



JOHNS HOPKINS
BLOOMBERG
SCHOOL *of* PUBLIC HEALTH



Protecting Health, Saving Lives—*Millions at a Time*



Department of Epidemiology

Tobacco's Toll

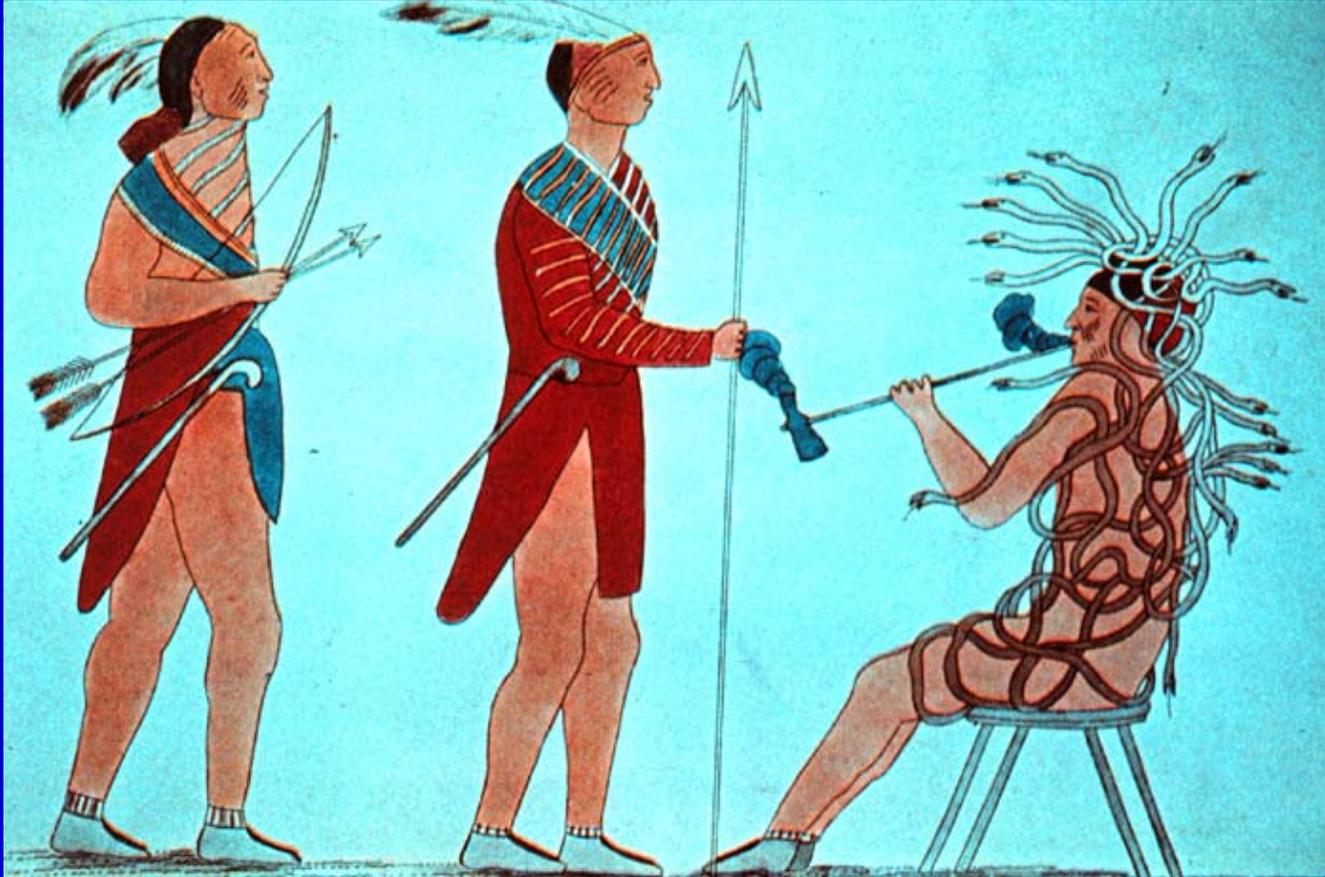
Jonathan Samet, MD, MS

November 15, 2006

Baltimore, MD

Tobacco History

1 BC Early use in the Americas, including smoking, chewing and tobacco enemas



Tobacco History

1492 “Discovered” by Columbus in the Americas



*Isms Stradanus inuent.
F. Hoebel. Galle sculp. Vitis Galle excudit.*

AMERICA.

American Americus retexit,

Semel vocauit inde semper excitam

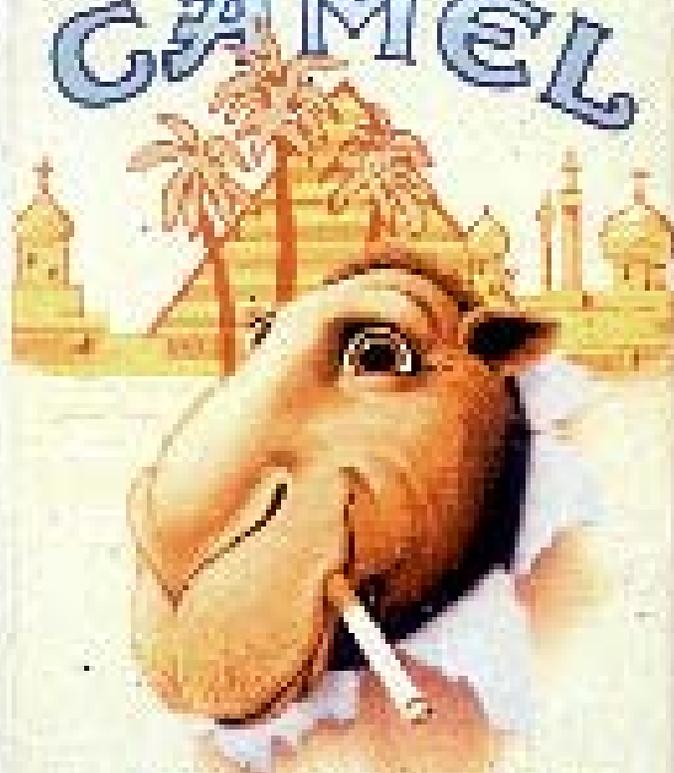


Camel Cigarettes

- October 13, 1913, R.J. Reynolds Tobacco Company introduced Camels, the first modern blended cigarette, and launched the first US cigarette-advertising campaign
- 1920s: women first became the targets of the tobacco companies



CAMEL



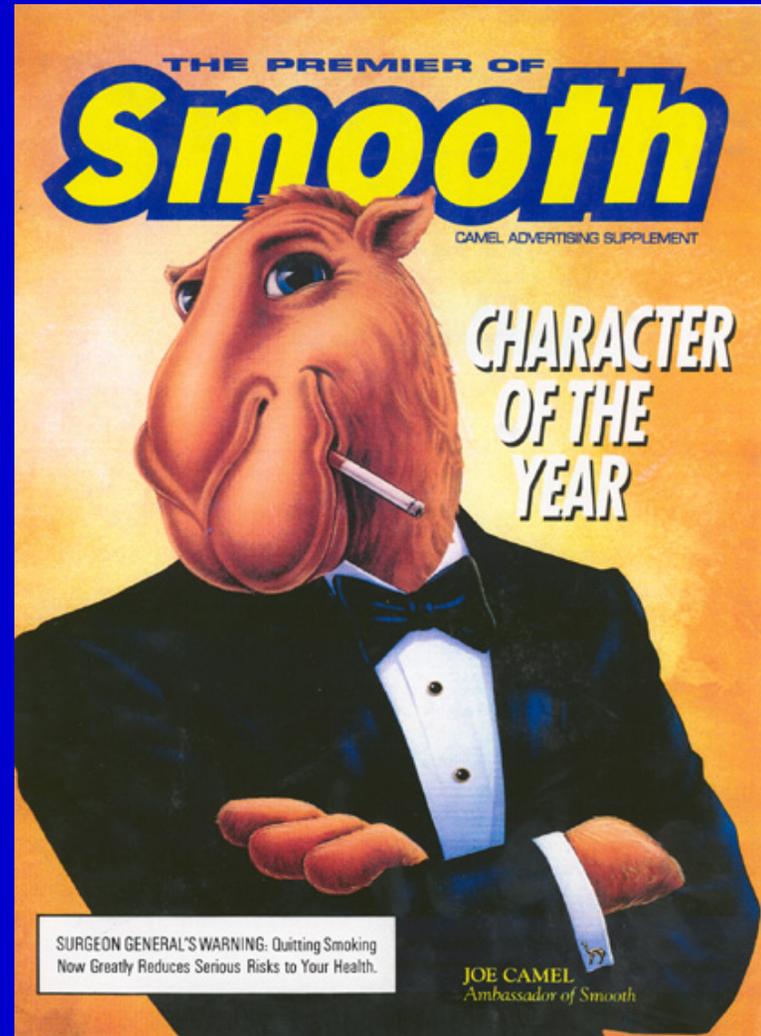
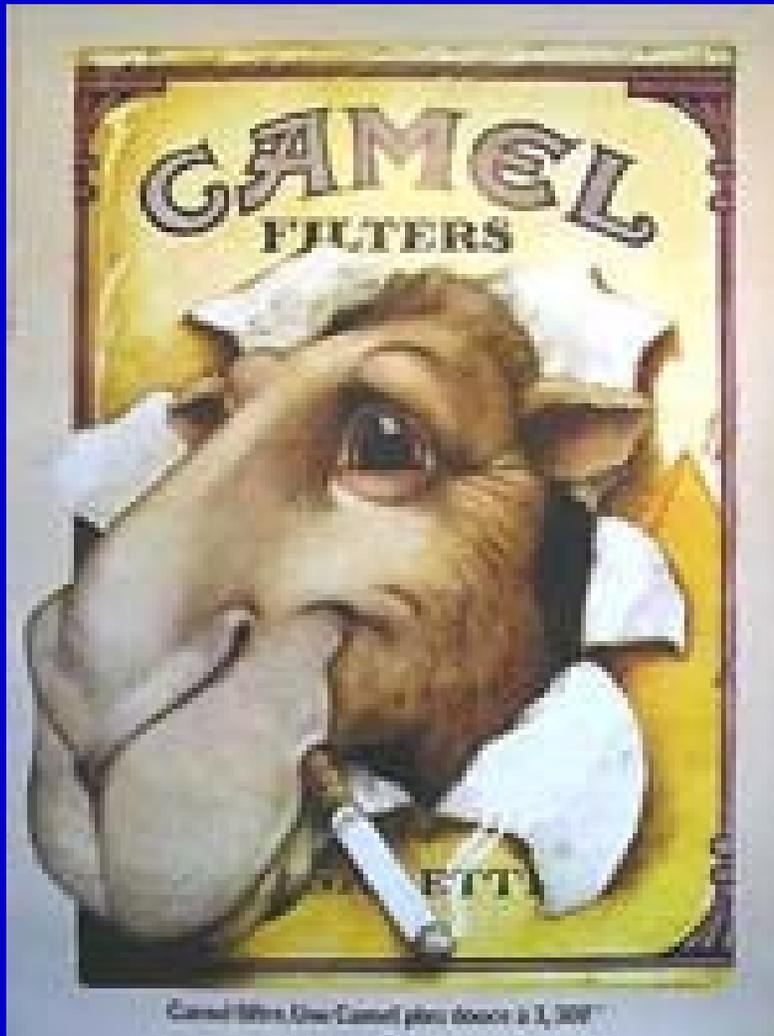
75th BIRTHDAY!

Un tipo suave.

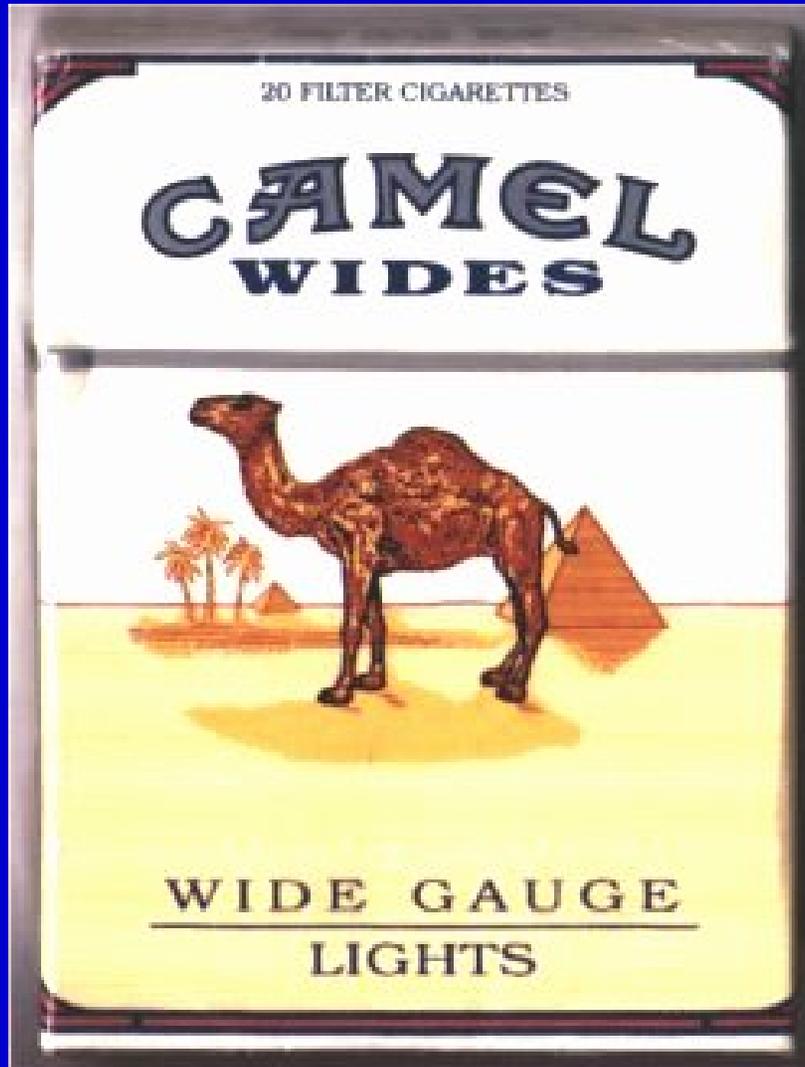


SYNOPSIS DE COMERCIO EXTERNO, Turis
Banco el Comercio Pudo Bajar Solo F13, 743

Camel Marketing to Youth: Meet Joe Camel



Camel Wides Marketed to Men



CAMEL

BIG FAT DELICIOUS

WIDES

© 2009 B&W T Co. B&W

CAMEL WIDES LIGHTS: 12 mg. "tar", 1.0 mg. nicotine, CAMEL WIDES FILTERS: 17 mg. "tar", 1.3 mg. nicotine, av. per cigarette by FTC method. Actual amount may vary depending on how you smoke. For T&N info, visit www.fjrtt.com

SURGEON GENERAL'S WARNING: Cigarette Smoke Contains Carbon Monoxide.

This advertisement graphic features the word "CAMEL" at the top in large, red, outlined letters. Below it, a large, stylized cigarette is shown with a red camel on its filter. The words "BIG FAT DELICIOUS" are written across the cigarette in a banner. At the bottom, the word "WIDES" is written in large, red, outlined letters. Two packs of Camel Wides cigarettes are shown on the left. The background is white with green and yellow decorative flourishes. A small copyright notice is visible on the right side.

RJ Reynolds first launched Red Kamel cigarettes in 1913 as an up-scale companion to the more plebian Camel. Like many upwardly mobile products, Red Kamels did not survive the depression, and were dropped in 1936. In 1996 they resurfaced...



Kamel Reds

"ANNA JOINED THE RESISTANCE BECAUSE SHE LOVED HER HOMETLAND, PLUS SHE GOT TO SMOKE AMERICAN CIGARETTES."

KAMEL
Cigarettes

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

RED KAMEL LIGHTS: 11 mg. "tar", 0.8 mg. nicotine av. per cigarette by FTC method.
RED KAMEL ORIGINALS: 16 mg. "tar", 1.1 mg. nicotine av. per cigarette by FTC method.

SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

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RED KAMEL LIGHTS: 11 mg. "tar", 0.8 mg. nicotine av. per cigarette by FTC method.

Kamel Marketing to Youth

Cigarettes More than a drug
It's all here. Kamel! They're different! Be unique!
Forget everything you ever knew about
robots. This one's not a play
to be taken.

No. 789
KAMELO
CIGARETTES

LIFE SMOKE... ENJOY... & WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.

*Go ahead,
It's ON ME.*

**Save 125
on Ticketmaster tickets
with Cornell Cash.**

Get the best ticket prices, with about
100 gift certificates, you could save on shows
in just about any Ticketmaster venue,
and they take the same cash Cornell
Cash can. When you're ready, check
out the Cornell Cash website for all the
Cornell Cash ticket good buys.

CORNELL

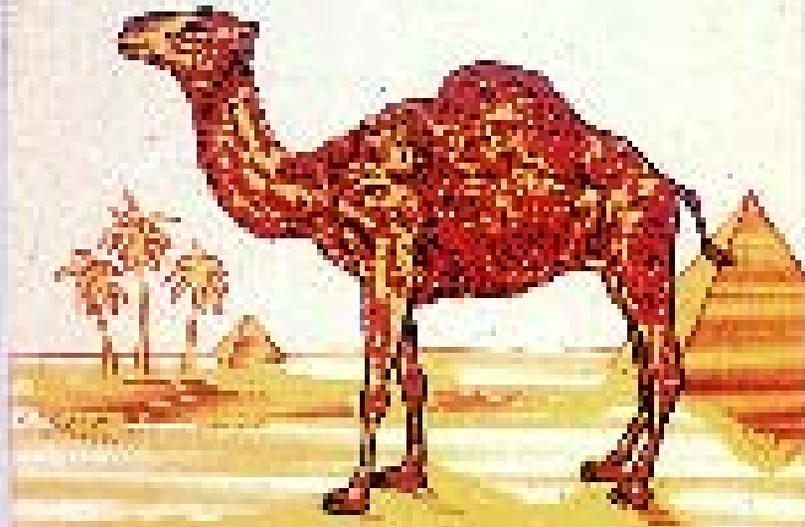


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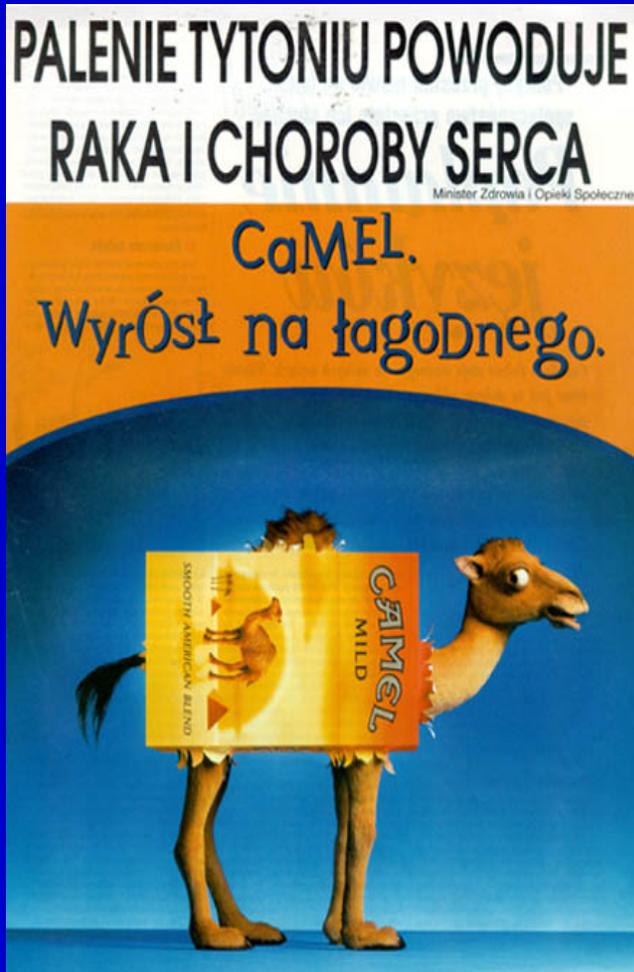
CAMEL

FILTERS



TURKISH & AMERICAN
BLEND
CIGARETTES

Poland



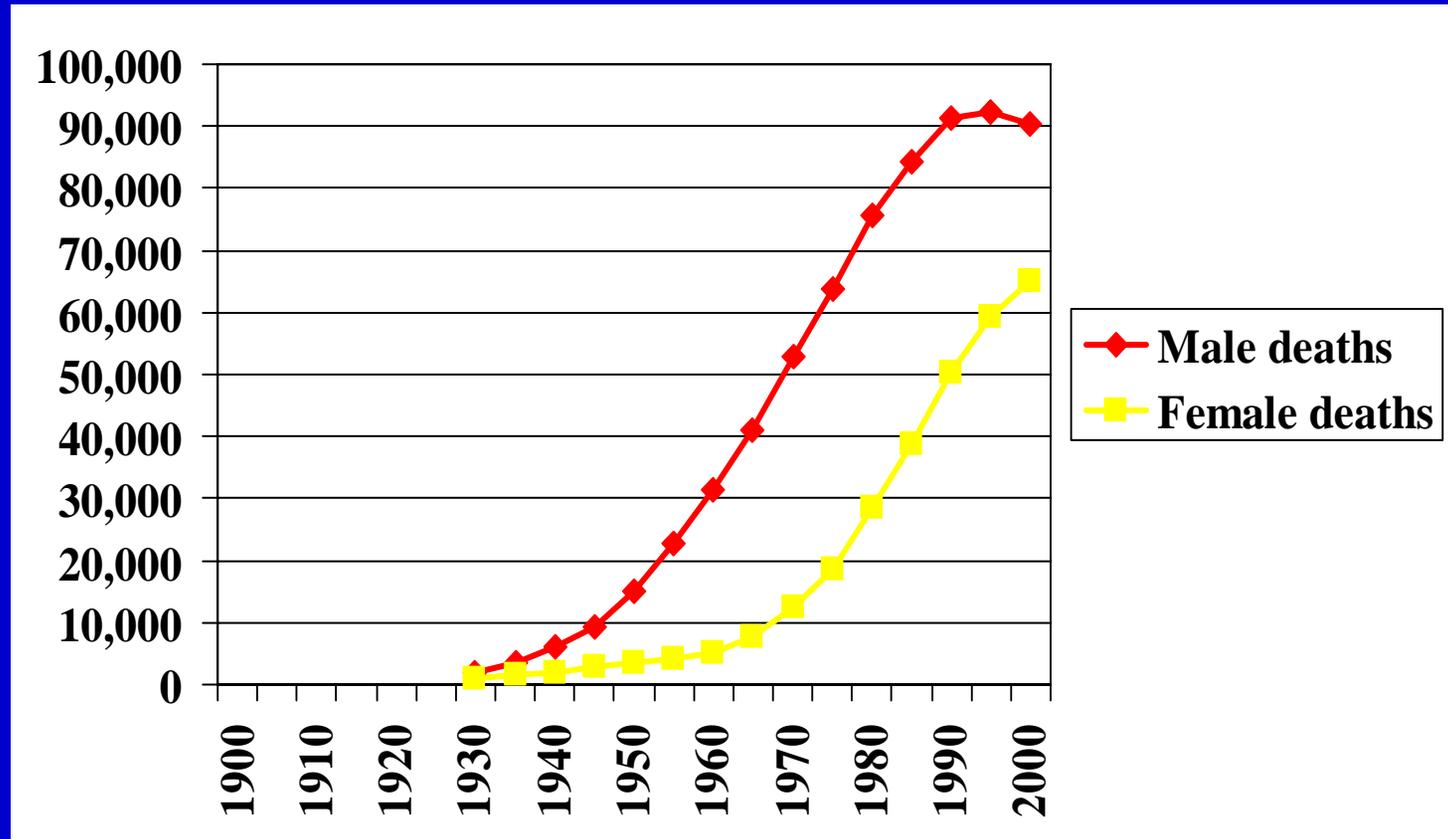
"Camel. He grew up to be kind."

Spain



"Have an intense pleasure with your Camel"

Number of Male and Female Lung Cancer Deaths, US 1930-2000



Wingo PA et al *Cancer* 2003 97(12 Suppl):3133-275; data include cancer of the bronchus, trachea, and pleura; 2000 data from National Vital Statistics Reports, September 16, 2002;50(15).

Early Recognition of the Epidemic by Clinicians

SYMPOSIUM ON CANCER

PRIMARY PULMONARY MALIGNANCY

Treatment by Total Pneumonectomy

Analysis of 79 Collected Cases and Presentation of 7 Personal Cases

ALTON TOSNER, M.D., F.A.C.S., and MICHAEL DUBREUIL, M.D., New Orleans, Louisiana

UNTIL recently carcinoma of the lung has been considered a relatively infrequent condition. However, recent studies have demonstrated that pulmonary malignancy is not only a common occurrence but is one of the most frequent carcinomas of the body. The increase in incidence of bronchogenic carcinoma is undoubtedly both apparent and real, as indicated by autopsy series from the German Clinics. Jürgens¹ found an incidence of pulmonary carcinoma of only 0.5 per cent of all autopsies performed from 1899 to 1921. The incidence of primary pulmonary carcinoma in all malignancies based on autopsy was 14.21 per cent during the period from 1819 to 1897. Seyditz² found an increase in the incidence of pulmonary carcinoma from 5.21 per cent during 1896 to 1906 to 11.21 per cent from 1911 to 1921. During the first half of 1922 there was an incidence of 14.1 per cent. Jell³ of Chicago, believes that pulmonary carcinoma represents 21.27 per cent of all carcinomas, and that pulmonary carcinoma was second in frequency only to carcinoma of the stomach and of the intestines. Prasad and Koss, in a series of 2494 autopsies, found 188 cases of carcinomas of which 59 were carcinomas of the lung, then representing 3.4 per cent of the total carcinomas and 1.21 per cent of the total autopsies. D'Annunzio, Franco, and Halpert reported that of 6,000 autopsies on persons over 1 year of age, performed in the Charity Hospital in New Orleans, primary carcinoma of the lung occurred in 70, or 1.17 per cent, and was almost as frequent as primary carcinoma of the biliary tract or of the pancreas. In 1,424 autopsies performed at the Touro Infirmary in New Orleans there were 199 cases with carcinoma. Twenty-three of the carcinomas originated in the bronchus. The incidence of bronchial carcinoma in the total autopsies was 1.8 per cent.

From the Department of Surgery, School of Medicine, Tulane University.

Presented at the Symposium on Cancer, before the Clinical Congress of the American College of Surgeons, New York, October 1922.

whereas that in all carcinomas was 11.1 per cent (1922). It is evident, therefore, that the incidence of pulmonary carcinoma is high. The fact that Jell's cases were covered only by autopsies, research emphasizes the necessity for its consideration.

Although it is controversial whether the increase in pulmonary carcinoma is recent, primary, apparent or real, the German autopsy material would indicate that the increase is actual and not only apparent. There are several explanations for the actual increase in the incidence of pulmonary malignancy, most of which have not been satisfactory. A number of theories have been suggested. The results of Wynn and McClellan, because of the presence of metastasis in the bronchial system of persons dying from influenza, suggested that this change is a post-influenza lesion. The incidence of irritating gases such as coal gas or gas originating from the increased use of motor cars has been proposed as an etiological factor. In our opinion the increase is smoking with the universal custom of inhaling is probably a responsible factor, as the related smokes, constantly repeated over a long period of time, undoubtedly is a source of chronic irritation in the bronchial system. In addition to the actual increase in pulmonary malignancy, there is unquestionably a relative increase in those localities where routine post-mortem examinations previously have not been made. This is due probably to the fact that the condition has not been suspected in many cases and adequate diagnostic procedures have not been employed. The recent development of thoracic surgery has stimulated interest in intrathoracic lesions. This, with the development of specialized methods of diagnosis, has facilitated the recognition of pulmonary malignancies.

PATHOLOGIST

It is generally agreed that the living cells of the thorax rarely, if ever, give rise to malignant neoplastic growths. Consequently all carcinomas of

- Clinical series reported
- Hypotheses offered concerning smoking and other factors
- Some case-control like studies

Ochsner and DeBakey--1939

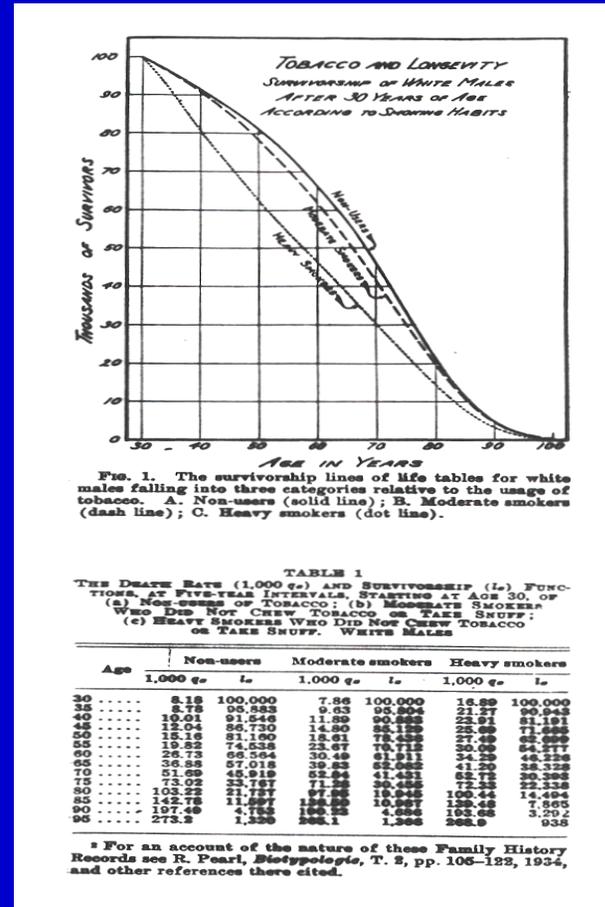
“In our opinion the increase in smoking with the universal custom of inhaling is probably a responsible factor, as the inhaled smoke, constantly repeated over a long period of time, undoubtedly is a sources of chronic irritation to the bronchial mucosa.”

*(Ochsner and DeBakey
Surg Gyn Ob 1939; 68:435)*

Raymond Pearl, 1938: Smoking Shortens Lifespan



Raymond Pearl, 1879-1940



Source: Pearl, Science 1938

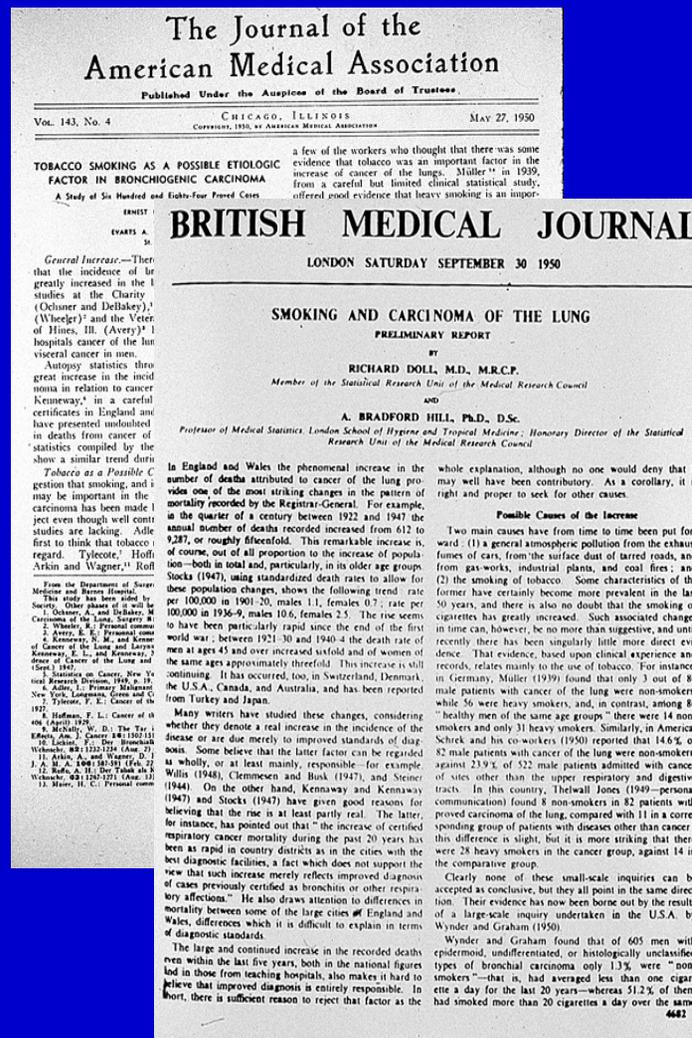
1950: Case-Control Studies

1950 Three Key Case-Control Studies:

Morton Levin publishes study from Roswell Park in JAMA

Ernst L. Wynder and Evarts A. Graham publish study in JAMA- 96.5% of lung cancer patients smoked

Richard Doll and Bradford Hill publish study in BMJ finding that heavy smokers are at 50X greater risk for lung cancer

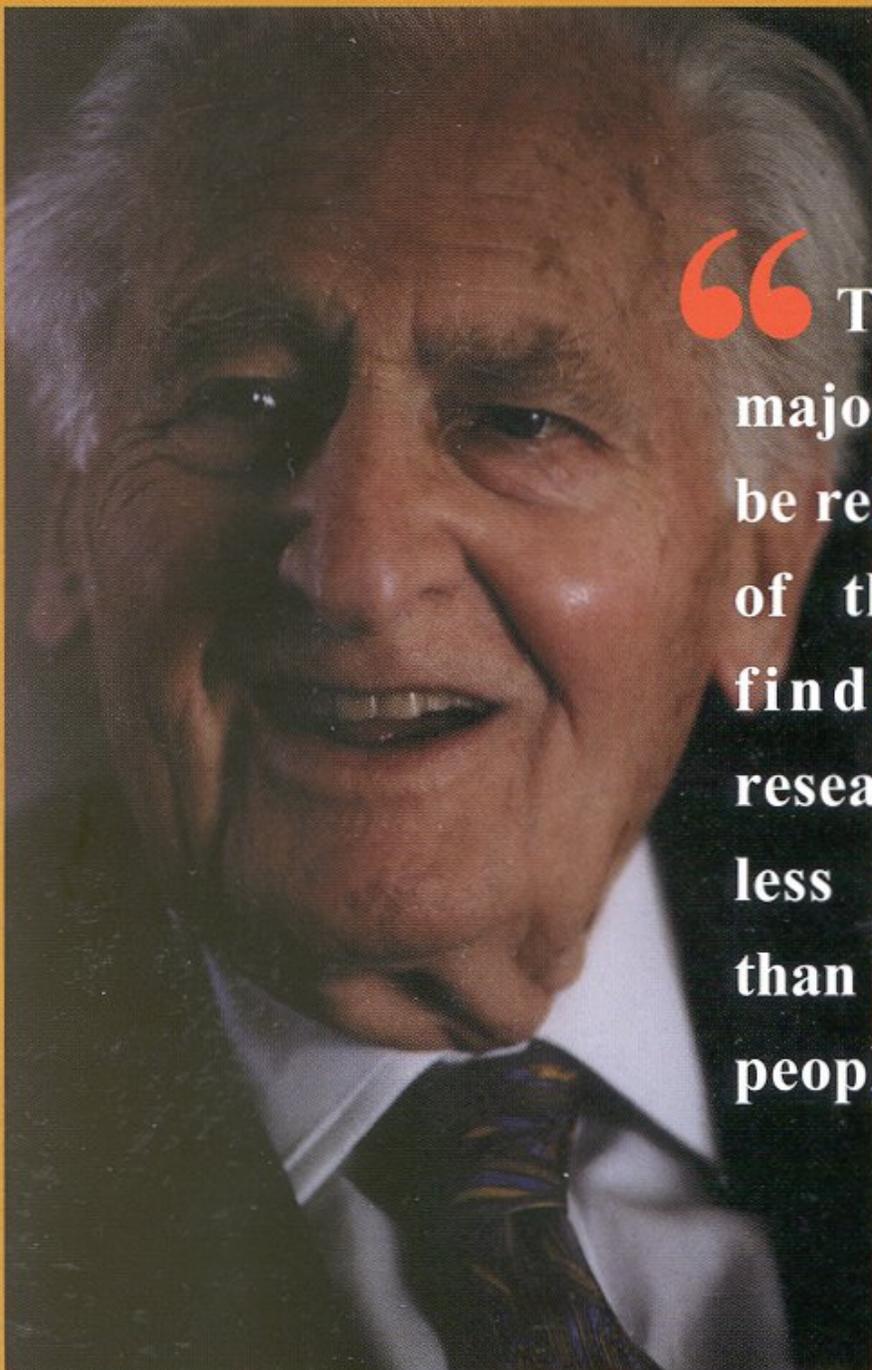


Dr. Morton Levin, 1950

Dr. Levin was lecturing on the subject (cigarette smoking and lung cancer) at the Sorbonne. Interviewed by the French press, he was asked if he himself was a smoker. Dr. Levin replied, “Gentlemen, I have just quit.”



Photo: The Department of Epidemiology at the Johns Hopkins School of Hygiene and Public Health, circa 1936 (Source: Dept. Archives)



“ That so many diseases - major and minor - should be related to smoking is one of the most astonishing findings of medical research in this century; less astonishing perhaps than the fact that so many people have ignored it. ”

Mortality in relation to smoking: 50 years' observations on male British doctors

Richard Doll, Richard Peto, Jillian Boreham, Isabelle Sutherland

Abstract

Objective To compare the hazards of cigarette smoking in men who formed their habits at different periods, and the extent of the reduction in risk when cigarette smoking is stopped at different ages.

Design Prospective study that has continued from 1951 to 2001.

Setting United Kingdom.

Participants 34 439 male British doctors. Information about their smoking habits was obtained in 1951, and periodically thereafter; cause specific mortality was monitored for 50 years. **Main outcome measures** Overall mortality by smoking habit, considering separately men born in different periods.

Results The excess mortality associated with smoking chiefly involved vascular, neoplastic, and respiratory diseases that can be caused by smoking. Men born in 1900-1930 who smoked only cigarettes and continued smoking died on average about 10 years younger than lifelong non-smokers. Cessation at age 60, 50, 40, or 30 years gained, respectively, about 3, 6, 9, or 10 years of life expectancy. The excess mortality associated with cigarette smoking was less for men born in the 19th century and was greatest for men born in the 1920s. The cigarette smoker versus non-smoker probabilities of dying in middle age (35-59) were 42% v 24% (a twofold death rate ratio) for those born in 1900-1909, but were 43% v 15% (a threefold death rate ratio) for those born in the 1920s. At older ages, the cigarette smoker versus non-smoker probabilities of surviving from age 70 to 90 were 10% v 12% at the death rates of the 1950s (that is, among men born around the 1870s) but were 7% v 33% (again a threefold death rate ratio) at the death rates of the 1990s (that is, among men born around the 1910s).

Conclusion A substantial progressive decrease in the mortality rates among non-smokers over the past half century (due to prevention and improved treatment of disease) has been wholly outweighed, among cigarette smokers, by a progressive increase in the smoker v non-smoker death rate ratio due to earlier and more intensive use of cigarettes. Among the men born around 1920, prolonged cigarette smoking from early adult life tripled age specific mortality rates, but cessation at age 50 halved the hazard, and cessation at age 30 avoided almost all of it.

Introduction

During the 19th century much tobacco was smoked in pipes or as cigars and little was smoked as cigarettes, but during the first few decades of the 20th century the consumption of manufactured cigarettes increased greatly.¹ This led eventually to a rapid increase in male lung cancer, particularly in the United

Kingdom (where the disease became by the 1940s a major cause of death). Throughout the first half of the 20th century the hazards of smoking had remained largely unsuspected.² Around the middle of the century, however, several case-control studies of lung cancer were published in Western Europe³⁻⁶ and North America,⁷⁻¹⁰ leading to the conclusion in 1950 that smoking was "a cause, and an important cause" of the disease.¹

1951 prospective study

This discovery stimulated much further research into the effects of smoking (not only on lung cancer but also on many other diseases), including a UK prospective study of smoking and death among British doctors that began in 1951 and has now continued for 50 years.¹¹⁻²⁷ The decision that this study would be conducted among doctors was taken partly because it was thought that doctors might take the trouble to describe their own smoking habits accurately, but principally because their subsequent mortality would be relatively easy to follow, as they had to keep their names on the medical register if they were to continue to practise. Moreover, as most doctors would themselves have access to good medical care, the medical causes of any deaths among them should be reasonably accurately certified.

The 1951 study has now continued for much longer than originally anticipated, as the doctors did indeed prove easy to follow, and they provided further information about any changes in their smoking habits along the way (in 1957, 1966, 1971, 1978, and 1991). A final questionnaire was sent out in 2001.

By 1954 the early findings¹¹ had confirmed prospectively the excess of lung cancer among smokers that had been seen in the retrospective studies.³⁻¹⁰ Findings on cause specific mortality in relation to smoking were published after four periods of follow up (after four years,¹² 10 years,¹³ 20 years,^{14, 15} and 40 years¹⁶). The early results from this study,¹³⁻¹⁶ together with those from several others that began soon after, showed that smoking was associated with mortality from many different diseases. Indeed, although smoking was a cause of the large majority of all UK lung cancer deaths, lung cancer accounted for less than half of the excess mortality among smokers.

As recently as the 1980s, however, the full eventual effects on overall mortality of smoking substantial numbers of cigarettes throughout adult life were still greatly underestimated, as no population that had done this had yet been followed to the end of its life span. The present report of the 50 year results chiefly emphasises the effects on overall mortality (subdivided by period of birth) of continuing to smoke cigarettes and of ceasing to do so at various ages.

A Frank Statement to Cigarette Smokers

RECENT REPORTS on experiments with mice have given wide publicity to a theory that cigarette smoking is a slow way to get lung cancer in human beings.

Although conducted by doctors of professional standing, these experiments are not regarded as conclusive in the field of cancer research. However, we do not believe that any serious medical research, even though its results are inconclusive should be disregarded or lightly dismissed.

At the same time, we feel it is in the public interest to call attention to the fact that serious doctors and research workers have publicly questioned the claimed significance of these experiments.

Disappointed scientists point out:

1. Their medical records of recent years indicate some possible causes of lung cancer.
2. There is no agreement among the scientists regarding what the cause is.
3. There is no proof that cigarette smoking is one of the causes.
4. The statistics purporting to link cigarette smoking with the disease could apply with equal force to any one of many other agents of modern life, hence the reliability of the statistics themselves is questioned by numerous scientists.

We accept no interest in people's health as a basic responsibility, particularly recovery after consideration in our business. We believe the products we make are not injurious to health.

We always have and always will cooperate closely with those whose task it is to safeguard the public health.

For more than 100 years tobacco has given relief, pleasure and enjoyment to countless, not one time but another during those years millions have held it responsible for practically every disease of the human body. One by one these charges have been abandoned for lack of evidence.

Regardless of the amount of the gas, the fact that cigarette smoking today should even be suggested as a cause of a serious disease is a matter of deep concern to us.

Many people have asked us what we are doing to meet the public's concern aroused by the recent reports. Here is the answer:

1. We are studying and assessing the research effort here all phases of tobacco are our focus. The joint financial and staff of teams is to advance in what is already being researched by individual companies.
2. For this purpose we are organizing a joint industry group consisting initially of the subsidiaries. This group will be known as TOBACCO INDUSTRY RESEARCH COMMITTEE.
3. The scope of the research activities of the Committee will be a selection of independent scientific and medical reports. In addition there will be an advisory Board of scientists distinguished in the cigarette industry. A group of distinguished men from medicine, science, and statistics will be asked to serve as this Board. These activities will inform the Committee as to research activities.

This statement is being issued because we believe the people are entitled to know. There is no need on this matter and what we intend to do about it.

TOBACCO INDUSTRY RESEARCH COMMITTEE

3100 EMPIRE STATE BUILDING, NEW YORK 1, N. Y.

SPONSORS:

<p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p> <p>WATSON & WATSON New York, New York, President</p> <p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p> <p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p> <p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p>	<p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p>	<p>AMERICAN TOBACCO COMPANY, INC. New York, New York, President</p>
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REPRODUCTION

A Frank Statement to Cigarette Smokers

"We accept an interest in people's health as a basic responsibility, paramount to every other consideration in our business."

"We believe the products we make are not injurious to health."

"We always have and always will cooperate closely with those whose task it is to safeguard the public health."

TRIAL EXHIBIT
14,024

Judge Kessler Speaks: “An immeasurable amount of human suffering”

The New York Times Washington

WORLD U.S. N.Y. / REGION BUSINESS TECHNOLOGY SCIENCE HEALTH SP
POLITICS WASHINGTON EDUCATION

New Limits Set Over Marketing for Cigarettes

By PHILIP SHENON
Published: August 18, 2006

WASHINGTON, Aug. 17 — A federal judge ordered strict new limitations on tobacco marketing on Thursday after finding that cigarette makers deserved to be punished for a decades-old conspiracy to deceive the public about the dangers of [smoking](#).



The deception, Judge Gladys Kessler of Federal District Court for the District of Columbia said, resulted in “an immeasurable amount of human suffering.”

But in her ruling here in a racketeering suit filed by the Justice Department against the industry, Judge Kessler also had good news for the leading tobacco companies.

Judge Kessler ordered the companies to stop marketing cigarettes as “low tar” or “light” or “natural” and to stop using “deceptive brand descriptors which implicitly convey to the smoker and potential smoker

Judge Kessler's office, via Associated Press

The tobacco industry has ***“marketed and sold their lethal product with zeal, with deception, with a single-minded focus on their financial success and without regard for the human tragedy or social costs that success exacted.”***

The Final Opinion

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

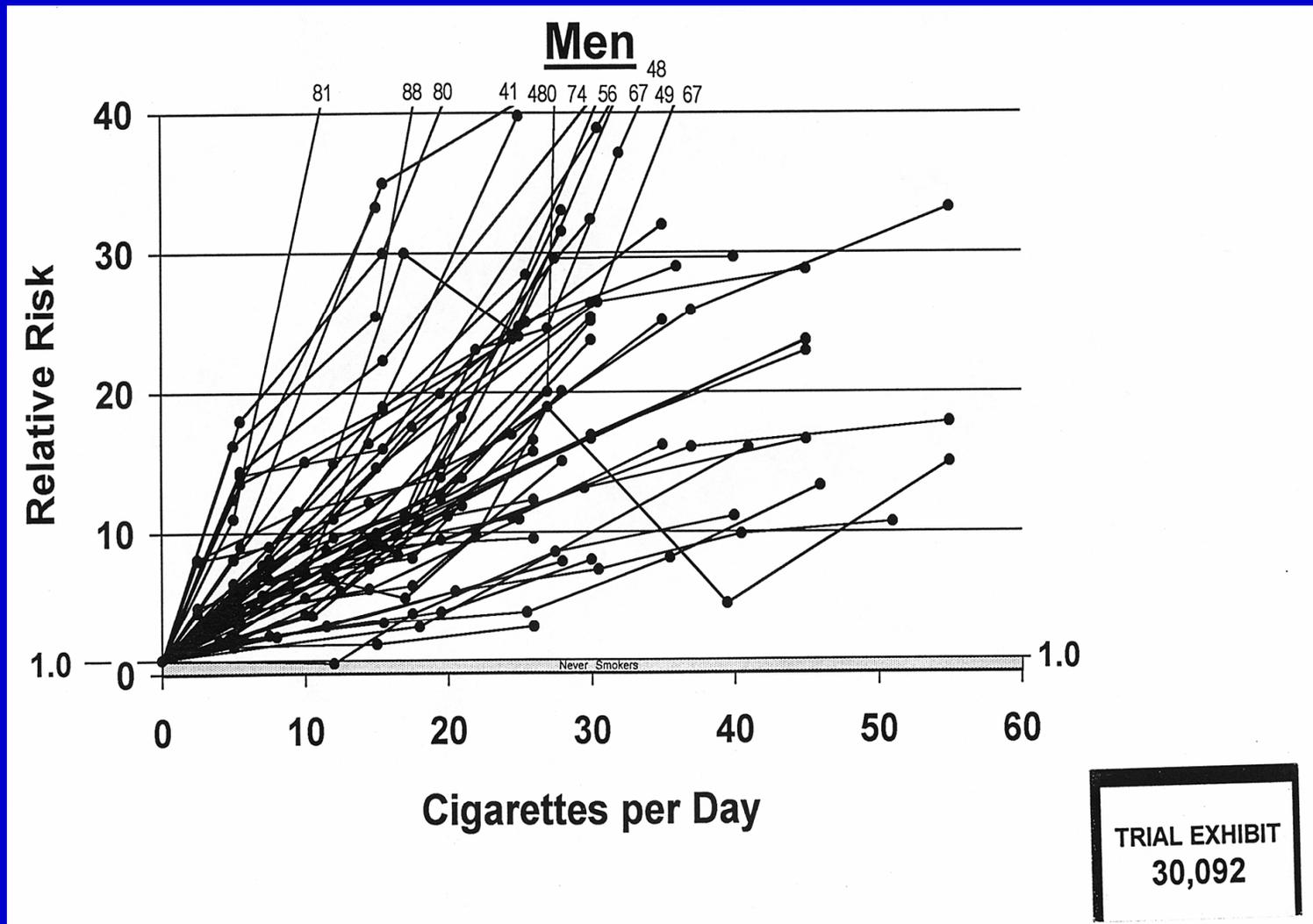
UNITED STATES OF AMERICA,	:	
	:	
Plaintiff,	:	
	:	Civil Action No. 99-2496 (GK)
and	:	
	:	
TOBACCO-FREE KIDS ACTION FUND,	:	
AMERICAN CANCER SOCIETY,	:	
AMERICAN HEART ASSOCIATION,	:	
AMERICAN LUNG ASSOCIATION,	:	
AMERICANS FOR NONSMOKERS' RIGHTS,	:	
and NATIONAL AFRICAN AMERICAN	:	
TOBACCO PREVENTION NETWORK,	:	
	:	
Intervenors,	:	
	:	
v.	:	
	:	
PHILIP MORRIS USA, INC.,	:	
(f/k/a Philip Morris, Inc.), <i>et al.</i> ,	:	
	:	
Defendants.	:	

FINAL OPINION

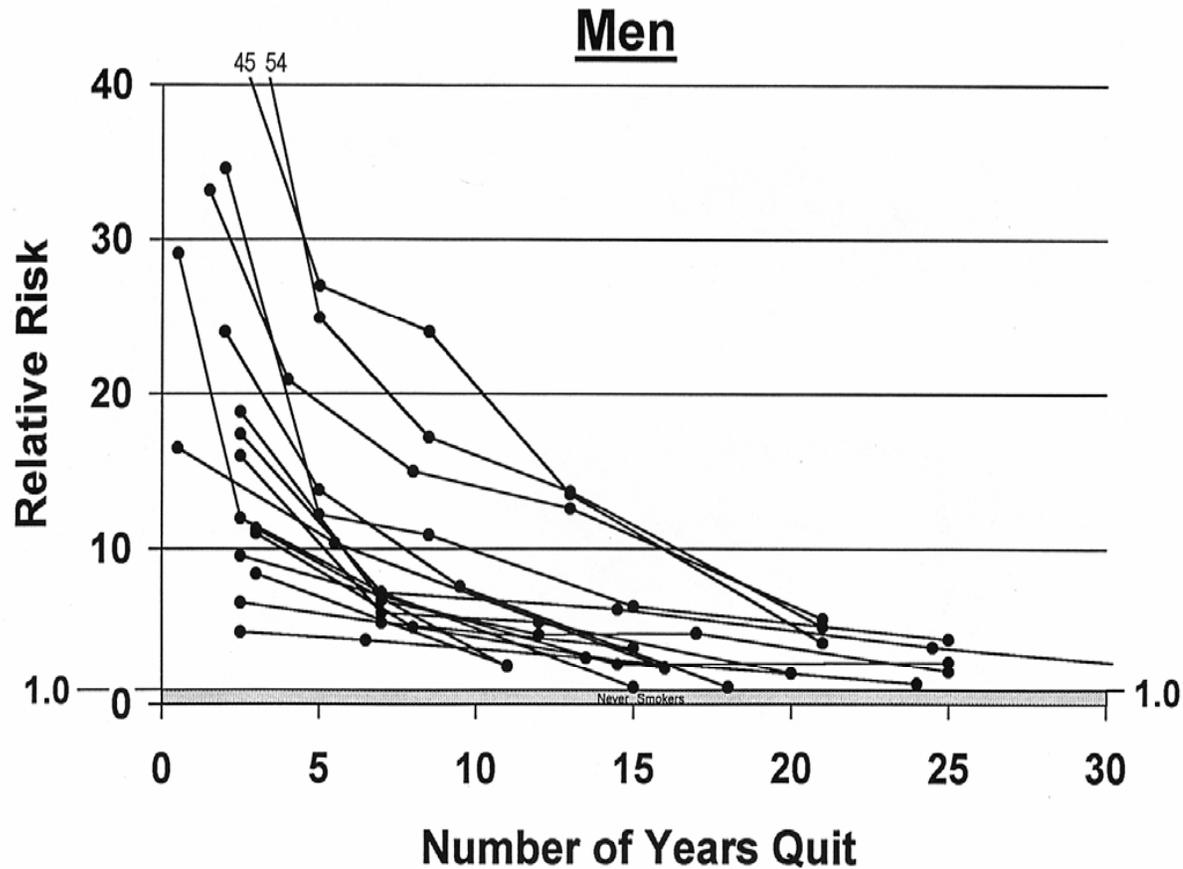
“Judge Gladys Kessler's scorn for the tobacco industry was evident in her 1,742-page opinion last week, which found that nine cigarette manufacturers and two trade groups had conspired to hide the truth about smoking's adverse health consequences for more than 50 years.”

**Source: Emma Schwartz
Legal Times
August 22, 2006**

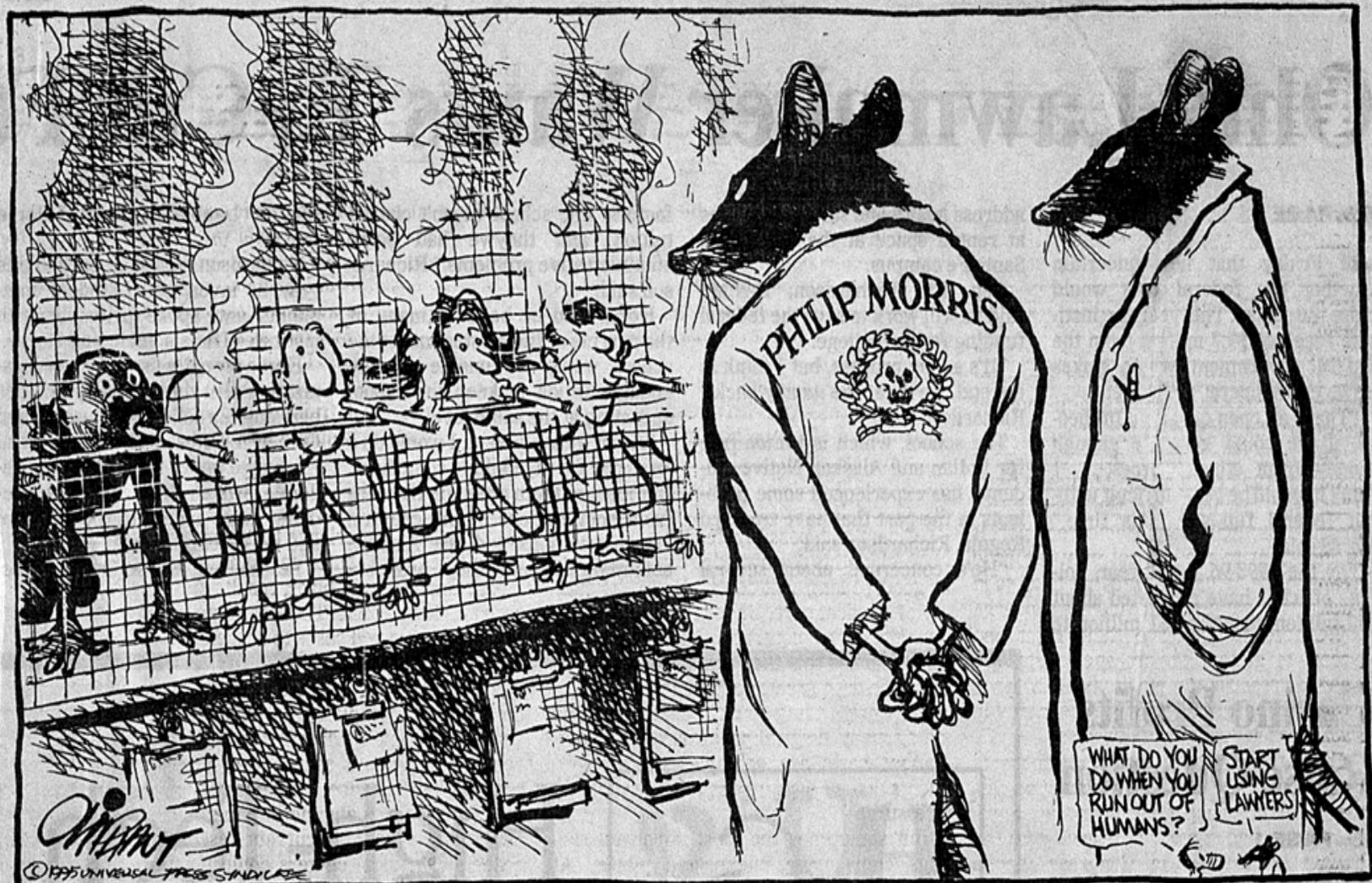
Relative Risk of Lung Cancer by Cigarettes Smoked Per Day: Current vs. Never Smokers



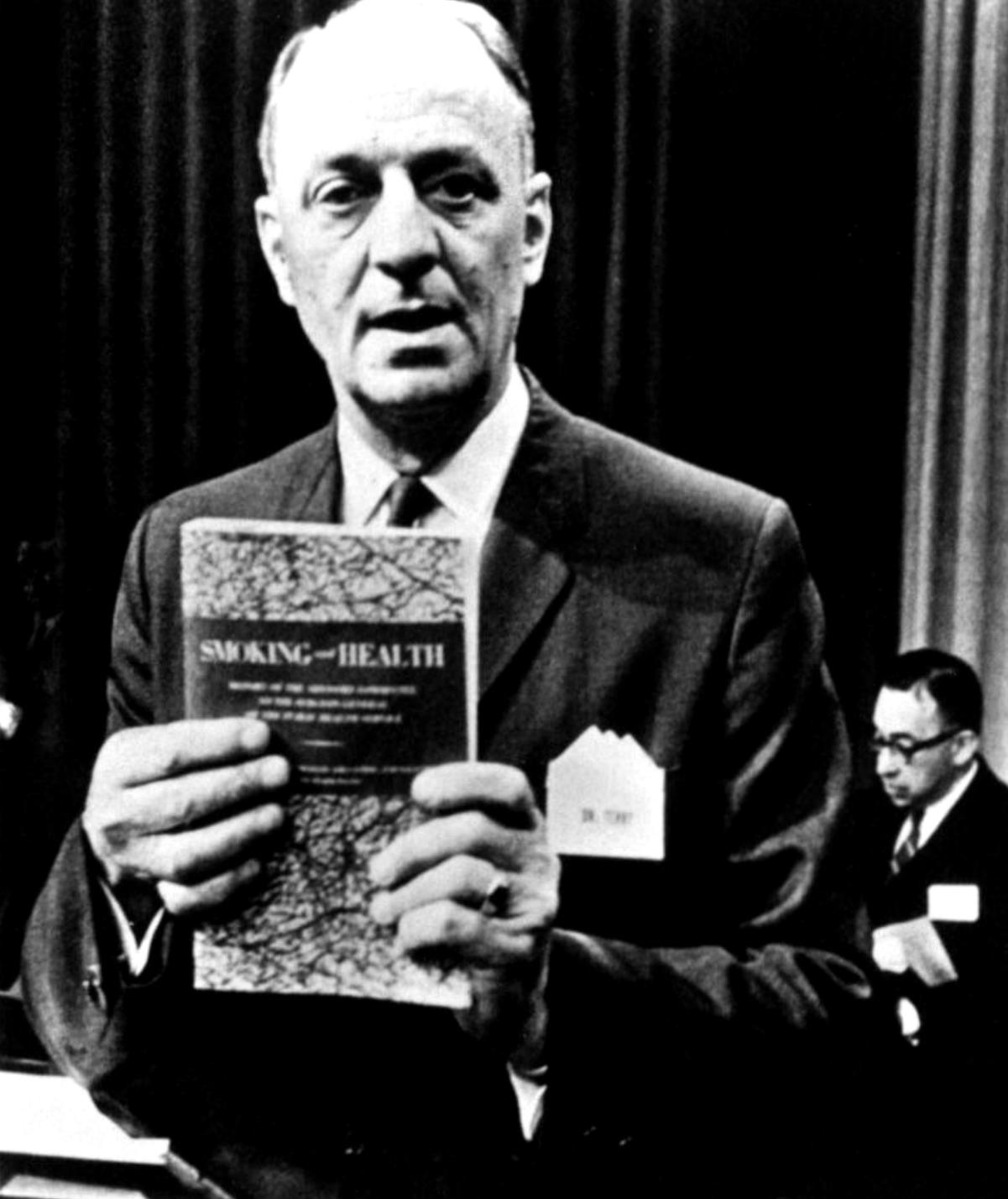
Relative Risk of Lung Cancer by Number of Years Quit Smoking: Current vs. Never Smokers



TRIAL EXHIBIT
30,096



'THESE STUDIES ARE INCONCLUSIVE — SO FAR WE'VE ONLY SUCCEEDED IN GIVING CANCER AND HEART DISEASE TO LABORATORY HUMANS.'



Luther Terry: The 1964 SG Report

1 out of every 3 smokers!

Which cigarette gives you the greatest health protection?



1.

Five people simultaneously light up five well-known brands of filter-tip cigarettes. Then each smoker puts the cigarette into the glass of water with a tube through which smoke can be drawn.



2.

Four puff-blowers of smoke are drawn into each glass by each of the five smokers. Then the glasses are allowed to sit for a few minutes so that nicotine and tar particles in the smoke have a chance to settle.



3.

At a given signal, each smoker lifts his glass for the smoking contest! The smokers that draw right through the water have cigarettes that really smoke. But there's nothing to draw from the new KENT. Proof that KENT contains far less nicotine than any other filter cigarette. Visual proof of the greatest health protection in cigarette history!

gives you the greatest health protection?

Five smokers compare KENT with four other well-known filter-tip cigarettes. Look at the results... then decide which cigarette you should smoke.

According to published medical reports, at least 1 out of every 3 smokers is sensitive to the nicotine and tar in tobacco smoke.

Until recently, if these sensitive smokers wanted a good smoke, they just had to suffer the consequences. But now... with the introduction of the new KENT with the Micronite Filter... their problem is solved.

What KENT's Micronite Filter does

KENT's Micronite Filter is the only filter that catches out enough of the nicotine and tar to tobacco smoke to give sensitive smokers the health protection they need.

In fact, KENT contains far more nicotine and tar than any other filter cigarette... and you can be proud of this fact for yourself in the three pictures on the opposite page.

Why the Micronite Filter is best

There is a good reason why the results you see in the third picture so favor KENT. It is because the Micronite Filter is made of a material which has been used to purify the air in atomic energy plants of microscopic impurities... while other cigarette filters are made of ordinary cotton, cellulose or crepe paper.

This material—as used in KENT's Micronite Filter—is so effective that it removes nicotine and tar particles as small as 2/10 of a micron... so tiny that it would take 15,000 of them to cover the head of a pin.

At the same time, you can easily draw through the Micronite Filter the wonderfully rich flavor of the fine tobacco blended especially for KENT cigarettes.

Try KENT today

With your first KENT, you'll discover how good a cigarette can be when you're not bothered by the harsh taste of nicotine and tar. And we believe that you sensitive smokers will be delighted with how much better you feel after smoking a carton of KENTs.



Kent

with exclusive
MICRONITE filter

Harm Reduction

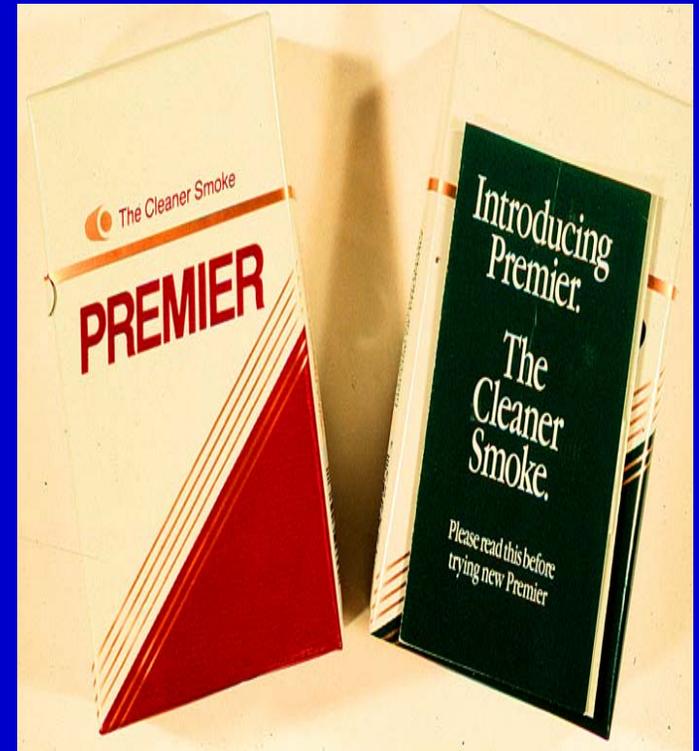
1950s Filter cigarettes

1970s Low tar and nicotine

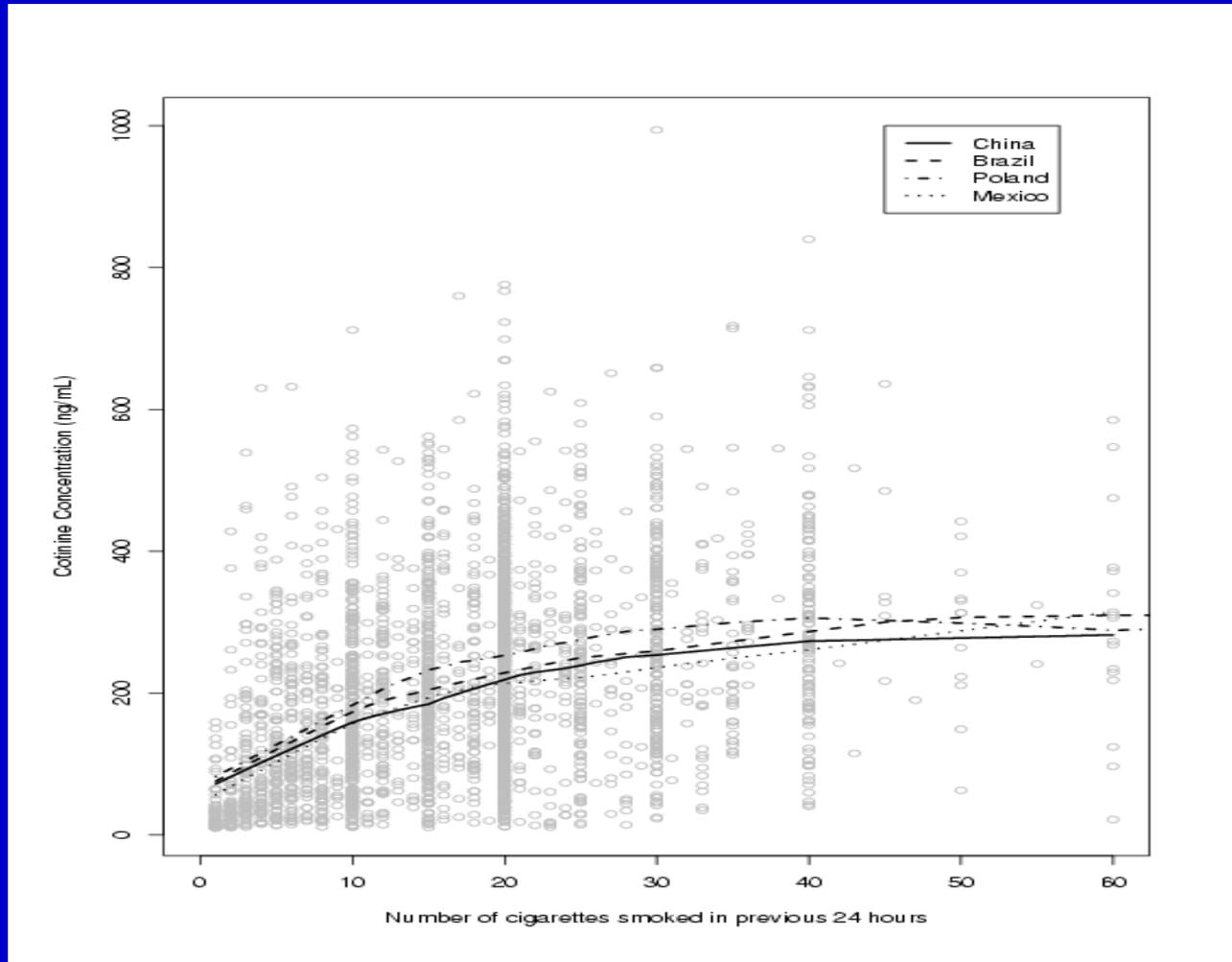
1989 PM tests and abandons
“Premier”

1990s Nicotine replacement
therapy

2000s Alternative nicotine
delivery products, like
Eclipse



Multi-Country Study: Cotinine Level by Number of Cigarettes in Past 24 hrs



The 2004 Report of the US Surgeon General

The Health Consequences of Smoking

A Report of the Surgeon General



Department of Health and Human Services

- **Systematic evidence review**
- **Effects of active smoking**
- **Specific diseases**
- **Diminished health**
- **Web-based data system**
- **Public report and website**

Most Recent Scientific Evidence: Active Smoking

Diminished Health: 2004

Leukemia: 2002

Nasal & Oral

pharynx: 1982

Larynx: 1980

Esophagus: 1982

Lung: 1964

Stomach: 2002

Pancreas: 1990

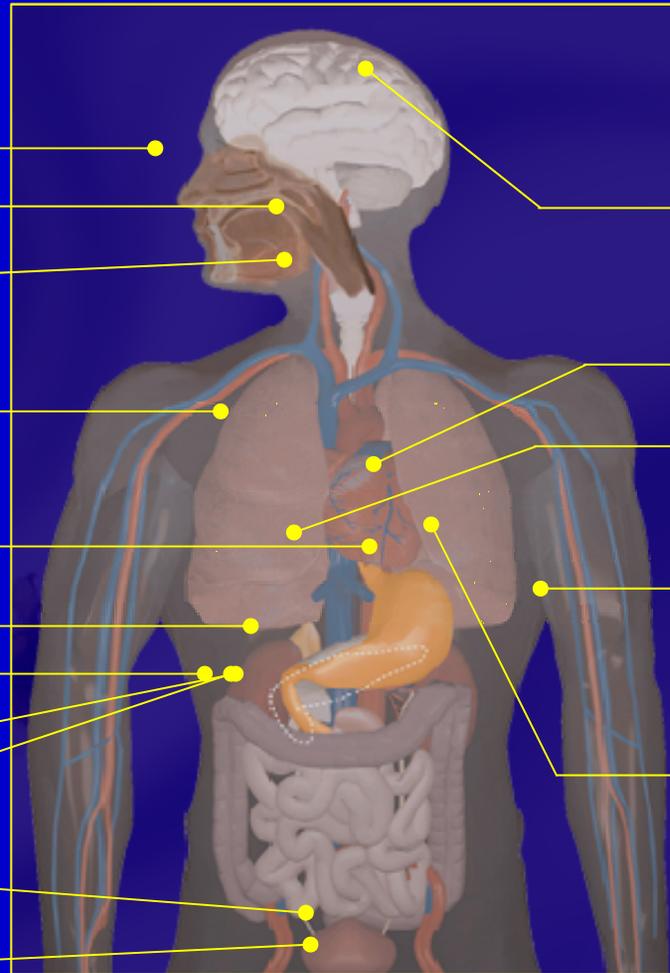
Kidney: 1982

Ureter: 1990

Liver: 2002

Bladder: 1990

Cervix: 2002



Cataract: 2004

Stroke: 1983

**Coronary heart
disease: 1979**

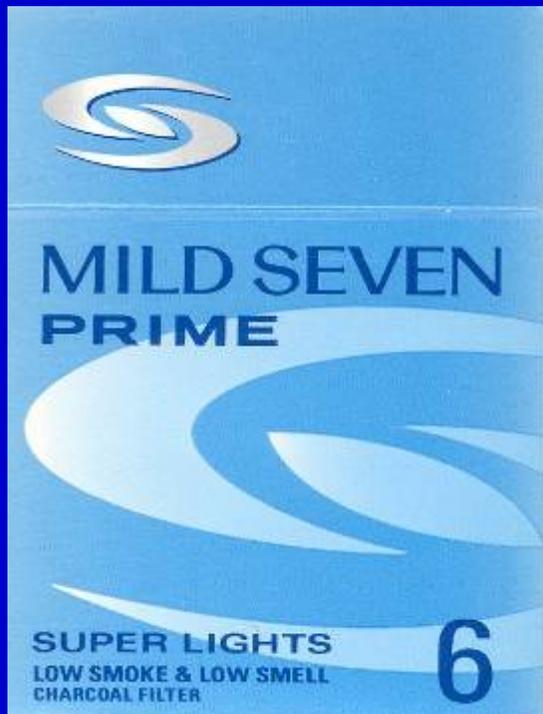
**Aortic aneurysm:
1983**

**Atherosclerotic
peripheral
vascular disease:
1983**

**Chronic obstructive
pulmonary disease
(COPD): 1964**

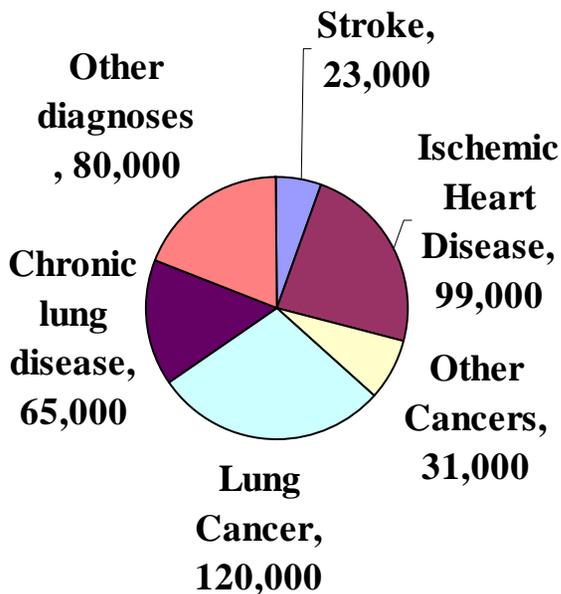
Examples of 'Novel' Products

NEW SMOKING WAY



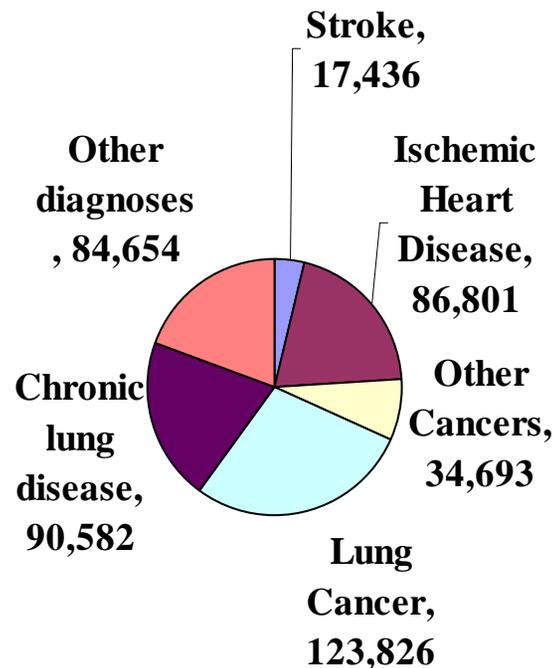
Deaths Attributable to Cigarette Smoking - U.S.

1999



Source: CDC SAMMEC, MMWR 1993; 42:645-9.

2001



Source: CDC, MMWR 2005; 54(25);625-628

Secondhand Smoke

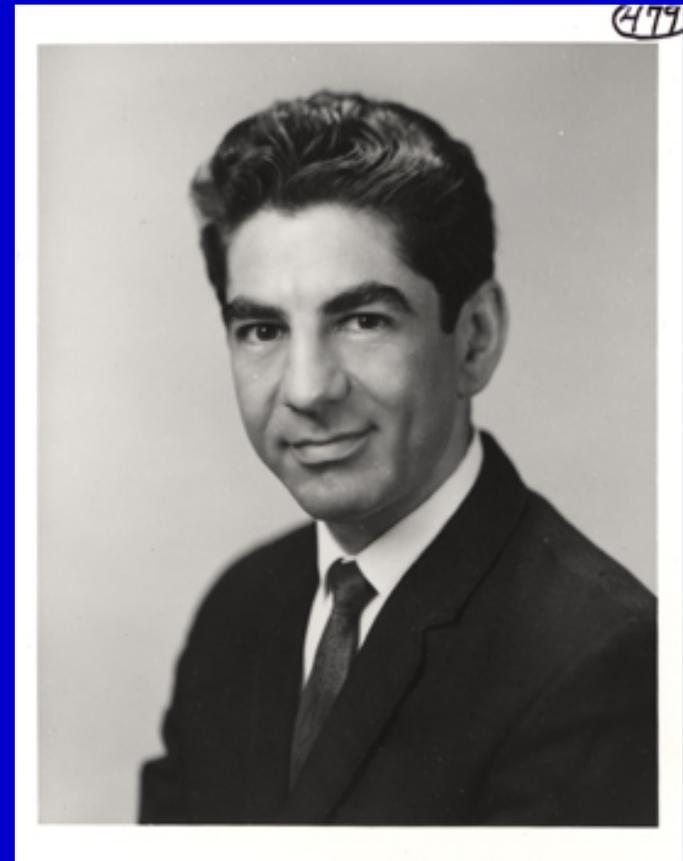
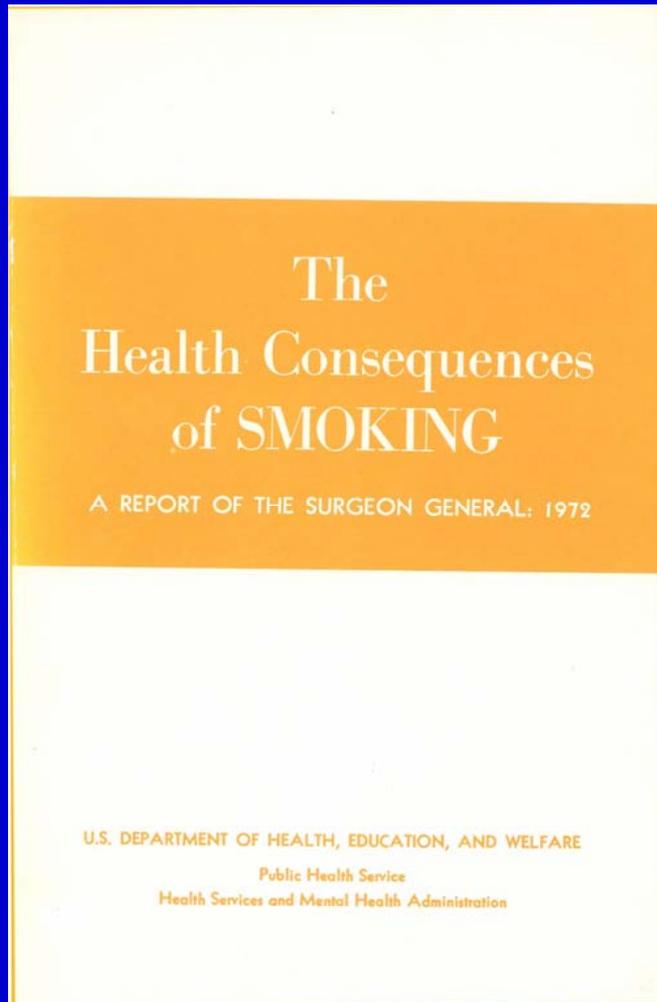
**Sidestream
smoke**



**Exhaled
mainstream
smoke**

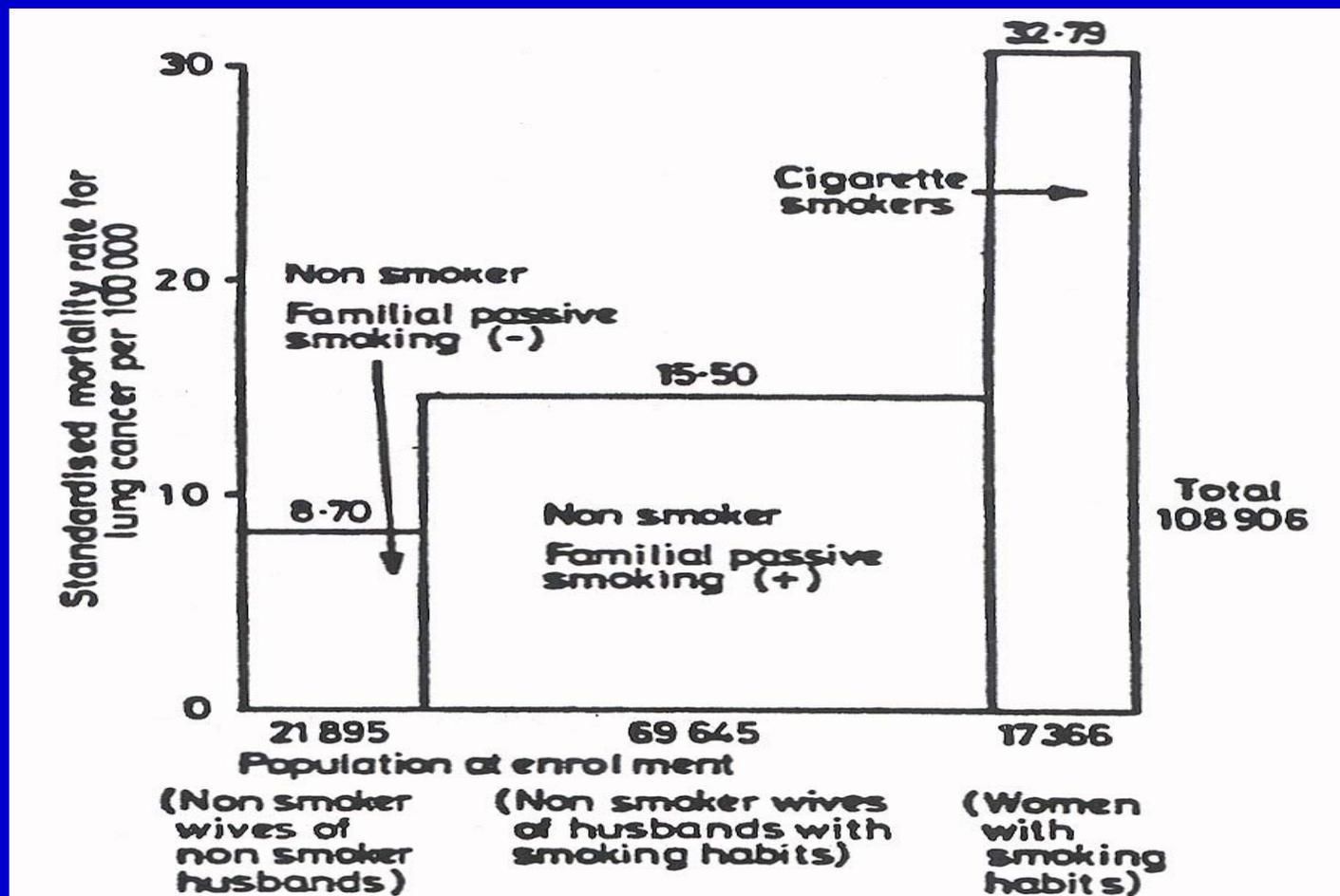
Sidestream + exhaled mainstream smoke = SHS

The 1972 Surgeon General's Report



Jesse L. Steinfield,
Surgeon General, 1969-1973
*Source: National Library of Medicine and
US Public Health Service*

Lung Cancer Mortality in Women According to the Presence or Absence of Direct and Familial Indirect Smoking *(Hirayama 1981)*



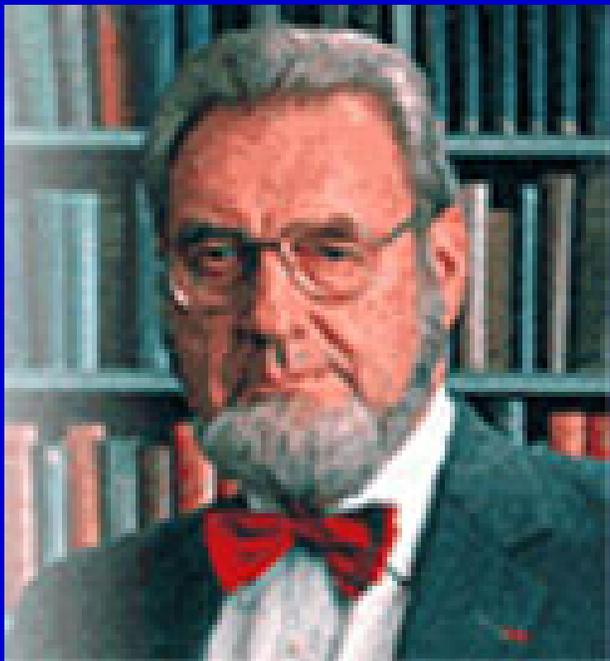
The House of Koop--1986



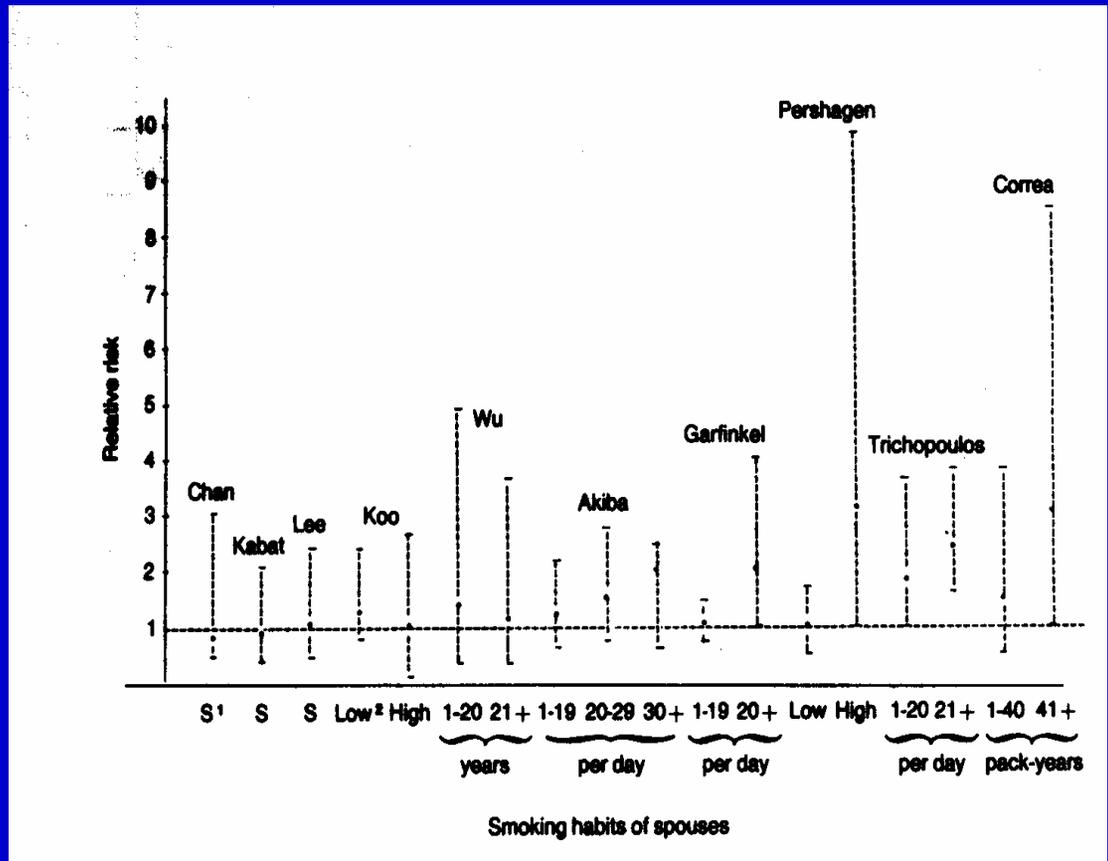
Bill Lynn (OSH), Dave Burns (Senior Editor), and Don Shopland (OSH)–Part of the 1986 SG Report team – in front of Dr. Koop’s house on the NIH campus.

Source: Jon Samet’s personal collection

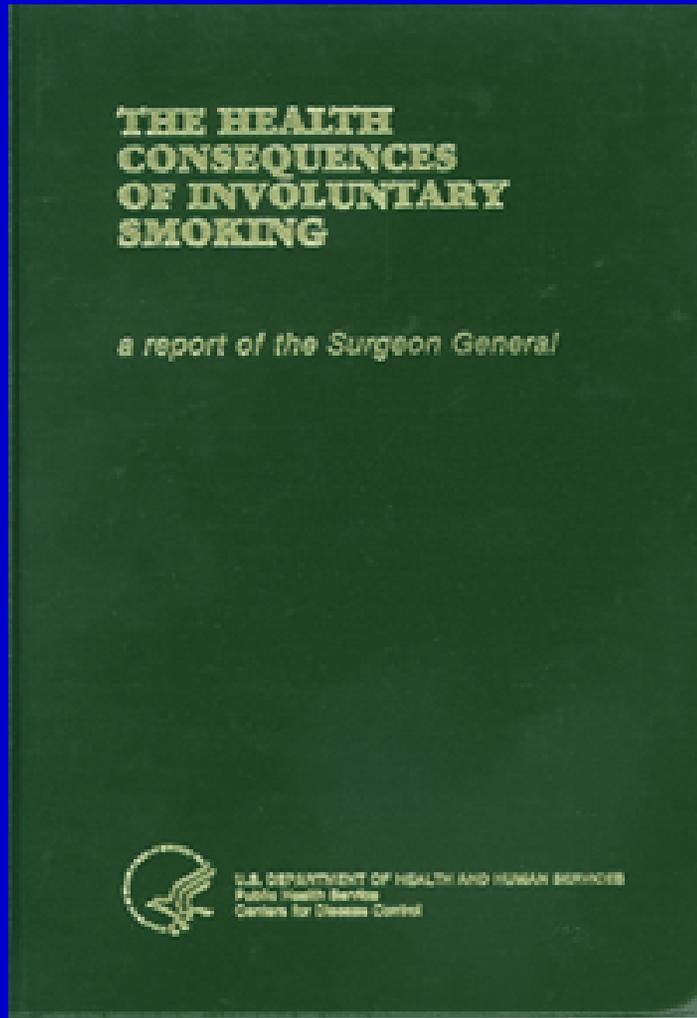
1986 Surgeon General's Report



C. Everett Koop, M.D.
Former U.S. Surgeon General



Passive Smoking and Lung Cancer--1986



“Involuntary smoking is a cause of disease, including lung cancer, in health nonsmokers.”

The 2006 SGR: The Release

June 27, 2006

Photos courtesy of OSH/CDC



The 2006 Report of the US Surgeon General

The Health Consequences of Involuntary Exposure to Tobacco Smoke

A Report of the Surgeon General



Department of Health and Human Services

Major Conclusions (1-3) of the 2006 Surgeon General's Report

- 1. Secondhand smoke causes premature death and disease in children and in adults who do not smoke.**
- 2. Children exposed to secondhand smoke are at increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.**
- 3. Exposure of adults to secondhand smoke has immediate adverse effects on the cardiovascular system and causes coronary heart disease in children.**

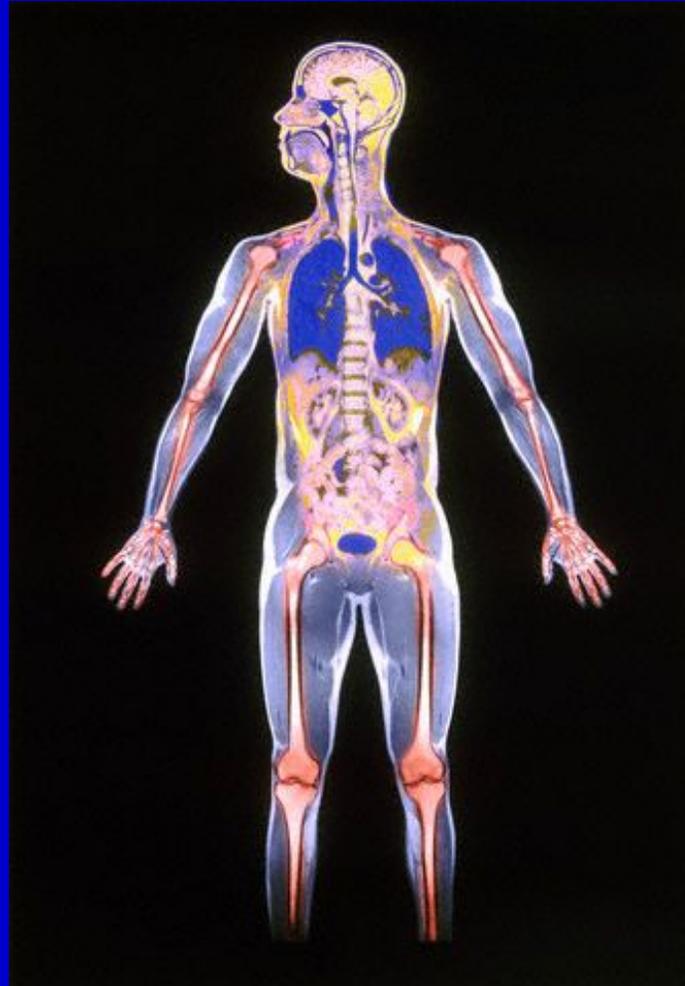
Major Conclusions (4-6) of the 2006 Surgeon General's Report

- **4. The scientific evidence indicates that there is no risk-free level of exposure to secondhand smoke.**
- **5. Many millions of Americans, both children and adults, are still exposed to secondhand smoke in their homes and workplaces, despite substantial progress in tobacco control.**
- **6. Eliminating smoking in indoor spaces fully protects nonsmokers from exposure to secondhand smoke. Separating smokers from nonsmokers, cleaning the air, and ventilating buildings cannot eliminate exposure of nonsmokers to secondhand smoke.**

Diseases and Adverse Health Effects Caused by Secondhand Smoke

Adults

- Lung Cancer
- Heart Disease



Children

- SIDS
- Exacerbation of Asthma
- Chronic Respiratory Illness
 - Reduced Lung Function Growth
- Middle Ear Disease
- Acute Respiratory Illness

2005 California EPA Report: Attributable Risks Associated with SHS

	Conclusion Update	Conclusion Update
Outcome	Annual Excess # in CA	Annual Excess # in US
Pregnancy: Low birth weight	1,600 ¹	24,500 ²
Pre-term delivery	4,700 ¹	71,900 ²
Asthma (in children): # Episodes ³	31,000 ⁴	202,300 ⁵
# New cases	N/A	N/A
#Exacerbations		
Lower respiratory illness	N/A	N/A
Otitis media visits	50,200	790,000 ⁶
SIDS	21 ⁷	430 ⁸
Cardiac death (Ischemic heart disease death)	3,600 (range: 1,700-5,500) ⁹	46,000 (range: 22,700-69,600) ¹⁰
Lung cancer death	400 ¹¹	3400

The New York Times Magazine

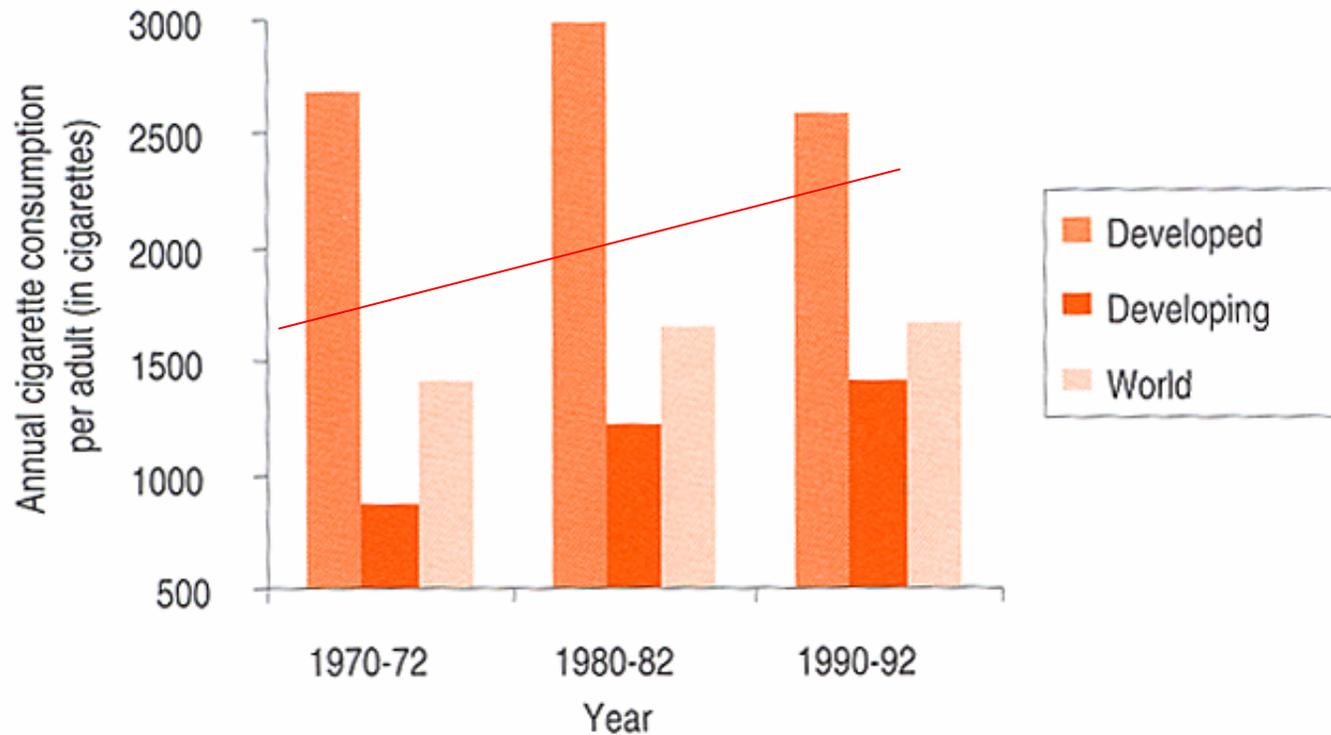
**PUSHING
CIGARETTES OVERSEAS**

By Peter Schmeisser



The Changing Epidemic

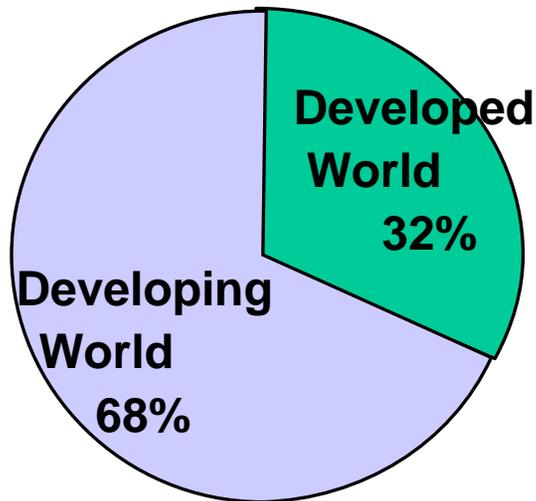
FIGURE 1.1 SMOKING IS INCREASING IN THE DEVELOPING WORLD
Trends in per capita adult cigarette consumption



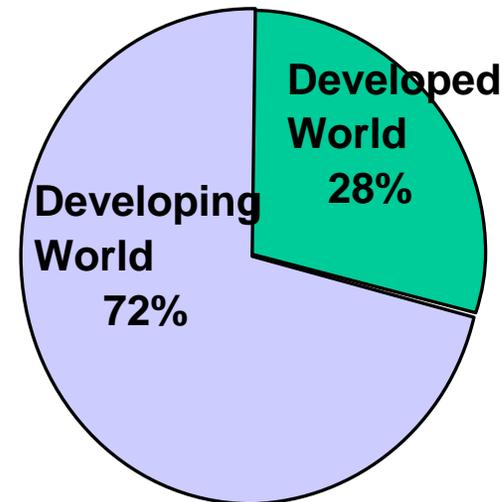
Source: World Health Organization. 1997. *Tobacco or Health: a Global Status Report*. Geneva, Switzerland.

World Consumption Has Increased in the Last 5 Years Due to Increasing Consumption in the Developing World

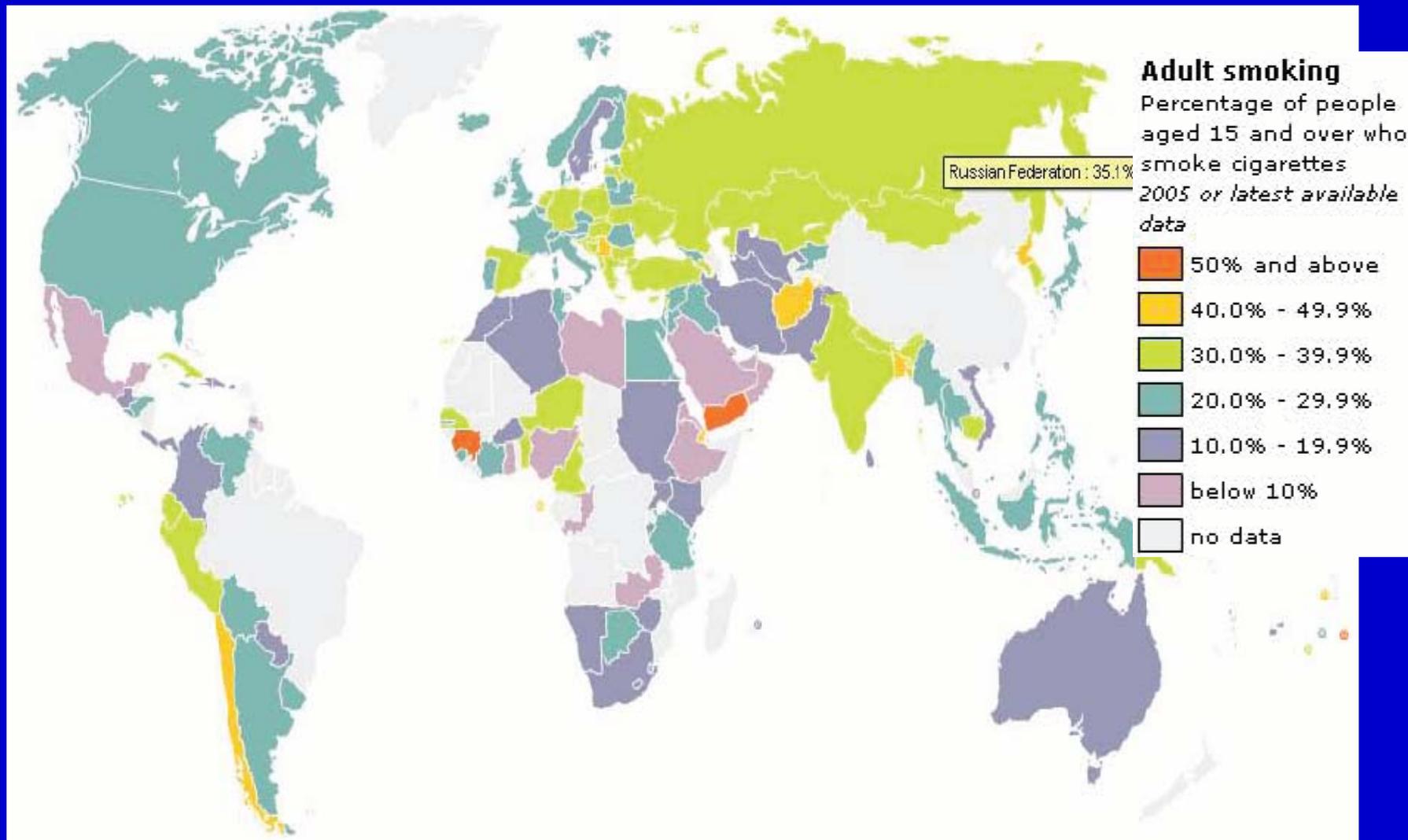
World Cigarette Consumption in
1996: 5280 billion pieces



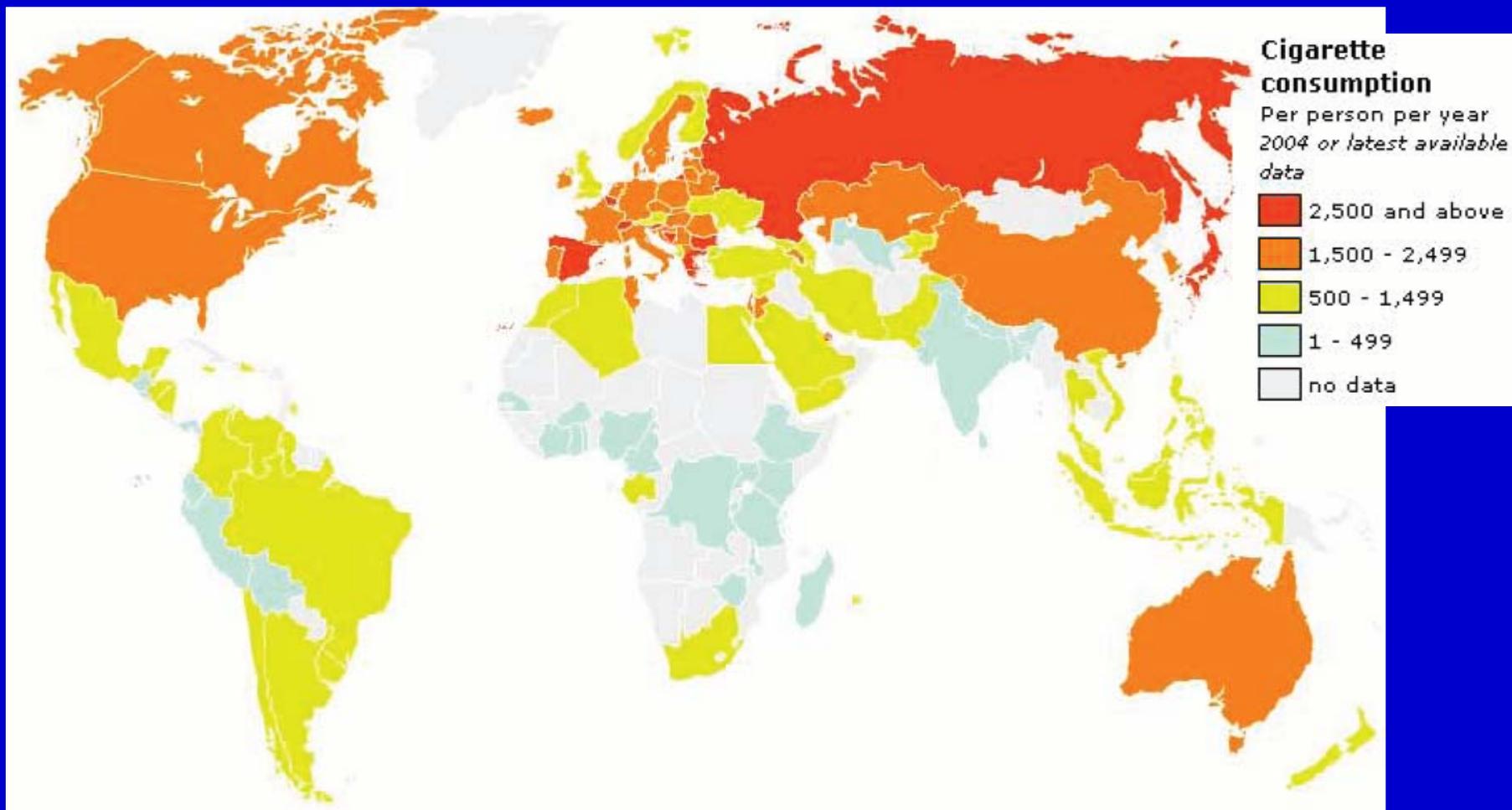
World Cigarette Consumption in
2001: 5364 billion pieces



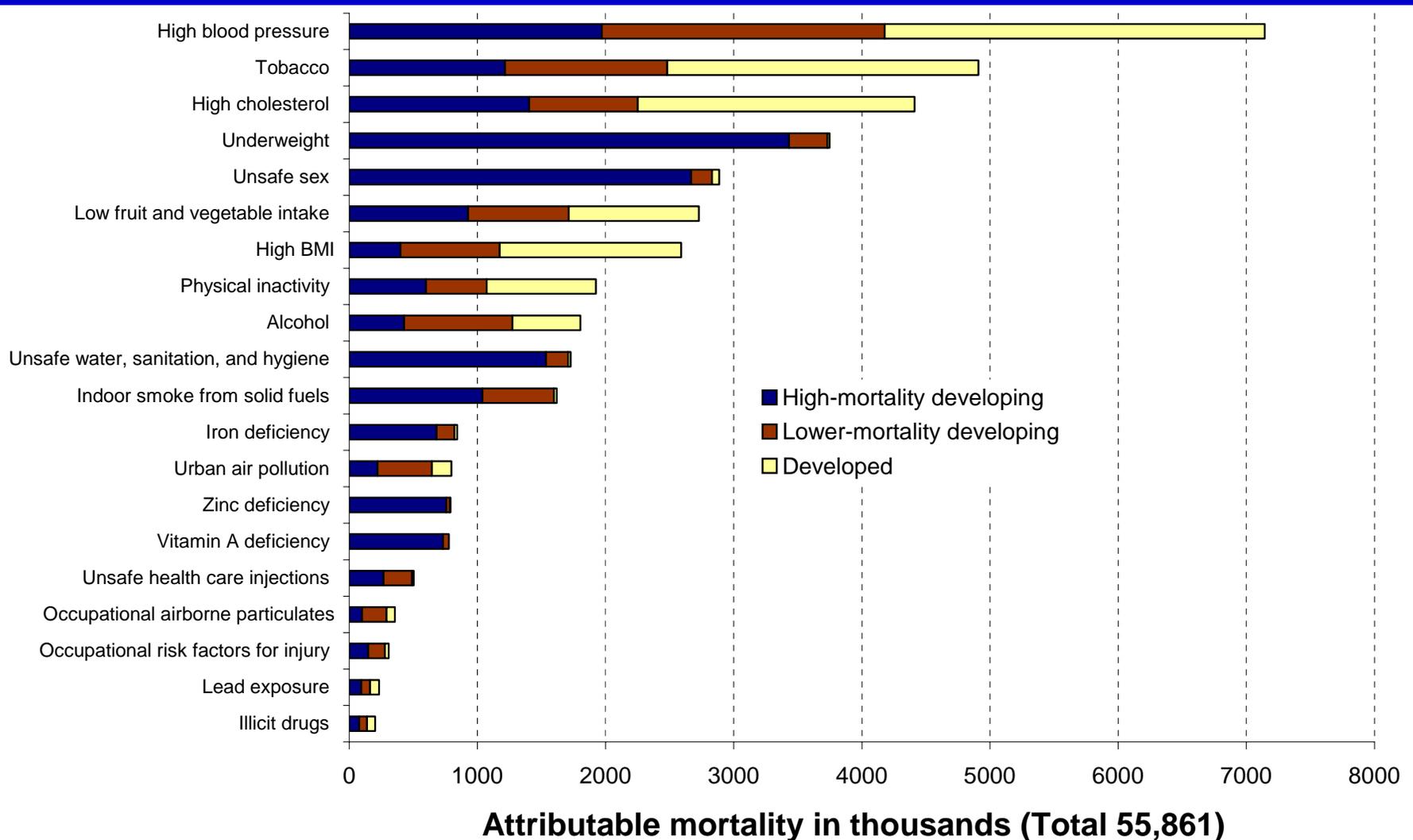
Smoking Worldwide



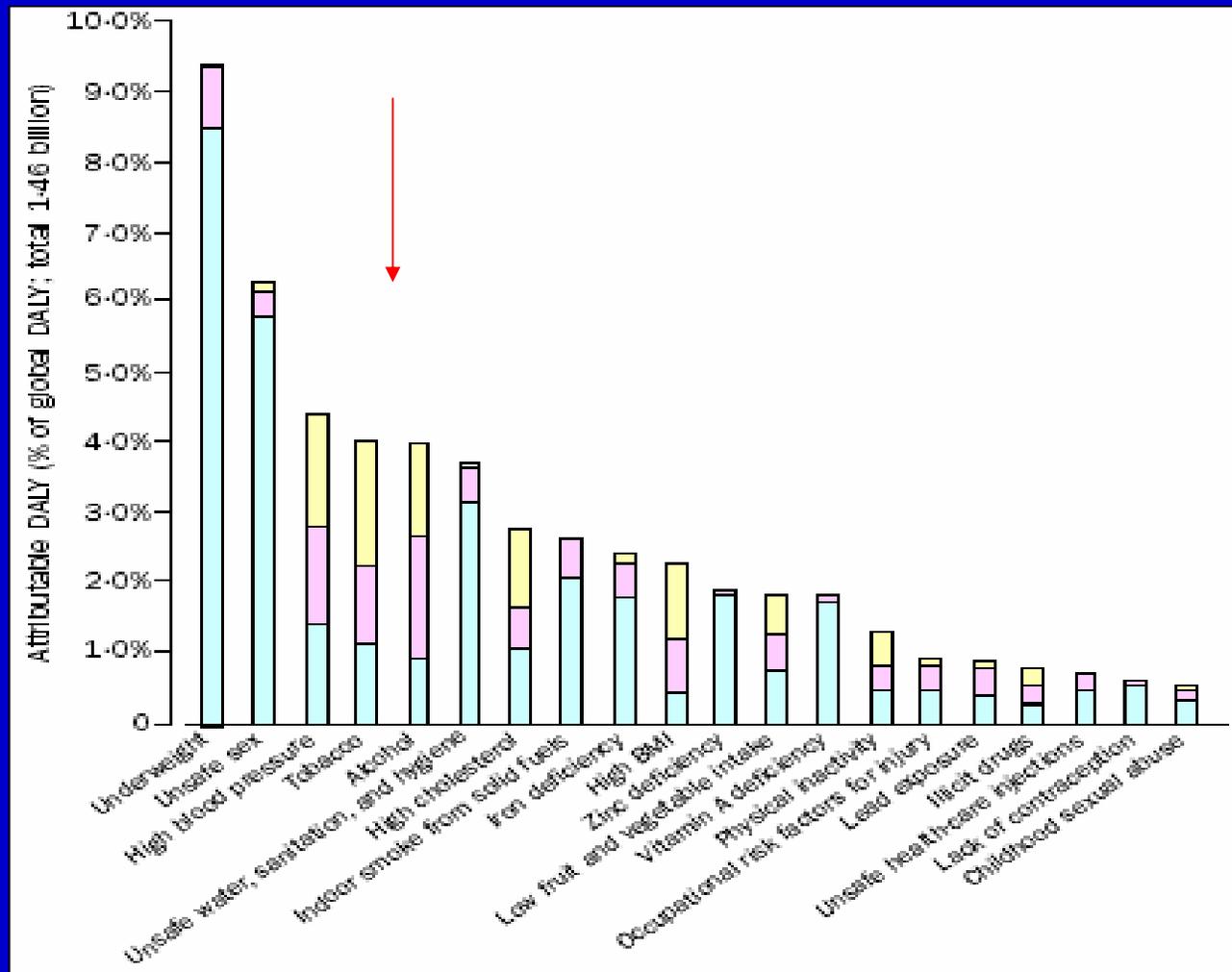
Global Cigarette Consumption



Global distribution of *mortality* attributable to 20 leading selected risk factors



Burden of Disease Due to Leading Global Risk Factors--DALYs



The Global Tobacco Burden: Youth

*tobacco poses a major
obstacle to children's
rights, infringing on their
basic health and
welfare...*

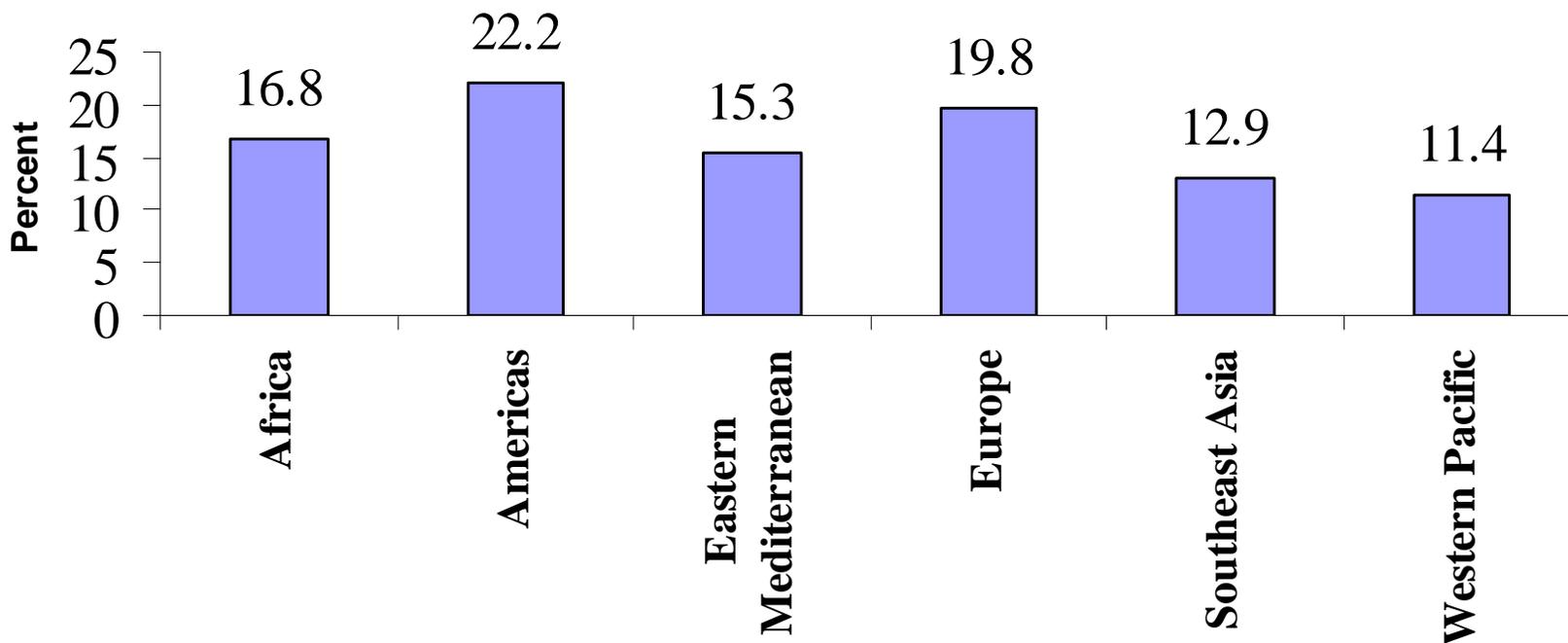
over 700 million
children are exposed to
second-hand smoke

Courtesy of D. Yach



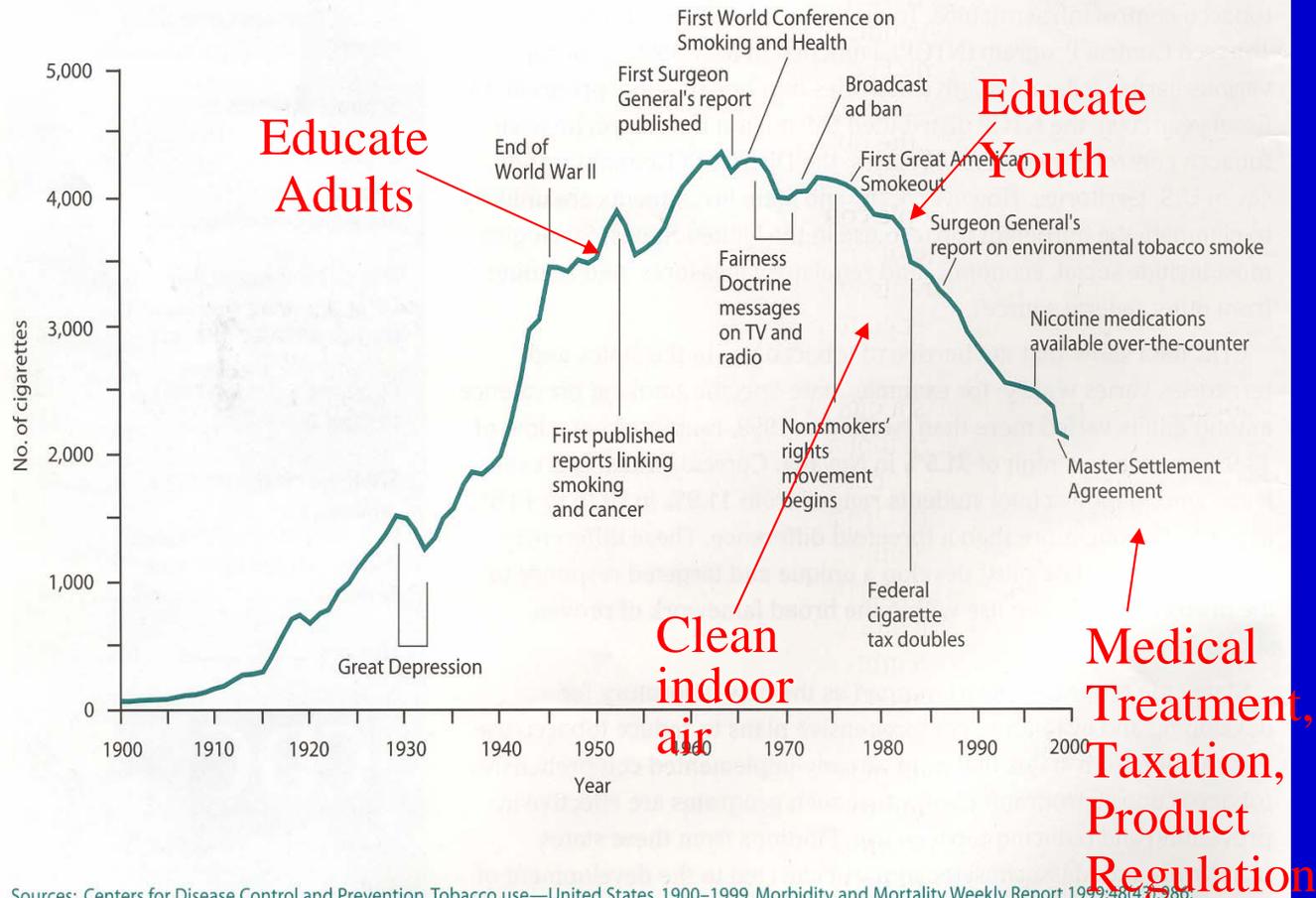
Global Youth Tobacco Survey (GYTS)

Percent of Youth Currently Using Any Tobacco Product



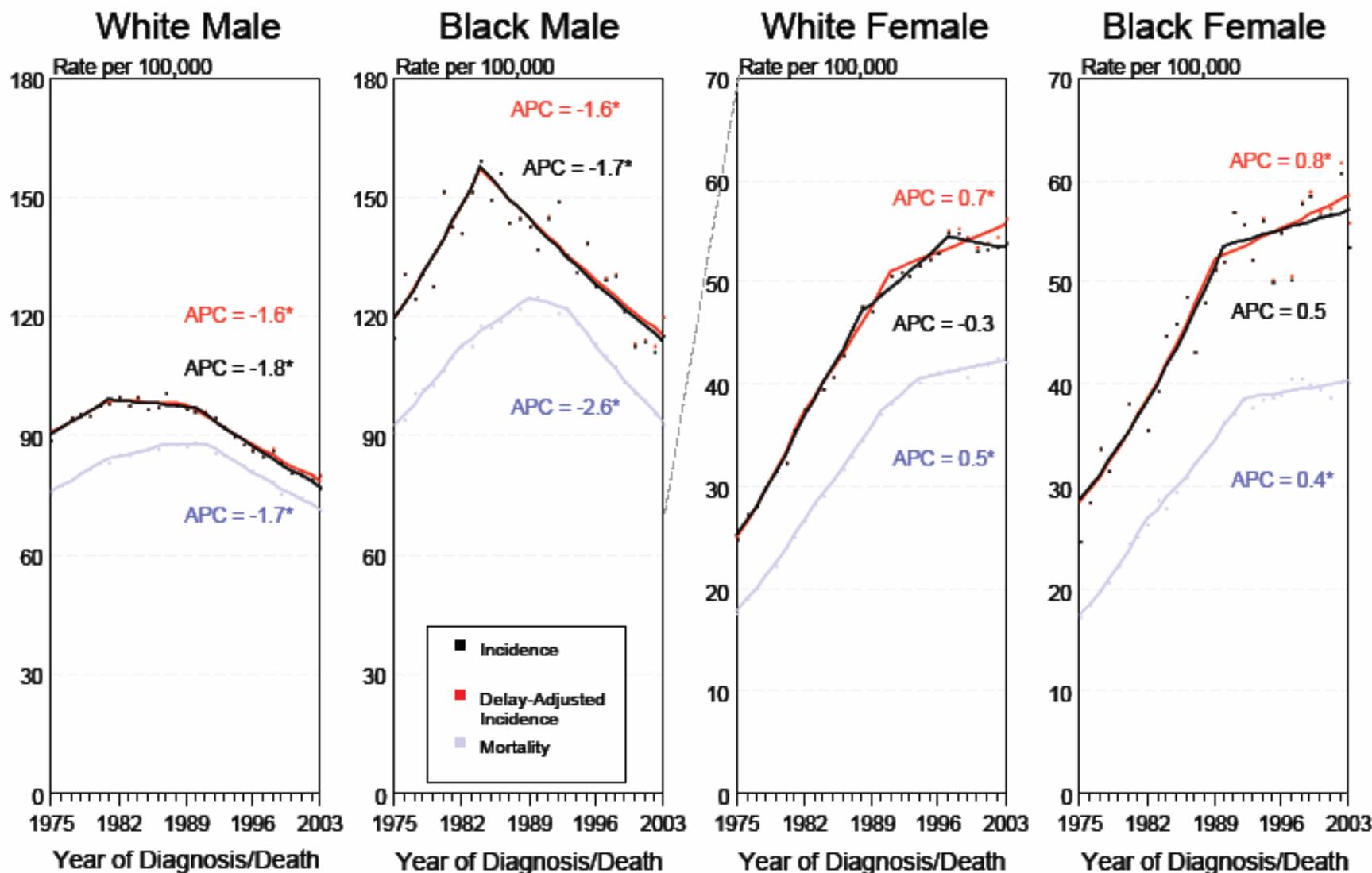
Success in the United States

Adult per Capita Cigarette Yearly Consumption and Major Smoking and Health Events, United States, 1900–1999



Sources: Centers for Disease Control and Prevention. Tobacco use—United States, 1900–1999. Morbidity and Mortality Weekly Report 1999;48(43):980. Department of Agriculture, Economic Research Service, Marketing and Trade Economics Division, Specialty Crops Branch, unpublished data; Department of Agriculture. Agricultural Outlook. Washington (DC): Department of Agriculture, Economic Research Service, 2001. USDA Publication No. ERS-AO-278.

SEER Incidence, Delay Adjusted Incidence and US Death Rates+ Lung and Bronchus Cancer, by Race and Sex



+ Source: SEER 9 areas and NCHS public use data file for the total US. Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.1, April 2006, National Cancer Institute.

The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.

* The APC is significantly different from zero ($p < 0.05$).

Historical Trends (1979-2003)

Mortality, Lung & Bronchus Both Sexes, All Ages



Good News in MD

Created by statecancerprofiles.cancer.gov on 11/07/2006 10:04 am.
Regression lines calculated using the Joinpoint Regression Program.

Source: Death data provided by the National Vital Statistics System public use data file. Death rates calculated by the National Cancer Institute using SEER*Stat. Death rates are age-adjusted to the 2000 US standard population by 5-year age groups. Population counts for denominators are based on Census populations as modified by NCI.

What is the FCTC?

- **Global evidence-based treaty designed to circumscribe the global rise and spread of the tobacco epidemic**
 - **Addresses secondhand smoke protections, tobacco taxation, tobacco product regulation, cigarette smuggling, public education, and cessation treatment**

What is the FCTC?

- **First time WHO Member States have harnessed the organization's capacity to develop a binding international convention to protect and promote global public health**
- **First time that low, medium, and high income countries have united to develop a collective response to chronic diseases**

FCTC Final Treaty Text

- **Introduction**
- **Objectives, guiding principles and general obligations**
- **Measures relating to the reduction of demand for tobacco**
- **Measures relating to the reduction of the supply of tobacco**
- **Protection of the environment**
- **Questions related to liability**
- **Scientific and technical cooperation and communication of information**



Mayor Michael R. Bloomberg: Advocate for Tobacco Control

Tobacco use is the second-leading cause of illness and preventable death in the world. If current trends continue, tobacco will kill one billion people this century, 10 times the toll in the 20th century, according to the American Cancer Society (A.C.S.).

"One billion men and 250 million women who smoke are candidates for tobacco-related diseases, such as cancers, chronic lung diseases, heart attacks and strokes," warned John R. Seffrin, C.E.O. of the A.C.S. "Seventy percent of those who are expected to die live in the developing nations where poverty is rampant. More than half of tobacco-related deaths occur between ages 35 and 69, the key earning years. As a result, struggling families lose their breadwinners and developing nations are deprived of the healthy work forces they need to thrive."

To combat the growing international tobacco pandemic, Mayor Michael R. Bloomberg, a former smoker, recently announced that he is contributing \$125 million of his personal funds to create the "Worldwide Stop Smoking Initiative."

Coordinated by nonprofit groups that fight smoking internationally, the initiative will finance programs helping smokers to quit, as well as educating children to keep them from starting. By creating a system to track global tobacco use and the effectiveness of anti-smoking efforts, the initiative will support efforts by anti-tobacco advocates and governments to implement effective policies helping to promote freedom from tobacco.

The founder of Bloomberg L.P., a financial information company, the mayor has given millions each year to a variety of philanthropic projects. As mayor, he has supported legislation to ban smoking in bars and restaurants, and championed smoking cessation programs.

From Cause to Cure recently discussed the initiative with Mayor Bloomberg.

What prompted you to give the grant at this time?

I have always believed that we all have an obligation to help others. As has been said,



Mayor Bloomberg contributes \$125 million of his personal funds to create the "Worldwide Stop Smoking Initiative."

you can help others with wealth, wisdom and work. Whether you're volunteering your time, providing guidance or providing money, I think we all must try to make a difference and improve the world. Those are the values that my parents instilled in me; that is what drove me to philanthropy. Smoking is a worldwide epidemic that needs to be stopped. Globally, nearly five million people are killed by tobacco each year, and that number will rise to 10 million in less than 15 years unless we do something now. Tobacco doesn't just harm those who do smoke: secondhand smoke causes lung disease, cancer, low birth weight and increased infant death, among other problems. The science is very clear on this issue. Stop-smoking campaigns save lives. There is no better time than now to start. We hope the grant will reduce the number of smokers in the world, saving millions of lives and saving governments around the world billions of dollars in health care costs.

You mentioned at the press conference that philanthropy has ignored the issue of tobacco control around the world. Why?

There are a lot of causes around the world supported by the philanthropic community, and I commend those who donate their time and money to philanthropy. I have focused mainly on public health, education, the arts, medical research and social services; other philanthropists focus on other issues. I don't know why anti-smoking efforts in developing countries have been overlooked, but one goal of this initiative is to bring worldwide attention to the effects of tobacco use and change the perception of it. It may be that the world has been slow to recognize that in developing countries, in addition to infectious diseases such as AIDS, tuberculosis and malaria — all of which need continued and increased attention — there is a growing epidemic of noncommunicable diseases now killing just as many people prematurely. Tobacco is not only the leading preventable agent of death worldwide, but is also something we can actually do something about, just as we have done in New York City. We hope that this grant will spur others to add their support to this cause — millions of lives are at stake.

What role might philanthropic organizations assume in the tobacco control movement?

Key interventions include assisting anti-tobacco advocates and governments to implement effective policies helping to promote freedom from tobacco. The most important interventions are increasing taxation, preventing smuggling, changing the image of tobacco by banning advertising and running hard-hitting educational programs, protecting workers from tobacco-smoke pollution, helping smokers quit and rigorously monitoring how we are doing. While many developed countries and some developing countries have implemented effective policies, most have not. We can make much more progress if we join together on programs that work.

Continued on page 42

Bloomberg Initiative



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November 2, 2006

School of Public Health Joins Michael Bloomberg's \$125 Million Initiative to Promote Freedom from Smoking

The **Johns Hopkins Bloomberg School of Public Health** will be one of five organizations to receive funds from a \$125 million global initiative established by Michael R. Bloomberg. Over the next two years, the partner organizations will implement and coordinate activities to help stop the global epidemic of tobacco use. The other partners announced are the Campaign for Tobacco-Free Kids, the Centers for Disease Control and Prevention Foundation, the World Health Organization and the World Lung Foundation.

More Information

- **US Surgeon General's website:**
<http://www.surgeongeneral.gov/>
- **CDC Office on Smoking and Health (includes access to all SGR reports on smoking):**
<http://www.cdc.gov/tobacco/sgr/index.htm>
- **Institute for Global Tobacco Control at the Johns Hopkins Bloomberg School of Public Health:**
http://www.jhsph.edu/global_tobacco/
- **Global Tobacco Research Network (includes The Tobacco Atlas online):**
<http://www.tobaccoresearch.net/>