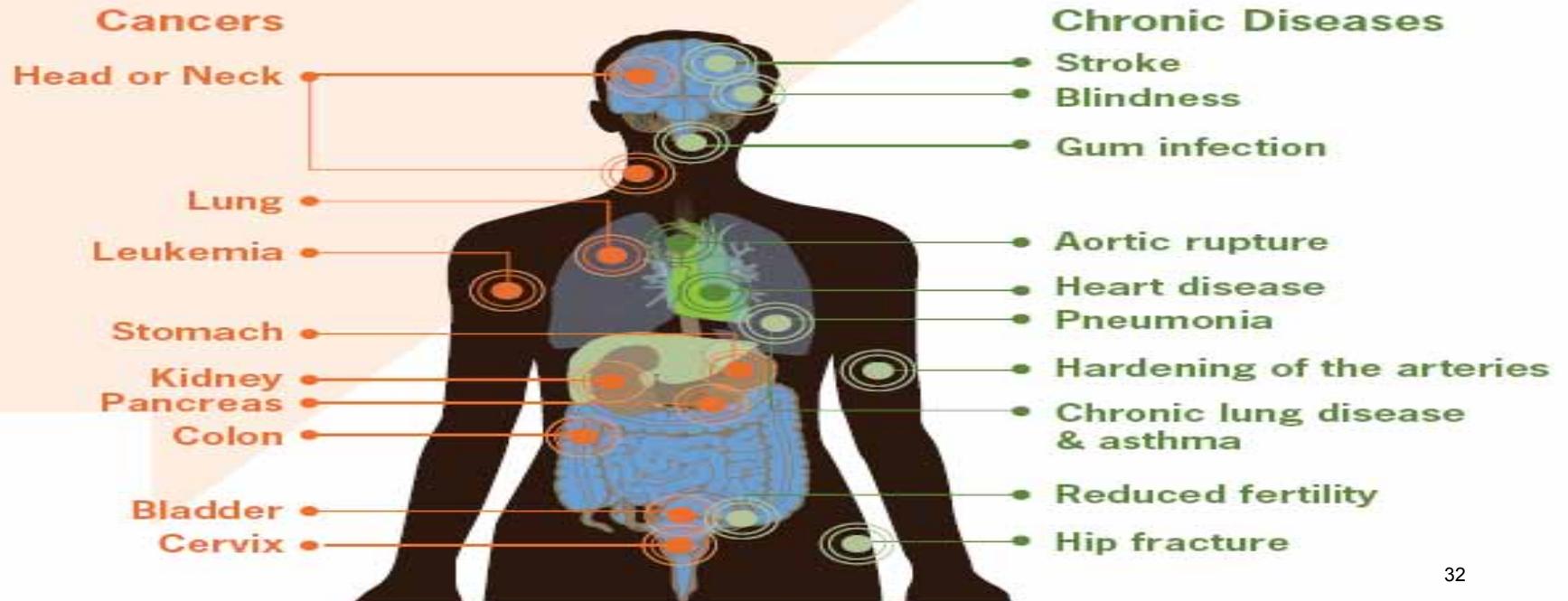
## Smoking in the US needs to be reduced.

- ◇ About 1 in 2 adults who continue to smoke cigarettes will die from smoking-related causes.
- ◇ Health reform is expected to help increase smokers' access to services and treatments that help people quit. This could help more smokers quit and may result in fewer adult smokers in the US.

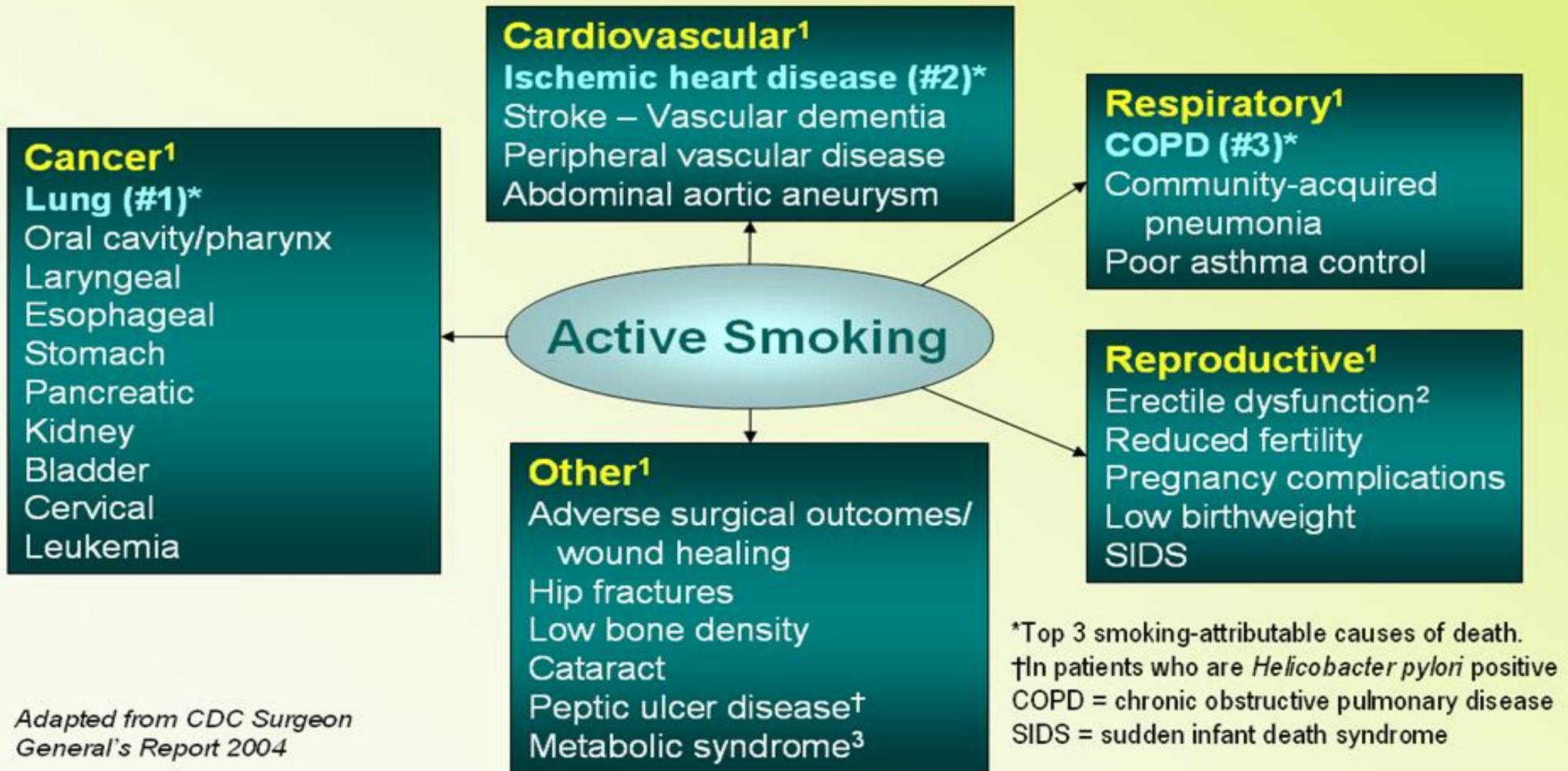
- ◇ Medicare now covers support for quitting services for smokers.
- ◇ By 2015, an estimated 5 million fewer people would smoke if all states funded their tobacco control programs at CDC-recommended levels. States such as Maine, New York, and Washington have recently seen youth smoking go down 45% to 60% with sustained comprehensive statewide programs.

# Risks from Smoking

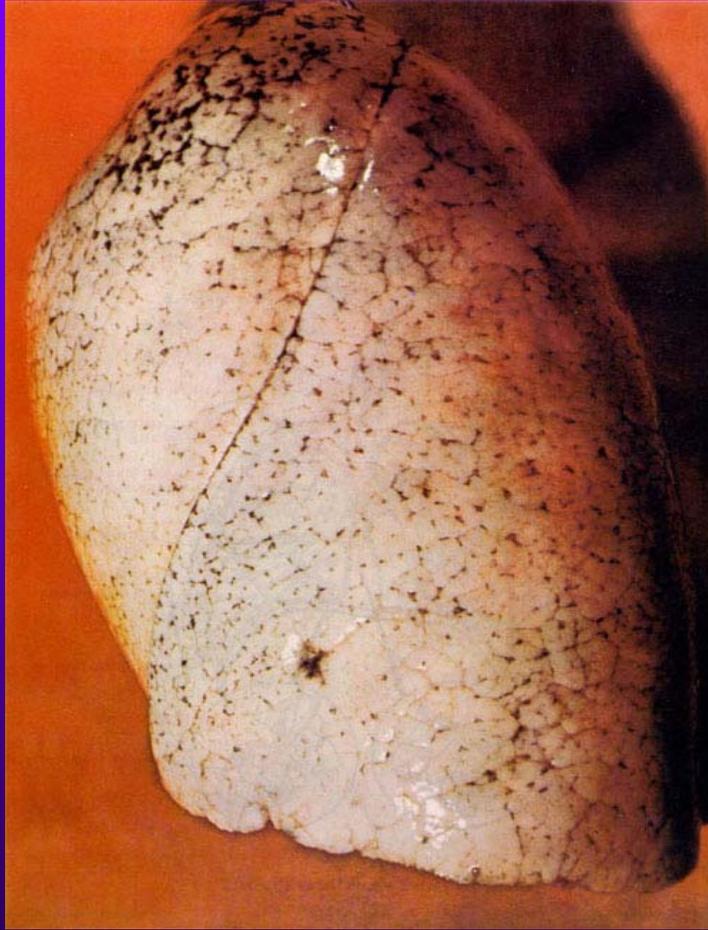
Smoking can damage every part of the body



# Smoking is a Risk Factor Across an Array of Diseases



# Smoking & Respiratory Disease



# 30<sup>th</sup> Surgeon General Report on SMOKING, 2010

- Science behind how causes disease
- Even ONE cigarette can cause immediate and direct harm
- Now > 7000 combustion products
- Now > 70 human carcinogens
- 4000/1000 kids daily :: 1/2 die early
- > 1200 die daily
- 20% rate unchanged since 2004

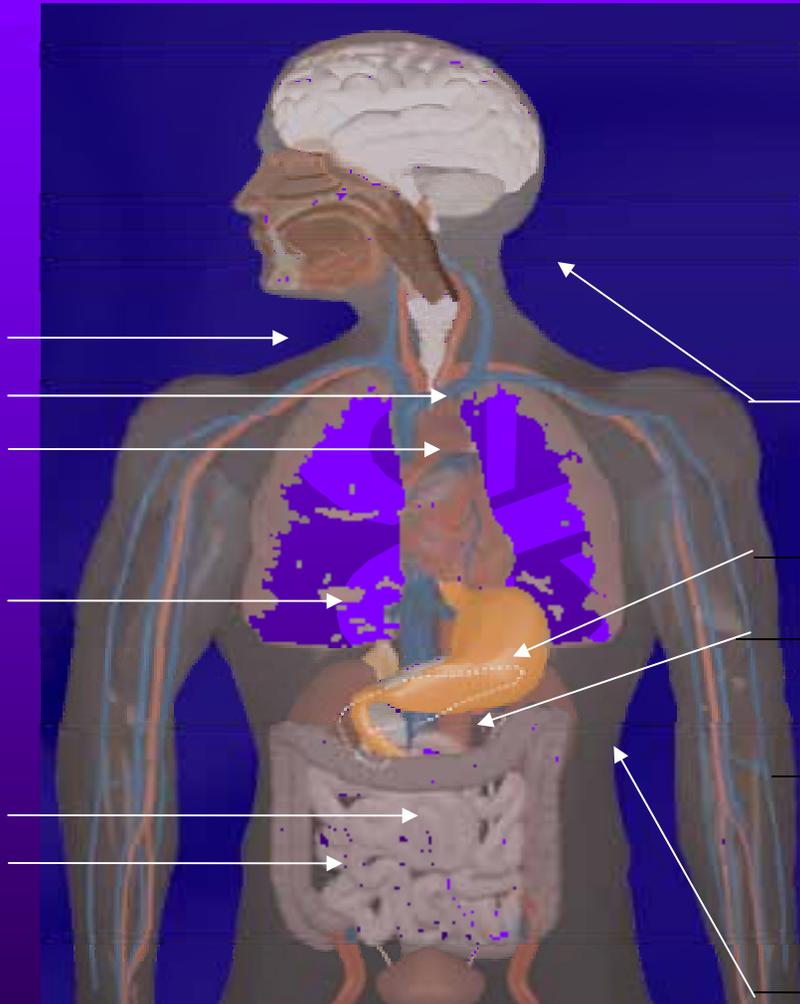
# What's In A Cigarette?

- Acetone (nail polish remover)
- Ammonia (floor cleaner)
- Arsenic (poison)
- Butane (cigarette lighter fluid)
- Cadmium (rechargeable batteries)
- Carbon Monoxide (car exhaust)
- DDT (insecticide)
- Formaldehyde (preserver)
- Hydrogen cyanide (gas chamber)
- Naphthalene (mothballs)
- Hexamine (barbecue lighter)

# Diseases Caused by Smoking

## Cancers

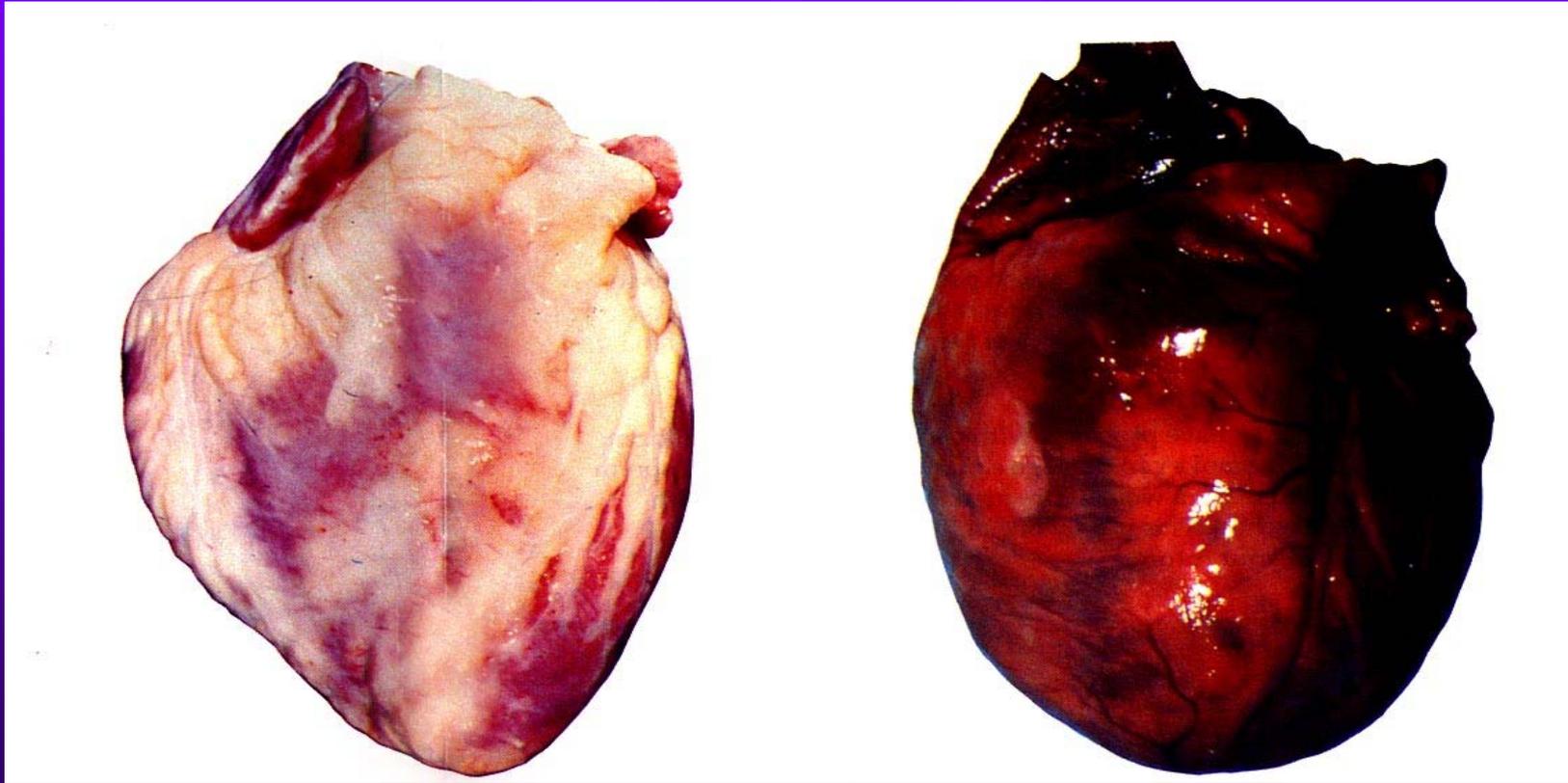
Oral pharynx  
Larynx  
Esophagus  
Leukemia  
Lung  
  
Pancreas  
Kidney &  
Ureter  
Bladder



## Chronic Diseases

Stroke  
  
Coronary heart disease  
Aortic aneurysm  
Atherosclerotic peripheral  
vascular disease  
  
Chronic obstructive  
pulmonary disease (COPD)

# Smoking & Heart Disease





# Smoking Is the Single Most Preventable Cause of Death and Disease

---

- Smoking is the major risk factor for lung cancer and chronic obstructive pulmonary disease (COPD) and is a major risk factor for heart disease
- For every one person who dies from a smoking-attributed disease, there are another 20 people suffering from at least one serious smoking-related illness

# Cost Consequences of Smoking: USA

Direct and Indirect total as of 2007

> \$190 billion

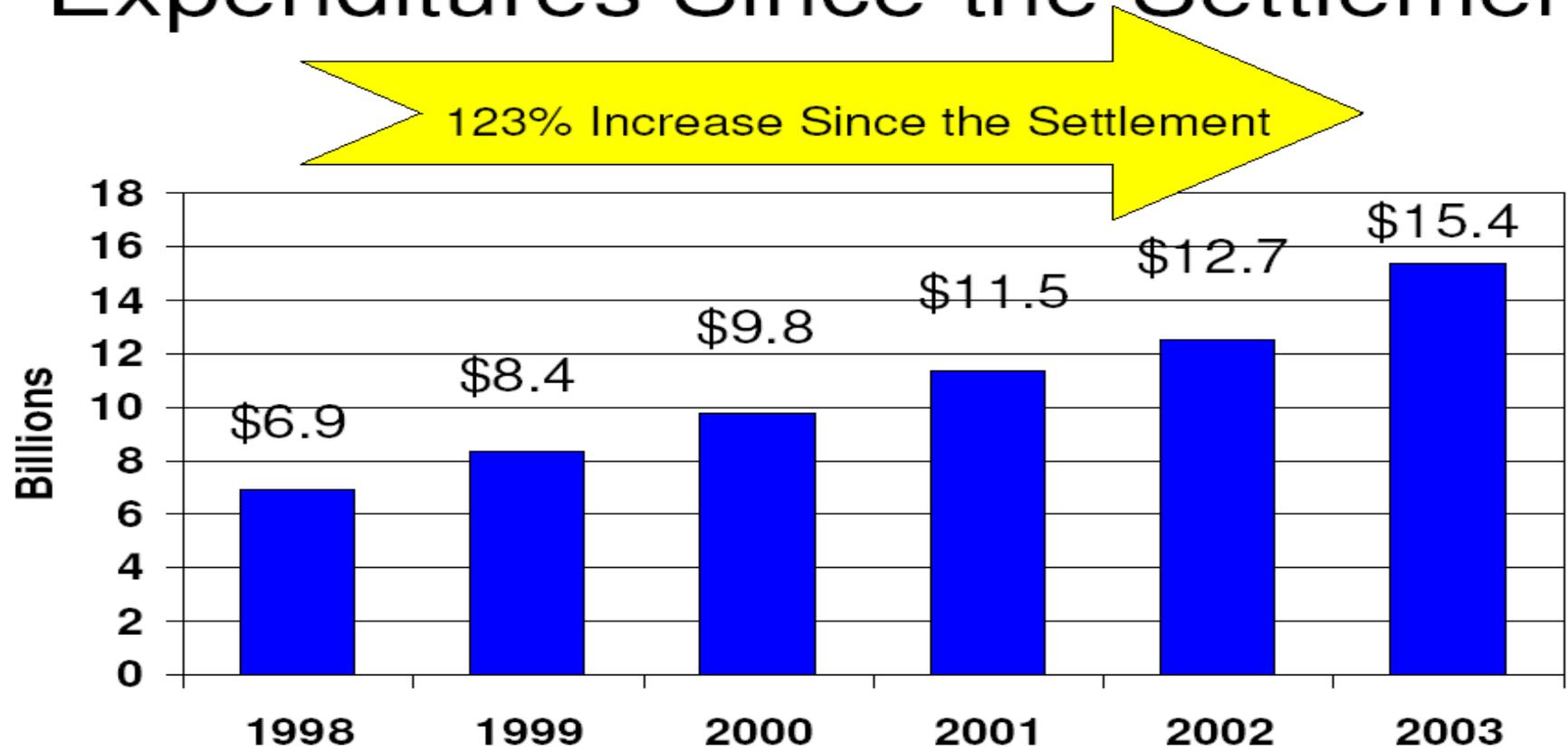
(CDC/MMWR, 2008)

- \$1800/year/smoker/direct cost
- >\$2500/year/smoker/productivity

# Burden of Smoking on Employers

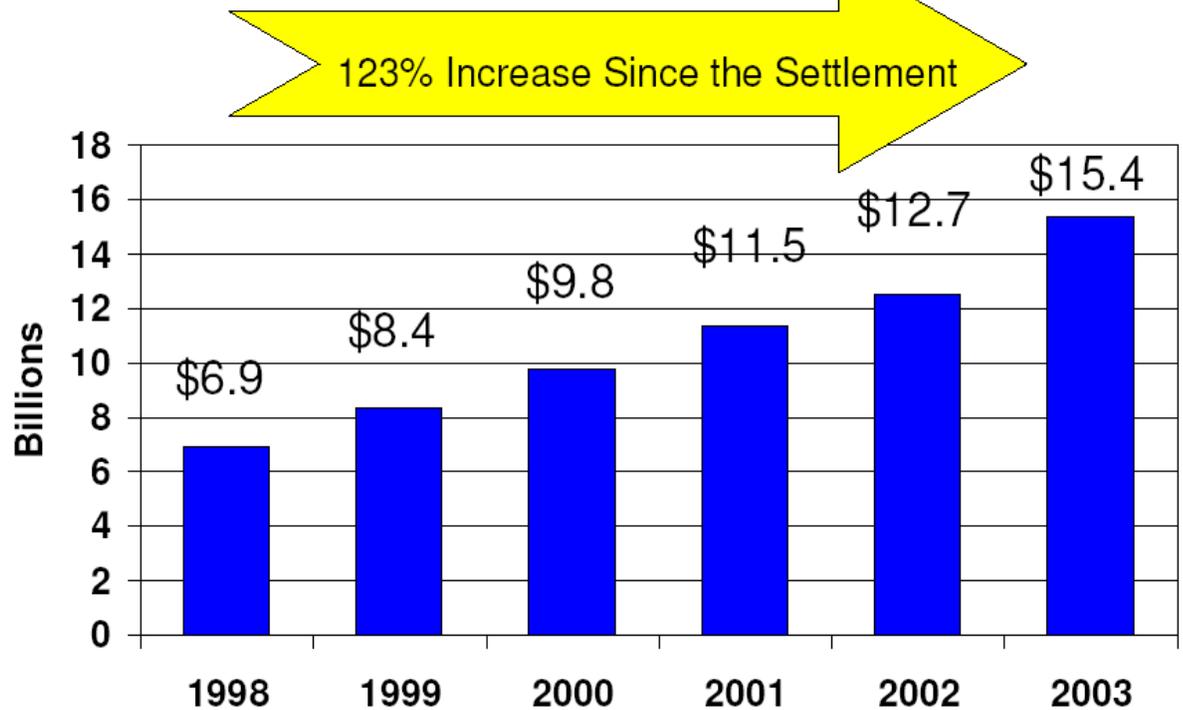
- Smokers absent up to 73.5% more often than nonsmokers
- Smokers average 6 additional healthcare days per year and their dependents 4 additional healthcare days per year
- Smokers spend 8% or more work time spent on smoking-related activities

# U.S. Tobacco Industry Marketing Expenditures Since the Settlement



Source: A Broken Promise to our Kids: The 1998 State Tobacco Settlement 7 Years Later. Publication of the AHA, ALA, CFTFK, and ACS. November 30, 2005

# U.S. Tobacco Industry Marketing Expenditures Since the Settlement



Source: A Broken Promise to our Kids: The 1998 State Tobacco Settlement 7 Years Later. Publication of the AHA, ALA, CFTFK, and ACS. November 30, 2005



# JOBS CREATED BY THE TOBACCO INDUSTRY...



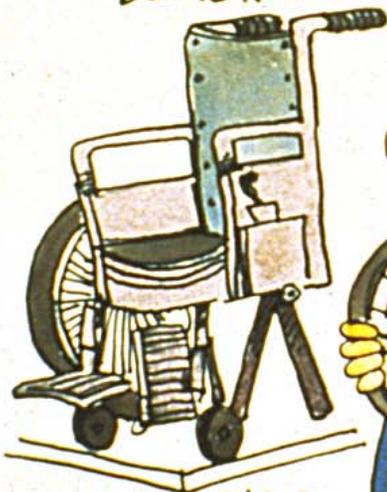
DOCTOR



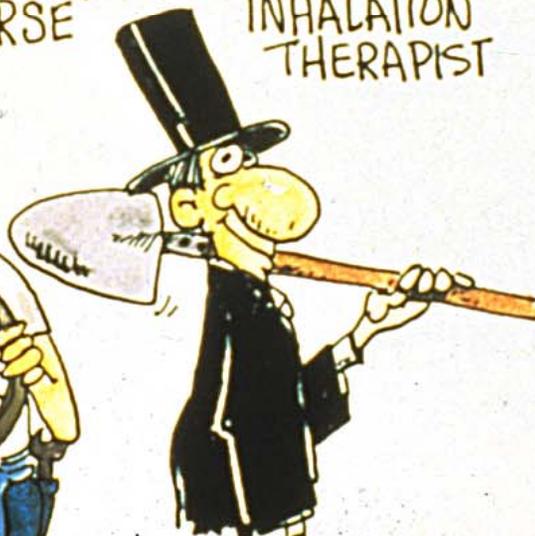
NURSE



INHALATION  
THERAPIST



WHEEL CHAIR  
INDUSTRY



MORTICIAN

HOSPITALS  
START

# Cost Consequences of Smoking: NH

- \$564 million/year on tobacco related disease
- \$405 million/year on lost productivity
- \$115 million/year on Medicaid spending
- \$635/household/year, every household, to cover these costs
  
- \$35-50 million/year to the state from tobacco MSA, since 1998 for 25 years
  
- < \$20 million/year for comprehensive CDC TPCP
  
- \$0 spent on tobacco use reduction since 2003
  
- > \$182 yearly state tobacco revenue (taxes, MSA,2007)
  
- First and ONLY state in 40 years to reduce tobacco tax (user fee), 2011

**YOUR  
MONEY  
OR  
YOUR LIFE.**



**[ CIGARETTES TAKE BOTH. ]**

**It's time we made  
smoking history.**

# A PEDIATRIC Disease

- Age of onset,  
7-9 y/o
- Age of addiction,  
14 y/o



# Why?



REPLACEMENT SMOKER

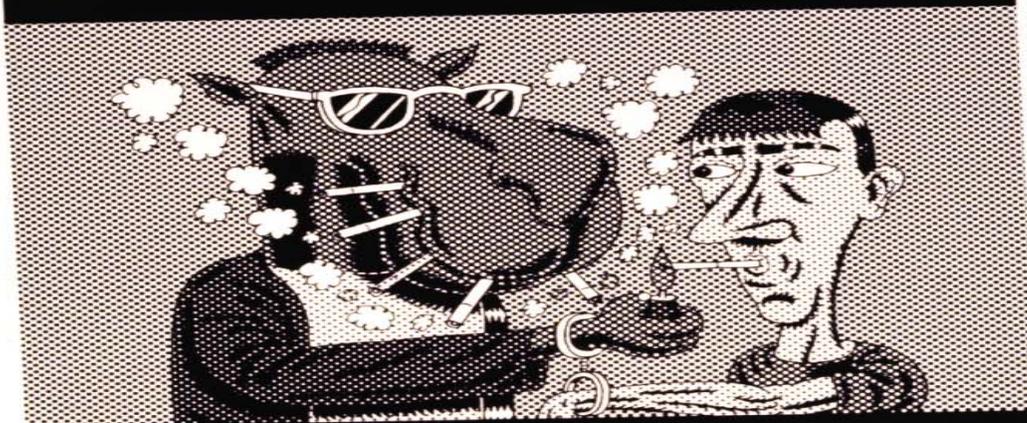


90% of new smokers begin as teenagers; more than 5 million of whom will eventually die as a result

Reprinted with permission of the American Academy of Pediatrics

Source: CDC Office of Smoking and Health; National Center for Tobacco-Free Kids

**MOST TEEN SMOKERS  
BELIEVE THEY CAN QUIT BUT AFTER  
SIX YEARS  
75% STILL SMOKE\***



**\*it's not like they're addicted or anything.**



**CDC**  
CENTERS FOR DISEASE CONTROL  
AND PREVENTION

## Nicotine as a Gateway Drug.

- Cottler et al.
- Nicotine in Non-IVDU
- Nicotine in Alcoholism
- Nicotine in IVDU
- NOT IVDU-nicotine
- NOT Crack cocaine-nicotine
- NOT amphetamine-nicotine

# Teens who smoke are —



- 3 times more likely to use alcohol
- 8 times more likely to use marijuana
- 22 times more likely to use cocaine

— than teens who don't



# Secondhand Smoke

# Tobacco Use

## Smoking & Secondhand Smoke

Tobacco use is the leading preventable cause of death, disease, and disability in the US. Each year, around 443,000 people die from smoking or exposure to secondhand smoke, and another 8.6 million suffer from a serious illness from smoking. Two new CDC reports indicate that, despite the dangers of tobacco use, about 46.6 million adults in the US smoke, and 88 million nonsmokers are exposed to secondhand smoke.

Want to learn more? Visit—

www <http://www.cdc.gov/mmwr>

www <http://www.cdc.gov/vitalsigns>

www <http://www.cdc.gov/tobacco>

 **46.6M**

About 1 in 5 adults smoke.

 **40%**

4 out of 10 nonsmokers (88 million people) are exposed to secondhand smoke.

 **54%**

More than 1 out of 2 kids (aged 3–11 years) are exposed to secondhand smoke.

# What is Secondhand Smoke?

- Secondhand smoke is the combination of two forms of smoke from burning tobacco products:
  - **Side-stream** smoke is smoke that is emitted between puffs of a burning cigarette, pipe or cigar.
  - **Main-stream** smoke is smoke that is exhaled by the smoker

# The Three Myths of Second Hand Smoke

- **The Ventilation Myth** - open windows and fans don't work
- **The Distance Myth** - no matter where you go, the entire building shares the air
- **The Odor Myth** – many chemicals found in cigarettes are odorless and those with odors can linger for up to four hours. Carpets, clothes, drapes and furniture can hold odors for several weeks

# The Surgeon General's 2006 Report

“Scientific evidence indicates that there is *no risk-free level* of exposure to secondhand smoke. Breathing even a little secondhand smoke can be harmful to your health”



# Secondhand Smoke

## Problem

*Even brief exposure to secondhand smoke can be harmful.*

**Secondhand smoke contains toxic chemicals and causes disease.**

- ◇ Secondhand smoke contains toxic and cancer-causing chemicals.
- ◇ Secondhand smoke causes heart disease and lung cancer in nonsmoking adults.
- ◇ Secondhand smoke causes sudden infant death syndrome (SIDS) and a number of health conditions in children, including middle ear infections, more severe asthma, and respiratory infections.

**About 4 in 10 nonsmokers in the US (40%, or 88 million people) continue to be exposed to secondhand smoke.**

- ◇ Almost everyone who lives with somebody who smokes indoors is exposed to secondhand smoke. Children and teens are more likely than adults to live in homes where someone smokes indoors.
- ◇ About 54% of children (aged 3–11 years) are exposed to secondhand smoke. Children are most heavily exposed at home.
- ◇ About 47% of youth (aged 12–19 years) are exposed to secondhand smoke.
- ◇ About 56% of black nonsmokers are exposed to secondhand smoke compared with about 40% of white nonsmokers and 29% of Mexican-American nonsmokers.

**Levels of secondhand smoke exposure in the US have greatly dropped during the last 20 years.**

- ◇ Nearly 88% of nonsmokers in the US were exposed to secondhand smoke during 1988–1991.
- ◇ That number greatly dropped to about 53% by 1999–2000.
- ◇ About 40% of US nonsmokers were exposed to secondhand smoke during 2007–2008.

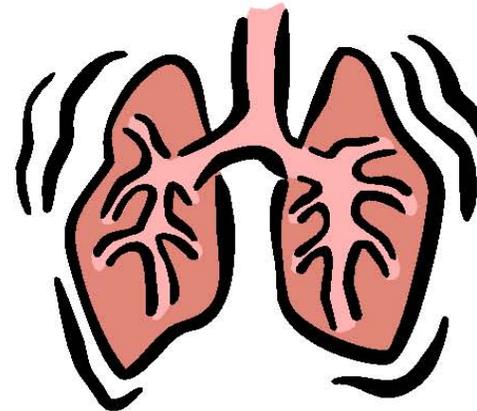
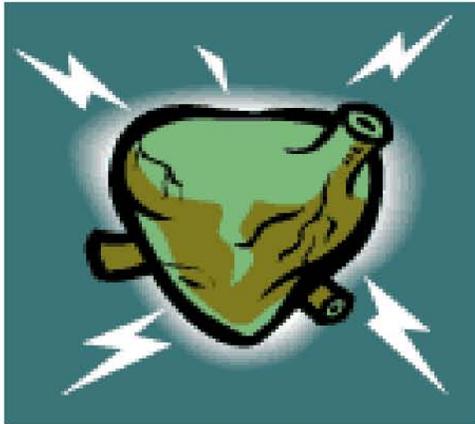


# Secondhand Smoke is Dangerous

- Surgeon General in 2006 declared that there are no safe levels of second hand smoke
- There are on average 53,000 deaths each year to non-smokers from caused by secondhand smoke
- ***Third leading cause of preventable death***
- ***Risk of heart attack for those with heart problems goes up by 25% after a 20 minute exposure***

# Secondhand Smoke Is No Joke

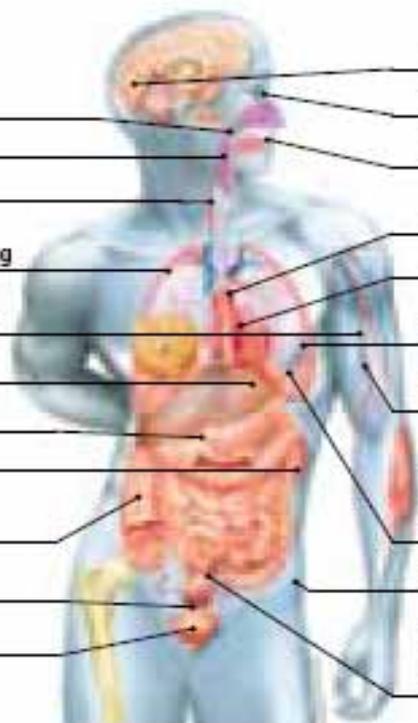
- Deaths due to heart disease caused by secondhand smoke rival number of deaths from traffic accidents
- Third leading cause of preventable death



## DISEASES CAUSED BY SMOKING

### CANCERS

Larynx  
 Oropharynx  
 Oesophagus  
 Trachea, bronchus or lung  
 Acute myeloid leukemia  
 Stomach  
 Pancreas  
 Kidney and Ureter  
 Colon  
 Cervix  
 Bladder



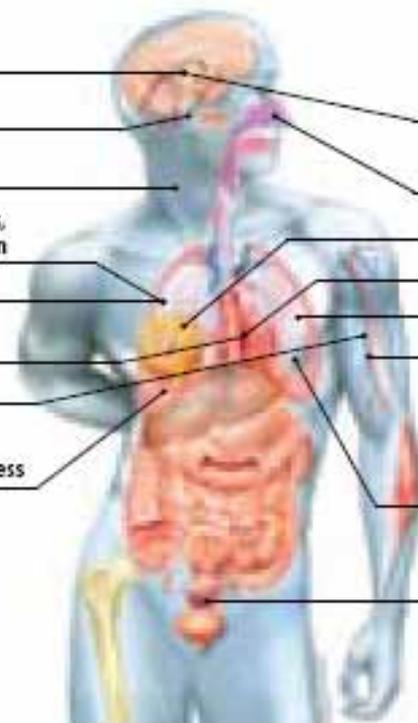
### CHRONIC DISEASES

Stroke  
 Blindness, Cataracts  
 Periodontitis  
 Aortic aneurysm  
 Coronary heart disease  
 Pneumonia  
 Atherosclerotic peripheral vascular disease  
 Chronic obstructive pulmonary disease (COPD), asthma, and other respiratory effects  
 Hip fractures  
 Reproductive effects in women (including reduced fertility)

## DISEASES CAUSED BY SECOND-HAND SMOKE

### CHILDREN

Brain tumours\*  
 Middle ear disease  
 Lymphoma\*  
 Respiratory symptoms, Impaired lung function  
 Asthma\*  
 Sudden Infant Death Syndrome (SIDS)  
 Leukemia\*  
 Lower respiratory illness



### ADULTS

Stroke\*  
 Nasal Irritation, Nasal sinus cancer\*  
 Breast cancer\*  
 Coronary heart disease  
 Lung cancer  
 Atherosclerosis\*  
 Chronic obstructive pulmonary disease (COPD)\*, Chronic respiratory symptoms\*, Asthma\*, Impaired lung function\*  
 Reproductive effects in women: Low birth weight; Pre-term delivery\*

\* Evidence of causation: suggestive  
 Evidence of causation: sufficient

Source: U.S. Department of Health and Human Services. *The health consequences of smoking: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2004 ([http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2004/chapters.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm), accessed 5 December 2007).

Source: U.S. Department of Health and Human Services. *The health consequences of involuntary exposure to tobacco smoke: a report of the Surgeon General*. Atlanta, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2006 (<http://www.surgeongeneral.gov/library/secondhandsmoke/report/fullreport.pdf>, accessed 5 December 2007).

# Nationwide

**NHS**

NHS Direct: 0845 4647

each day  
fifty kids under five  
are admitted to  
hospital because  
of passive smoking



**Smoking**

**If you can't cut it out, put it out  
when the kids are about!**

# Children are more vulnerable to SHS in the home because



- They breathe in more air relative to body weight (and for the same exposure, will absorb more tobacco toxins).
- Their immune system is less protective.
- They are less able to complain (either because their complaints are ignored or they are too young).
- They are less able to remove themselves from exposure (too young to walk or crawl away).

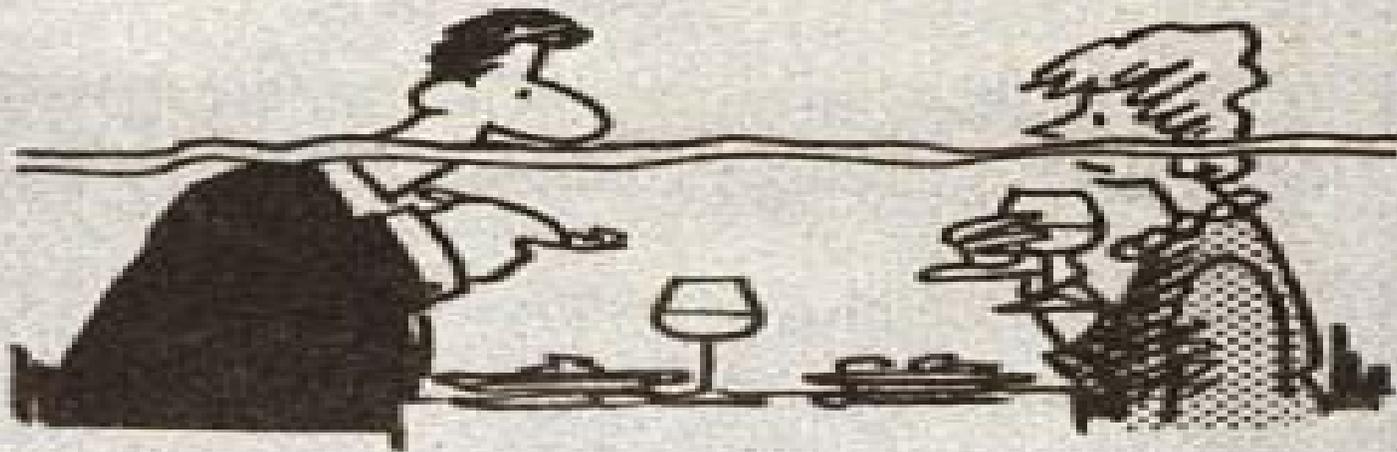


# Cigarette Equivalency

- Riding in a Car with a smoker for 1 hour is the same as if you smoked four cigarettes even if you don't smoke
- Living in a home with a Pack-a-day smoker is the same as if you smoked three cigarettes even if you don't smoke

# Berry's World

SECONDHAND  
SMOKING SECTION



*Jim Berry*  
© 1987 by NEA, Inc. CE



**Karen Wilson, MD, MPH, FAAP**  
**Assistant Professor**  
**University of Rochester**



# Background

- 18% of children ages 3-11 and 17% of those ages 12-19 are regularly exposed to secondhand tobacco smoke (SHS) in the home
- 54% of children 3-11 and 47% of children 12-19 had detectable cotinine levels in the 2007-2008 NHANES
  - 32 million children ages 3-19 with exposure
- Newer measurement techniques allow assessment of very low levels of exposure

# Cotinine Measurement

- Blood, urine, saliva, hair, nails
- Now able to detect to very low levels
- Studies show even at these low levels, (0.015 ng/ml), biochemical, physiologic and ultimately health effects

# Risks of exposure

- Increased risk and severity of RSV bronchiolitis
- 1.28 greater odds of hospitalization
- 1.6 times greater risk of otitis media
- 1.8 times greater risk of asthma
- Twice the risk of developing inflammatory bowel disease
- 4.7 times the risk of developing metabolic syndrome

## Risks of exposure

- As well as higher risk for:
  - SIDS
  - School absence
  - Sleep problems
  - Dental caries

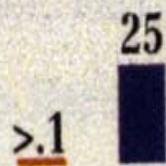
# Biochemical changes

- SHS exposure causes measurable biochemical changes:
  - Increases in Th2 inflammatory cytokines
  - Decreases in INF- $\gamma$  levels
  - Decreases in antioxidant levels
  - Attenuated endothelial function

# Even at low levels?

- YES!
- Yolton et al
  - NHANES analysis examining cognition in children exposed to SHS
  - Significant inverse relationship between cotinine level and block design, reading, and math scores
  - Greatest decrement was at the lowest cotinine levels (.1-1 ng/mL)

■ % of total benzene emissions ■ % of total benzene exposure



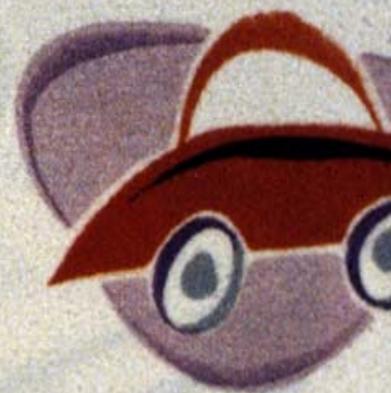
Tobacco



Indoor sources



Industrial sources



Motor vehicles

# Biochemical changes at low levels

- Wilson, et al (in press)
  - Also using NHANES
  - Relationship between cotinine levels and serum levels of antioxidants
  - Significant association between levels of cotinine and vitamin C, and carotenoids
  - Association was significant even at low levels of exposure (.015-2 ng/mL)

**Involuntary  
smoking  
occurs  
at all ages**



Smoking during pregnancy accounts for an estimated:

- **20 to 30% of low-birthweight babies**
- **up to 14% of preterm deliveries**
- **10% of all infant deaths**
- **4 times the incidence of negative behavior in toddlers**



STEPHANIE KLEIN-DAVIS | The Roanoke Times

Mellisa Williamson, 35, a Bullitt Avenue resident, worries about the effect on her unborn child from the sound of jackhammers.



**WARNING**

# **TOBACCO SMOKE HURTS BABIES**

**Tobacco use during pregnancy increases the risk of preterm birth. Babies born preterm are at an increased risk of infant death, illness and disability.**

Health Canada

**WARNING**

TO BE USED AS A FIRST AID ONLY  
• DO NOT USE IF THE SEAL IS BROKEN  
• DO NOT USE IF THE SEAL IS BROKEN  
• DO NOT USE IF THE SEAL IS BROKEN  
• DO NOT USE IF THE SEAL IS BROKEN

Exposing an infant to second-hand smoke greatly increases the child's risk of:

- **asthma**
- **pneumonia**
- **bronchitis**
- **fluid in the middle ear**



# General Effects of ETS

- Fetal Abnormalities:
  - Low birth weight
  - Spontaneous abortion
  - Congenital abnormalities
- Sudden Infant Death Syndrome (SIDS)
- Long term:
  - Lung cancer (?leukemia and lymphoma)
  - Cardiovascular disease

# Estimated Risks Associated With Exposure to Secondhand Smoke

Disease States	Estimated Annual Toll
Lung cancer	3,423 – 8,866 deaths
Cardiac-related illnesses	22,700 – 69,600 deaths
Sudden infant death syndrome	430 deaths
Low birth weight infant or pre-term deliveries	24,300 – 71,900 cases
Childhood asthma (new and exacerbations)	202,300 episodes
Childhood lower respiratory illnesses	150,000 – 300,000 cases
Childhood middle ear infections	789,700 cases

Estimated from California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. *Proposed Identification of Environmental Tobacco Smoke as a Toxic Air Contaminant*. Sacramento (CA). 2005

- Secondhand smoke increases the relative risk of COPD by 55%
- Passive cigarette smoke nearly doubles the risk for stroke approaching that of active smoking

1. CDC. Surgeon General's Report. *The Health Consequences of Involuntary Exposure to Tobacco Smoke; Executive Summary*. 2006. 2. Eisner MD et al. *Environ Health*. 2005;12;4:1-8. 3. Goldstein LB et al. *Stroke*. 2006;37:1583-1633.

● 1.4 million sick from SHS

**TABLE I****Estimated Annual Mortality from Passive Smoking**

Source	Mortality	Cause
EPA [5]	53,000	All deaths
Glanz, Parmley [13]	37,000	Heart disease
EPA [5]	3,800	Lung cancer
Eriksen <i>et al</i> [14]	12,200	Other cancers*
EPA [5]	Unknown†	Other respiratory diseases

\*Estimate includes cancers of the cervix, brain, thyroid, sinus, breast, and endocrine organs, and leukemia.

†No major studies conducted.

EPA = Environmental Protection Agency.

**Blow in her face and she'll follow you anywhere.**

Hit her with tangy Tipalet Cherry. Or rich, grapey Tipalet Burgundy. Or succulent Tipalet Blueberry. It's Wild! Tipalet. It's new. Different. Delicious in taste and in aroma. A puff in her direction and she'll follow you, anywhere. Or yes...you get smoking satisfaction without inhaling smoke.



Smokers of America, do yourself a flavor. Make your next cigarette a **Tipalet.**

New from Muriel.

About 5 for 25¢.

A classic black and white photograph of a man and a woman in formal attire. The man, on the left, is wearing a dark tuxedo jacket, a white dress shirt, and a black bow tie. He has a cigarette in his mouth and is looking towards the woman on the right. The woman is wearing a light-colored, possibly white, dress and has her hair styled in a classic 1940s fashion. She is looking back at the man. The background is a simple, dark, slightly textured wall.

**"Mind if I smoke?"**

***"Care if I die?"***

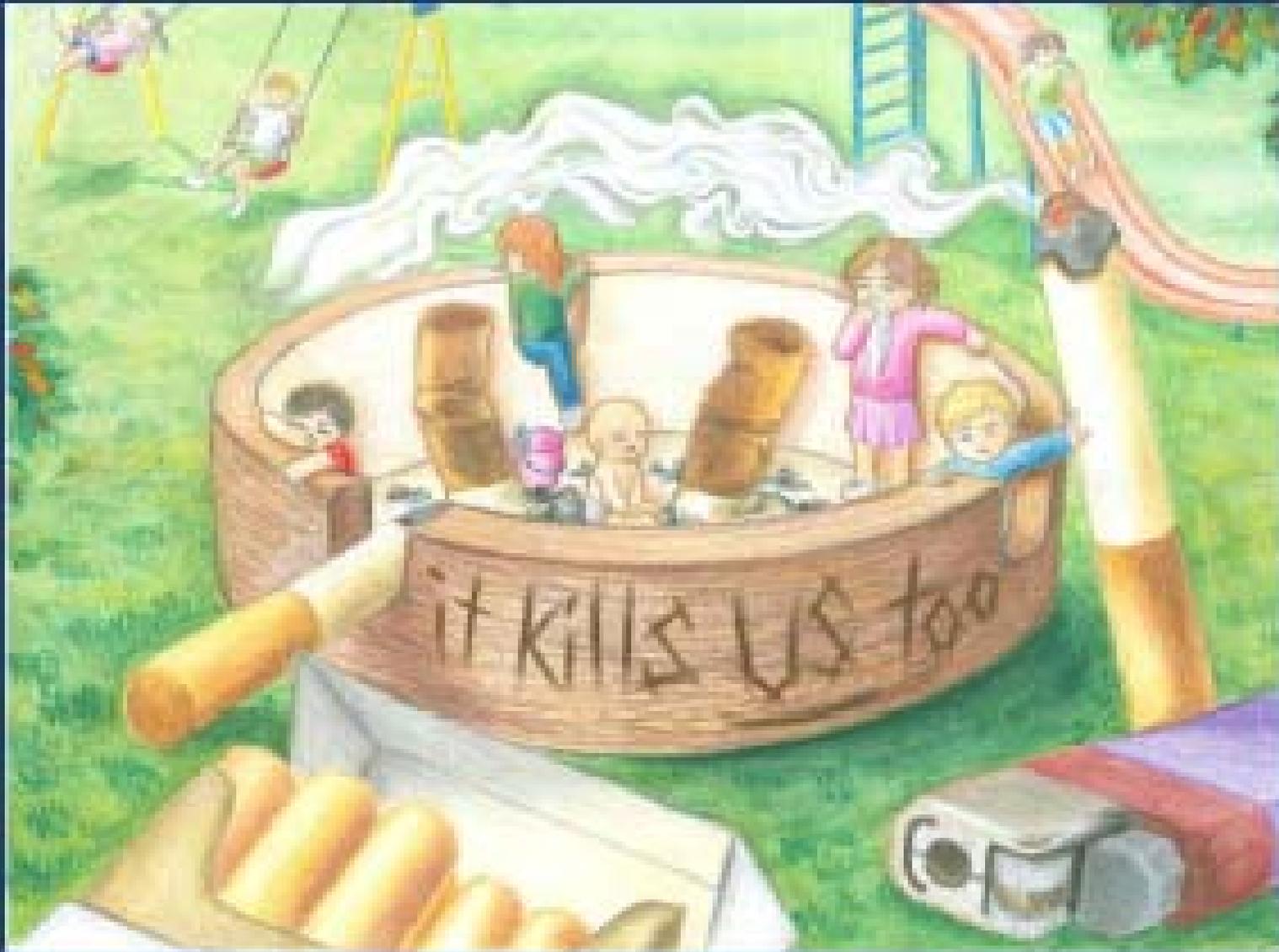
**THERE'S A WARNING LABEL ON CIGARETTE  
PACKS FOR PEOPLE WHO SMOKE.  
WHERE SHOULD THE WARNING GO FOR  
PEOPLE WHO BREATHE?**

**WARNING: Secondhand  
cigarette smoke can  
give you lung cancer.**

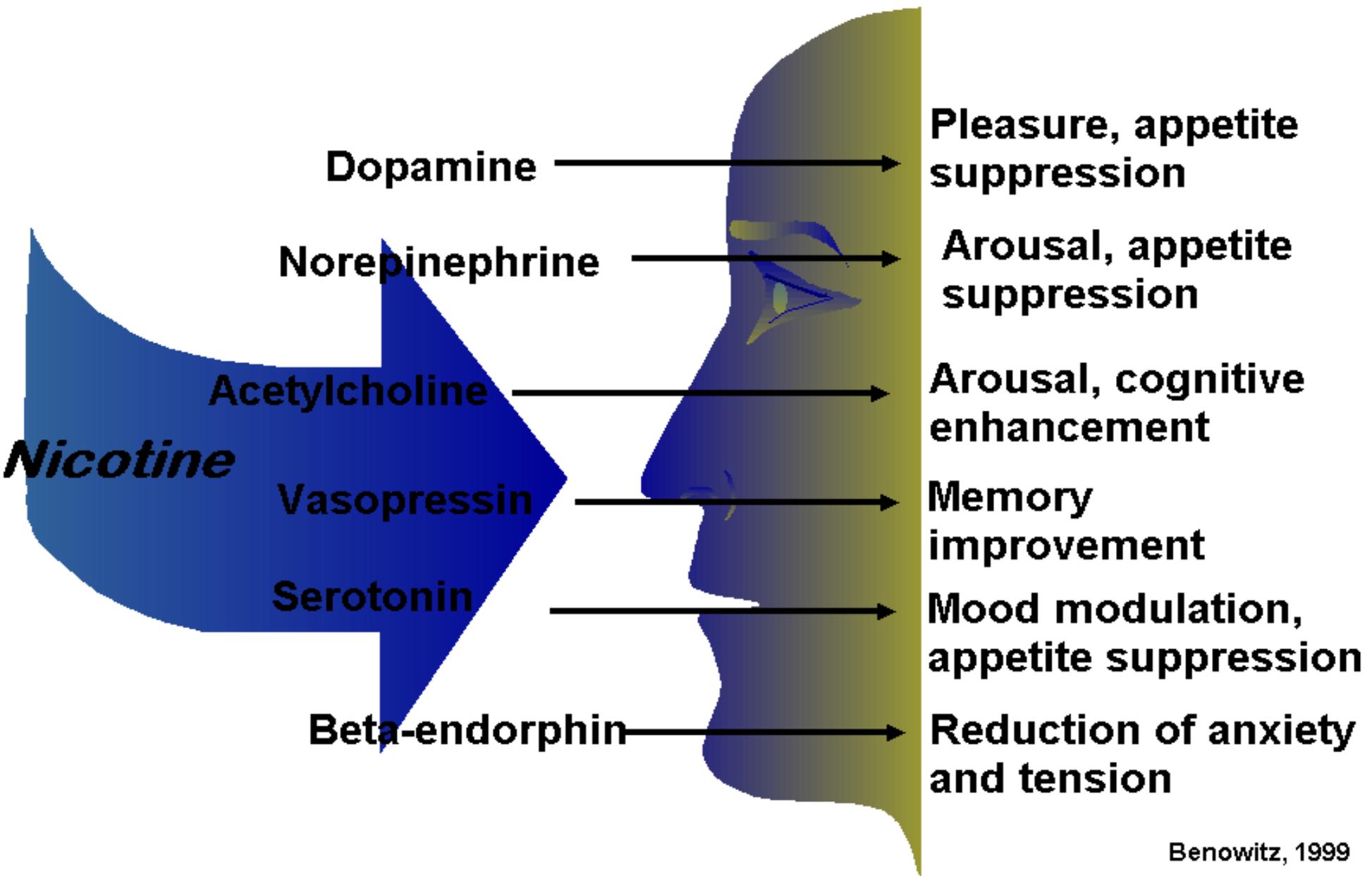
Secondhand smoke can kill. It doesn't matter that you aren't a smoker, or that you sit in non-smoking sections. When there's secondhand smoke in the air, your risk of getting

**It's time we made  
smoking history.**

lung cancer can increase by 34%. The tobacco companies must not have thought it was worth mentioning.



# Nicotine Releases Chemicals in the Brain



Benowitz, 1999

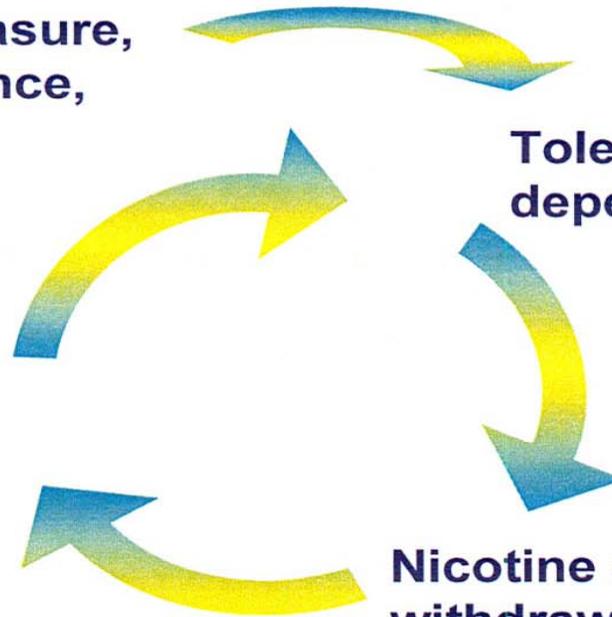
# The Cycle:

**Nicotine use for pleasure,  
enhanced performance,  
mood regulation**

**Nicotine use to self-  
medicate withdrawal  
symptoms**

**Tolerance and physical  
dependence**

**Nicotine abstinence produces  
withdrawal symptoms**



Benowitz NL. *Med Clin North Am.* 1992; 76: 423.



**SMOKE FREE / HEALTHY  
HOMES**

# What Started The Initiative?

- Repeated calls from individuals who were living in multifamily homes who needed help
- In 2009 there were no programs or laws that could help them
- Met as a collaboration and worked to design a pilot program which now we are taking statewide
- Mounting scientific evidence that it was right thing to do

# Smoking in multi-unit housing

- Increasing concern about tobacco smoke exposure from attached housing
- HUD statement from July 2009 encourages Public Housing Authorities to implement no-smoking policies in some or all public housing units.
- The majority of people believe that public housing should be smoke-free

# The bacon analogy



## How does it happen?

- When you cook bacon in your kitchen, where can you smell it?
  - A. Only in the kitchen
  - B. In the kitchen and adjacent rooms
  - C. Everywhere in the house, and in the apartment next door
  - D. Not only in the nearby apartments, but everyone around you can smell it on you

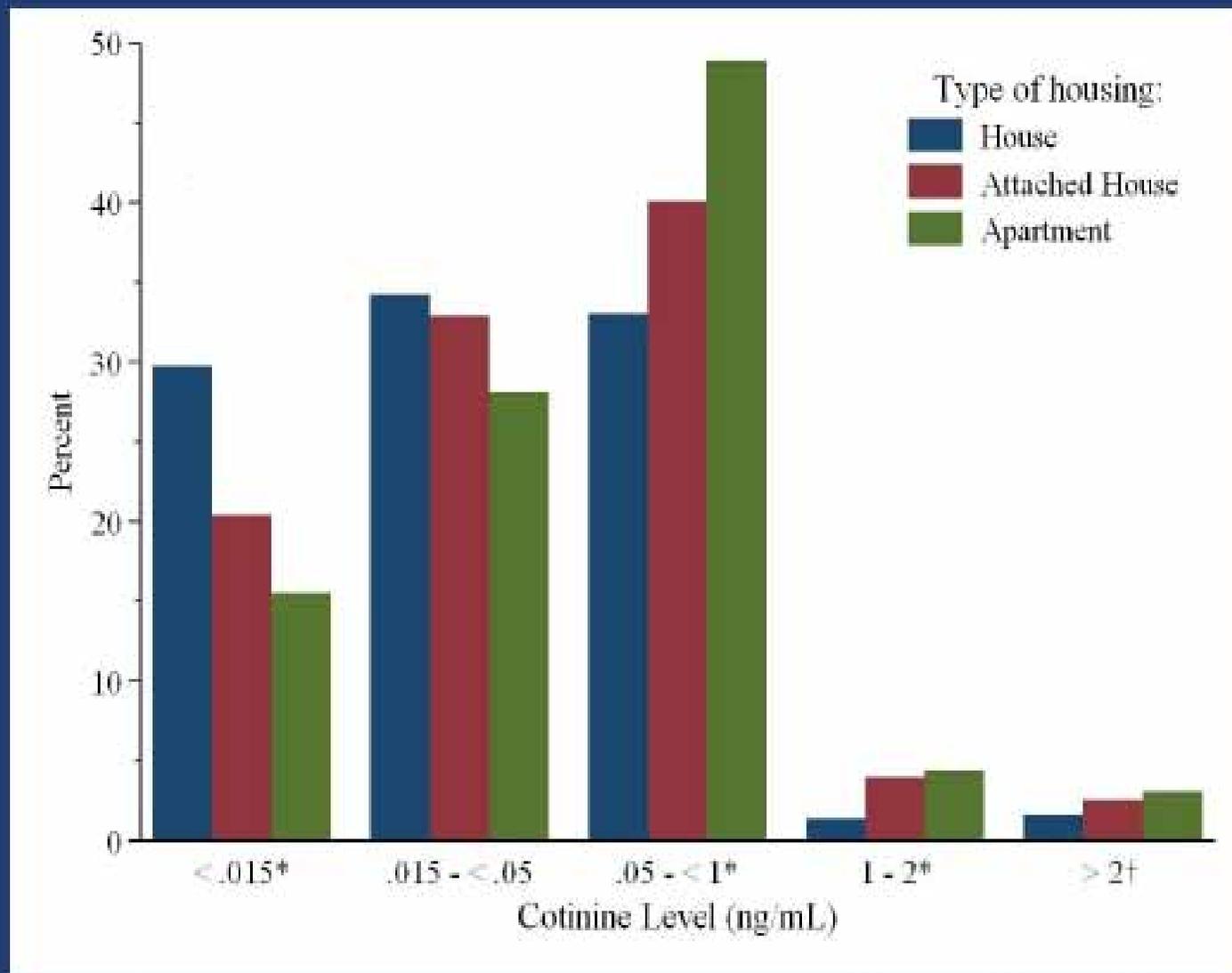
## Associated factors

- Older apartments with thin walls, floors, and outdated ventilation systems
- Through open windows and doorways
- Drift from decks and porches
- Communal areas
- Outdoor exposures

# Objective

- To determine whether children who live in attached housing have higher cotinine levels than children who live in detached housing

# RESULTS

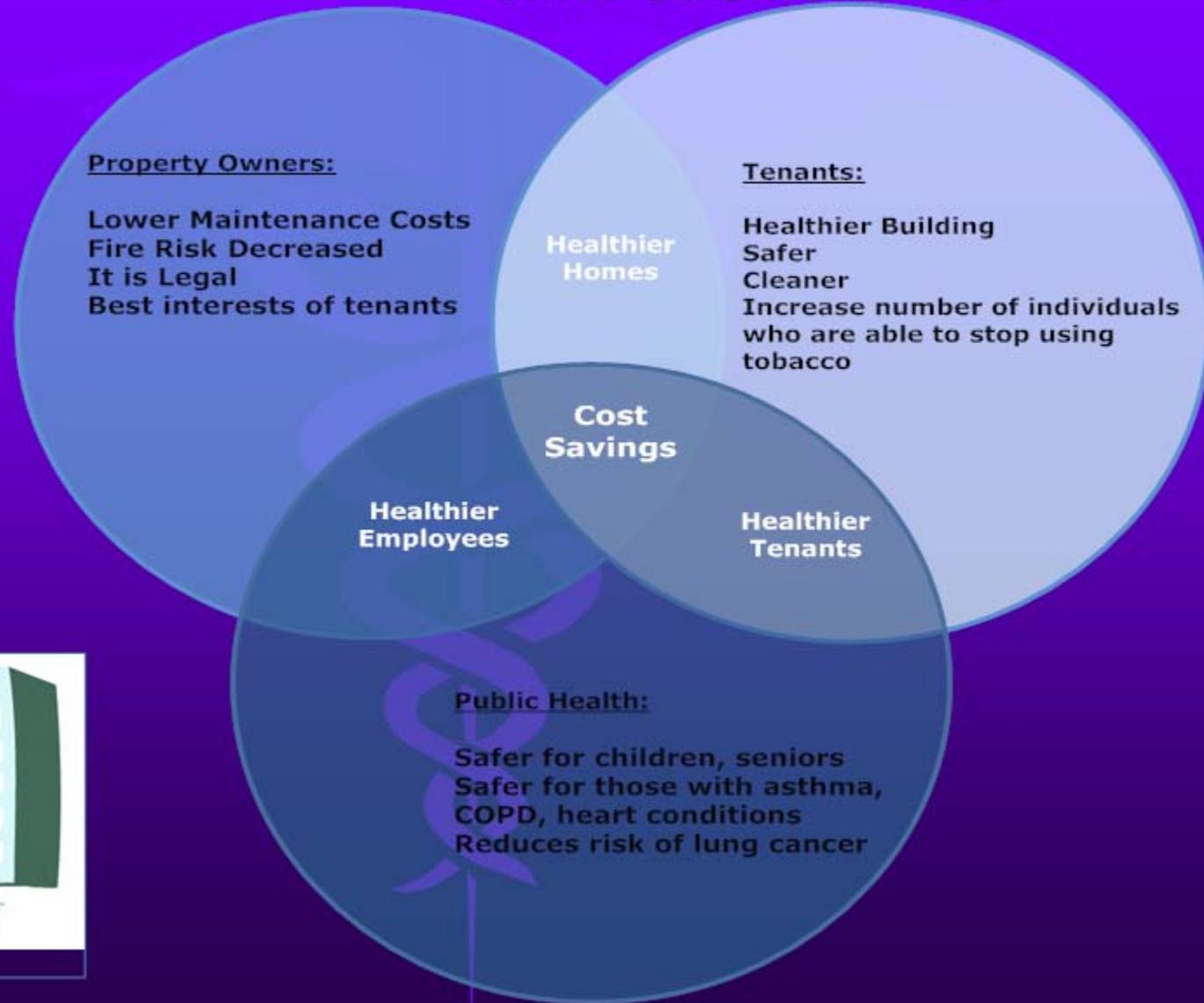


- 9 of 10 White and African-American children who live in an apartment without a smoker in the home have evidence of tobacco smoke exposure.
- These children also have higher mean cotinine levels than those living in detached houses.
- This relationship persists even when controlling for socioeconomic status

# SHS and HH

## Multifamily Units and Smoke Free Policy

# Everyone Wins When Multi-Family Units Go Smoke-free



# Myths about Smoke Free Multi-unit Housing

- I will have a hard time renting my units and my vacancy rate will increase.
- My tenants wouldn't be supportive of a non-smoking policy.
- Smokers have a right to smoke in their homes.
- It will be too hard to enforce a non-smoking policy.

# Acknowledge the difficulty of the issue

- Overarching issue is that smoke in multi-unit housing affects everyone else
- Smoke free laws mostly protect adults
- Young children spend most of their time in the home
- Poor children live in multi-unit housing, where smoking is most concentrated

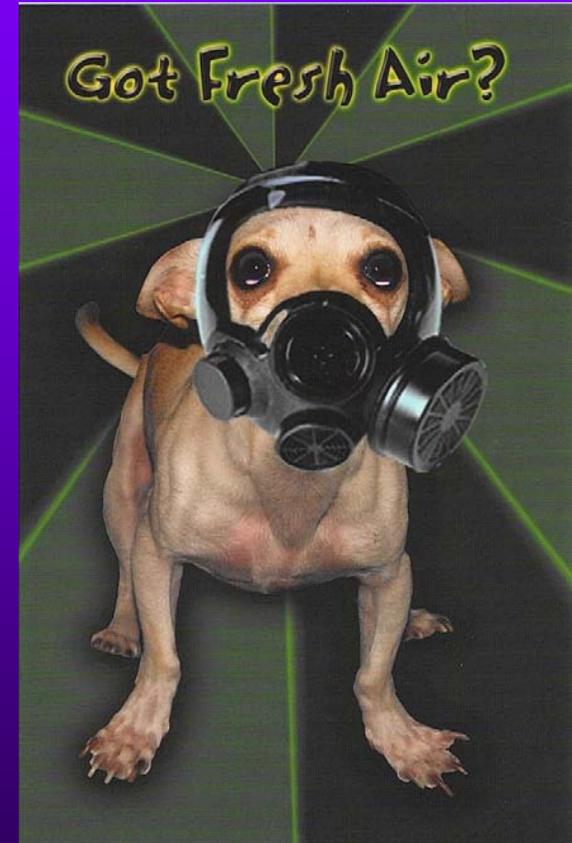
# Why Do It?

- Financial burdens incurred by an expensive clean-up situation
- Fire hazards
- Tenants are becoming more vocal and complaining about secondhand smoke
- Investment in remodeling or new construction that landlords wish to keep clean
- Economically it makes sense



# In Short --

- It is good for the property
- It is good for the tenant
- It's good for landlords's bottom line



# Barriers to Going SmokeFree

- Property managers don't think it's legal
- Economic concerns that cut two ways:
  - fear that they won't be able to rent units
  - know that units with smokers cost much more to rehab
- Not sure how to transition buildings with smokers to smokefree status
- Questions about enforcement

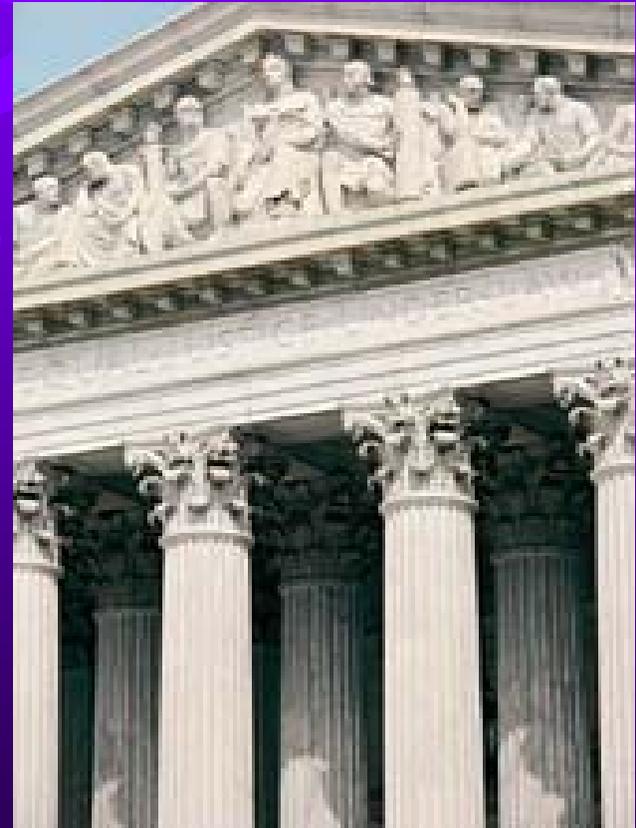


# Is It Legal?



# Three Basic Concerns

- That there is a “right” to smoke
- That it violates a tenant’s right to privacy
- That it discriminates against smokers



# Common Law Permits Smoke-free Policies

- Under Common Law, a landlord can restrict tenant activities as long as no constitutional right is violated.



# There Is No Constitutional “Right To Smoke”

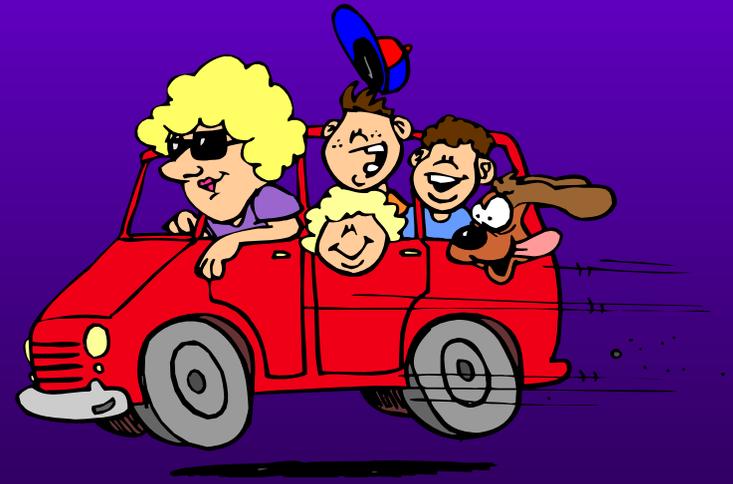
Smoking is not a right that is protected under the Civil Rights Act of 1964.

- Smoking is not a protected liberty
- Smokers are not a protected class of people under federal law
- Smoking is a privilege conferred by the property owner



# Right to Privacy

- The constitutional right to privacy only applies to:
  - Marriage
  - Family relationships
  - Rearing of children



# Your Rights as Landlord



- Landlords have a legal right to restrict smoking on all of their premises, especially indoors:
  - Prohibiting smoking is just like prohibiting pets, loud music, etc.
  - These policies do not infringe on smokers' rights; because it's about the **SMOKE**
  - **NOT THE SMOKER**



# Americans with Disabilities Act

- **Americans with Disabilities Act (ADA) was amended in 2008**
- **Amendment includes a list of “major life activities”**
  - Reduces need to establish that activity is a major life activity; includes breathing and respiratory bodily functions

# Reasonable Accommodation

- Reasonable Accommodation may be granted on a case by case basis
- Accommodations that may be required could include:
  - Repairs to reduce or eliminate secondhand smoke infiltration
  - Adding separate ventilation or heating systems
  - Developing and/or enforcing a smoke-free policy

**Note: Must prove a severe and long-term hypersensitivity to cigarette smoke that substantially limits one or more major life activities**



# Current HUD Smoke Free Policy

- HUD Voluntary Smoke Free Policies
  - 2009 – encouraging local public housing authorities to implement voluntary smoke free policies
  - 2010 – encouraging Section 8 and private housing facilities receiving public subsidies to voluntarily go smoke free

# SMOKE FREE HOUSING



A Toolkit for **Residents** of Federally Assisted  
Public and Multi-family Housing



U.S. Department of Housing and Urban Development

# SMOKE FREE HOUSING



A Toolkit for **Owners/Management Agents** of  
Federally Assisted Public and Multi-family Housing



U.S. Department of Housing and Urban Development

# What Are The Costs?

- It is estimated that it costs anywhere from \$1500 to \$5000 extra to rehab a smoking apartment vs. one vacated by non-smoker



# Reduce Maintenance Costs

- Residue and stains on walls, curtains, cabinets, blinds, appliances, and fixtures
- Odor in carpets, curtains, and walls
- Burn damage to tiles, carpets, curtains, countertops, bathtubs
- The cost of cleaning a unit that has been smoked in is often 2-3 times more than a smoke-free unit



# Reduces Risk of Fire Damage

- Fire damage can cause apartment unit to go off-line for months
- Water and smoke damage to adjoining units can take them off-line as well
- Former residents have to find alternative housing and may not return





# Nationally

- Smoking was the cause of just 9% of apartment fires, but
- Smoking was the cause of 40% of deaths from apartment fires, and
- Smoking was the cause of 16% of injuries from apartment fires

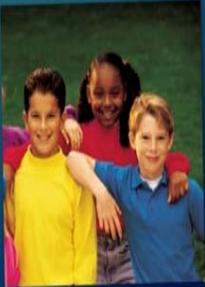


# Leading Our Nation to Healthier Homes

- **Secondhand smoke spreads throughout multi-unit dwellings**
- **Air quality studies in apartment buildings show that anywhere from 5% to 60% of the air in apartment units comes from other units in the building**

Leading Our Nation to Healthier Homes:

The Healthy Homes Strategic Plan



# Secondhand smoke cannot be prevented by ventilation or air cleaning

The latest position by the American Society of Heating, Refrigerating & Air-Conditioning Engineers (ASHRAE) states: “At present, the only means of effectively eliminating health risk associated with indoor exposure is to ban smoking activity.”



# Key Provisions of HUD Notice of September 15, 2010

- ▶ Update House Rules and Policies and Procedures
- ▶ Policy must address smoking in outdoor areas
- ▶ Must inform waitlist and new tenants of the policy
- ▶ Cannot ask about their smoking habits
- ▶ Cannot require existing tenants who smoke, as of the date of implementation, to move out of the property
- ▶ Cannot require existing tenants to transfer from their unit to another unit
- ▶ Not required to grandfather, but have option to do so.

# Healthy Homes: New England Journal of Medicine, July, 2010

- A resident who smokes in a single unit within a multiunit residential building puts the residents of the other units at risk.
- Tobacco smoke can move along air ducts, through cracks in the walls and floors, through elevator shafts, and along plumbing and electrical lines to affect units on other floors.
- High levels of tobacco toxins can persist in the indoor environment long after the period of active smoking – a phenomenon known as third-hand smoke.



He has his  
daddy's eyes  
and his  
momma's lungs.

Secondhand Smoke Kills.

# Technical Assistance

- Town Meetings
  - *Why policy change*
  - *Effective date*
  - *Make clear where they can/cannot smoke*
  - *Support and resources available*
  - *Violations*
- Allow for questions
- Post policy and notify tenants that did not attend meeting and waitlist of change in policy.

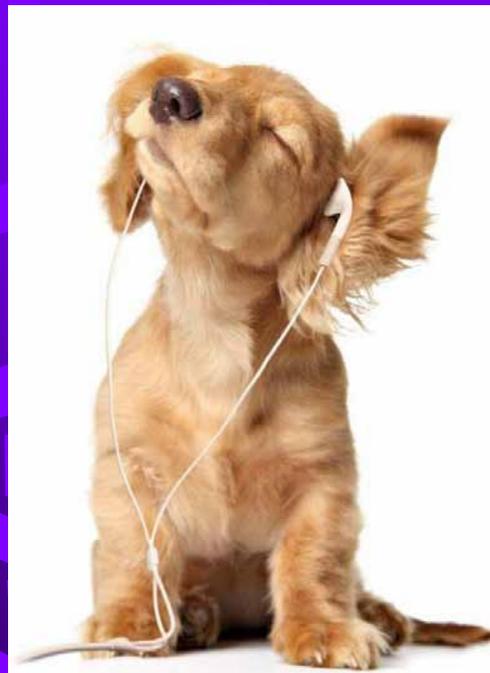
# Oregon Survey of Landlords

- Not one of the landlords who prohibited smoking regrets doing so, either personally or commercially.
- None even think about going back to permitting smoking where it has already been removed.
- Many said that once they tried non-smoking policies in one property, they quickly wanted it in all.

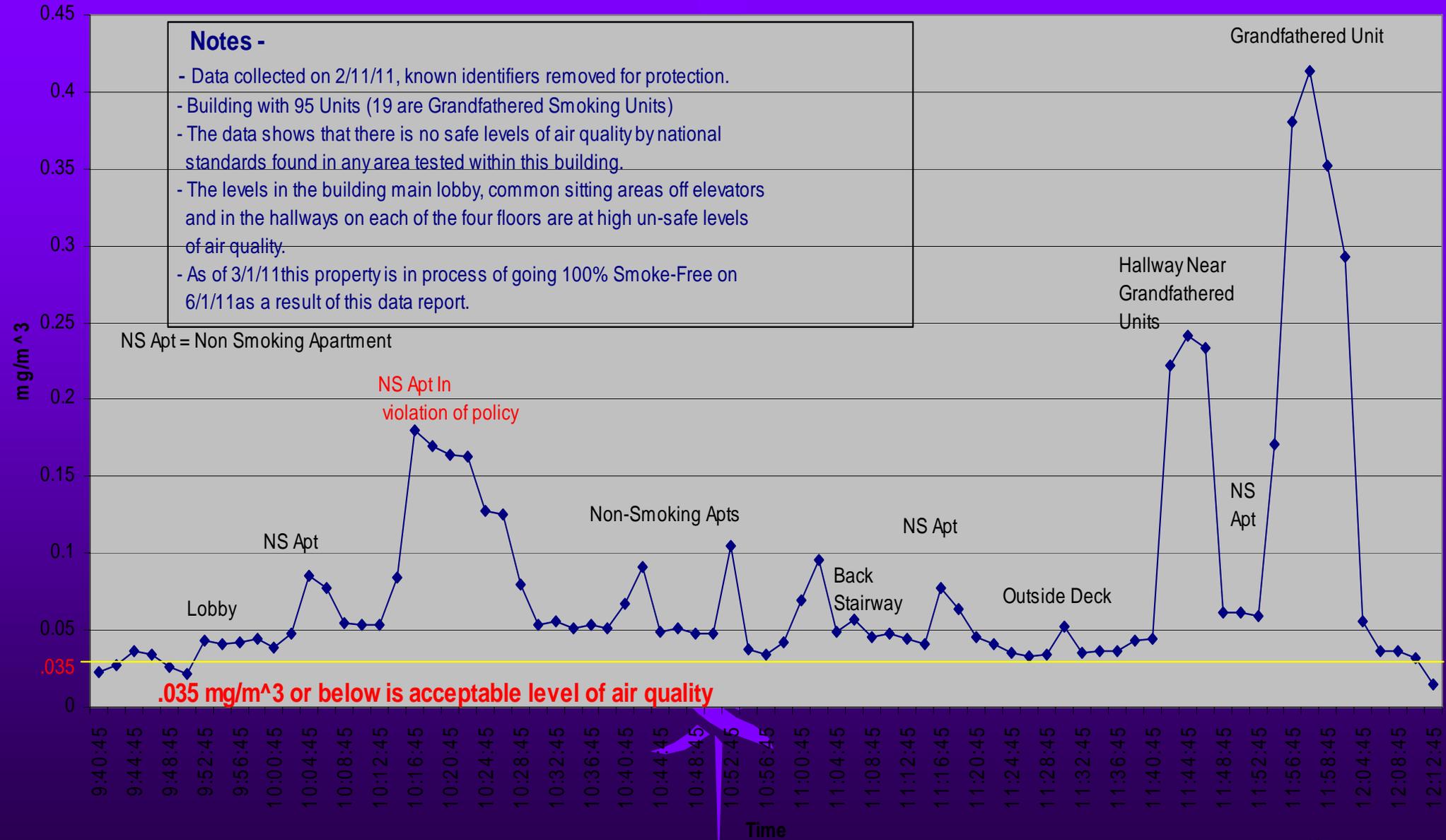
# Lessons Learned/What We Heard

- Fear of changing policy
- Dealing with tenants that are smokers
- How to do enforcement
- Need to connect with the medical provider
- Research discounts on NRT and other medicines
- Notify the quitline
- Policy about air testing education

## Importance of Listening



# Building with "Grandfathered Smoking" Units



# Moving Forward



- They Call – We Go!
- Continue to Provide:
  - Tobacco, SHS Education & Resources
  - Assist with Drafting Policies
  - Meet with Tenants
- Formalize Air Quality Testing Protocol
- Expand Community Partners and Outreach
- Offer Motivational Interviewing Training to Property Managers



# Partners

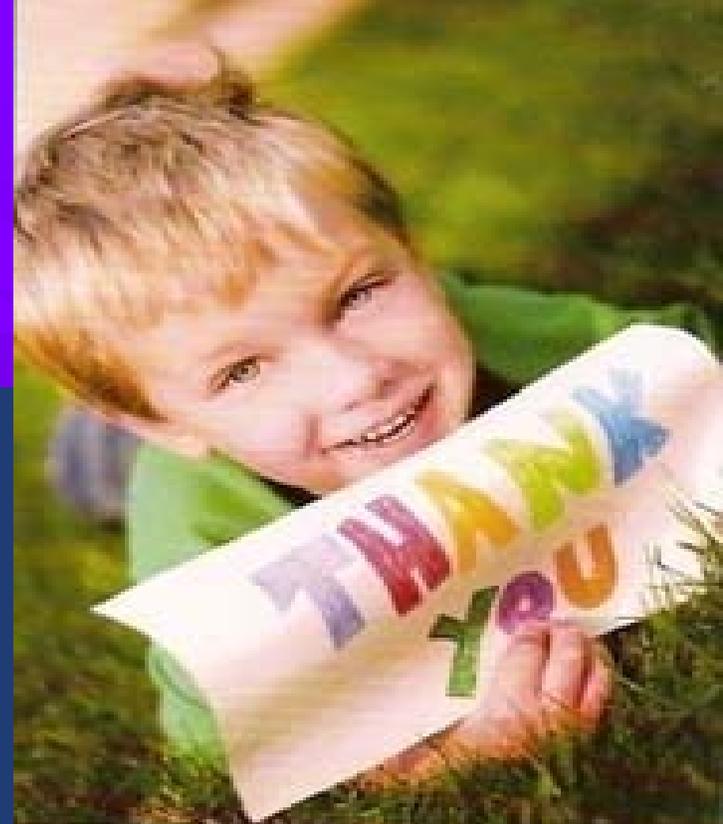
- Public Health Departments
- Pharmaceutical Company
- Area Hospitals & Clinics
- Local Community Coalitions
- Other Agencies

It Takes A Village...



“Air is not nothing, air is something. Air is wind that is not moving”

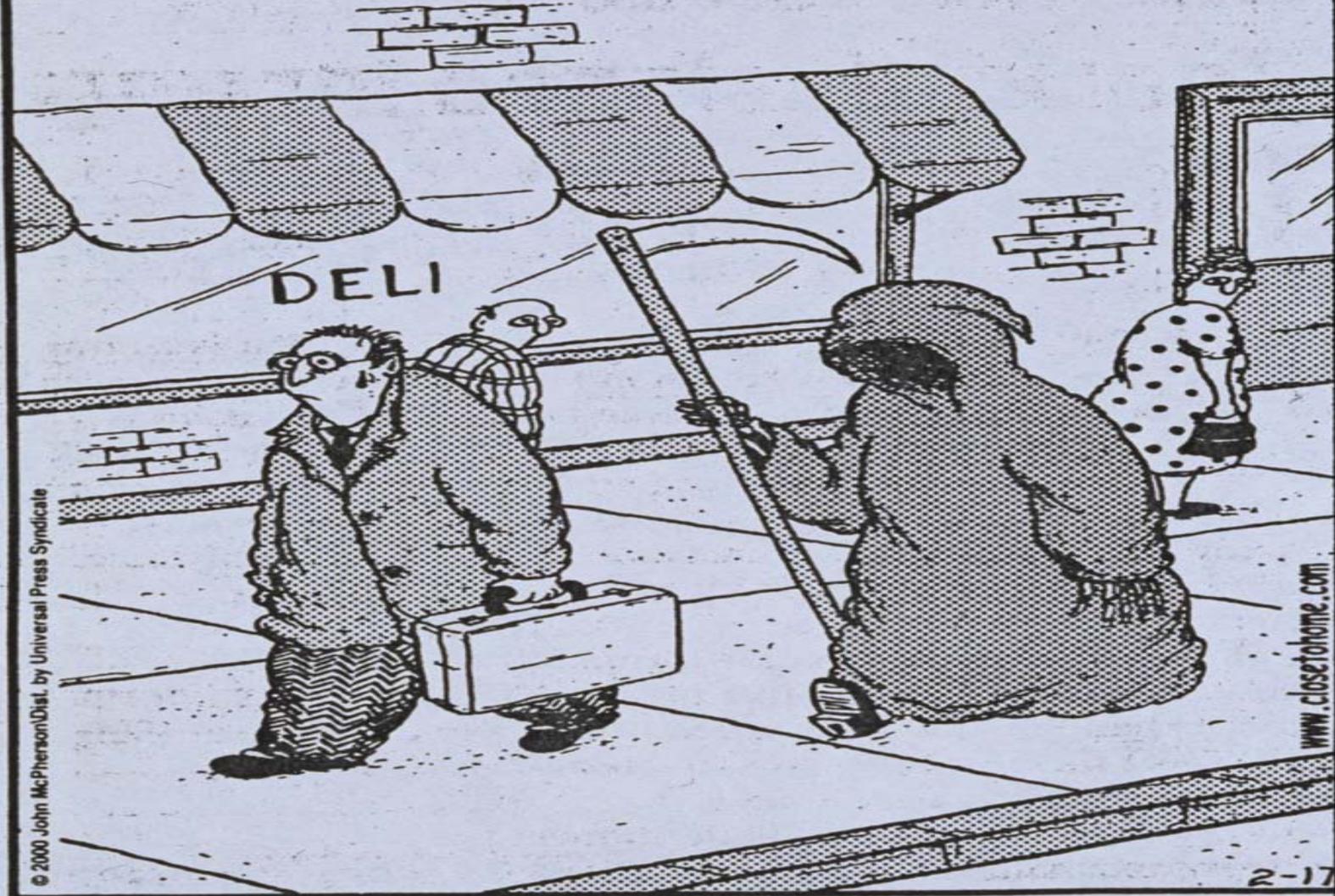
~ a 3 year old



# CLOSE TO HOME

e-mail: CLOSETOHOME@COMPUSERVE.COM

McPherson



Though expensive, hiring a professional actor dressed as death to stalk his every move finally broke Ted of his smoking addiction.

"If we do not act decisively, a hundred years from now our grandchildren and their children will look back and seriously question how people claiming to be committed to public health and social justice allowed the tobacco epidemic to unfold unchecked."

– Dr. Gro Harlem Brundtland,  
Director-General of the World Health Organization





Any Questions?





**Thank You for your  
Attention**

**QUESTIONS ?**