



Epidemiology and Prevention of Tobacco Use





**Factors
influencing the
initiation and
use of tobacco**



Factors influencing the initiation of tobacco use

- **Sociodemographic factors**
 - socioeconomic status [SES], developmental challenges of adolescence, gender, and race/ethnicity;
- **Environmental factors**
 - acceptability and availability of tobacco products, interpersonal variables, perceived environmental variables;
- **Behavioral factors**
 - academic achievement, problem behaviors, influence of peer groups, participation in activities, and behavioral skills;
- **Personal factors**
 - knowledge of the long-term health consequences of using tobacco, functional meanings of tobacco use, subjective expected utility of tobacco use, variables related to self-esteem, and personality;
- **Current behavior relative to tobacco use**
 - intentions to smoke and smoking status.

Predictors of tobacco use

Large social and physical environment

Norms within a society about whether, when, and for whom smoking is acceptable.

1. **Religion**– protective
2. **Race, ethnicity, culture** – African < African American < American Indian, Chinese
3. **Gender** – boys: use of smokeless tobacco, cigars and other tobacco products; small differences in cigarette smoking among adolescents by gender
4. **Socioeconomic Status** – low SES → risk, BUT early smoking is risk factor for low SES in future
5. **Educational and academic achievement** – lower level → risk
6. **School environment** – school smoking restrictions can curb youth smoking behavior when strictly enforced. Density of tobacco retailers surrounding a school.
7. **Extracurricular and organized activities** – e.g. sports
8. **Large physical environment** - involves features of public and private spaces that may make tobacco use more or less tolerated or enjoyable.
 - **Smoke-free indoor- and outdoor-air policies**
 - **Relative accessibility of tobacco products** (sales to minors, vending machines)
 - **Tobacco advertisement** (restricted, prohibited)
 - **Positive tobacco imagery, tobacco promotion** (movies, TV, video games, Internet, magazines)

Source: U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. 2012.*

Predictors of tobacco use

Small social groups

- **Peer factors**

- Friends' smoking behavior and adolescents's perceptions of their friends' smoking behavior
- **Having friends who smoke** → more likely to initiate smoking (esp. girls)
- **Overestimation** of the prevalence of **peer smoking**

- **Family factors**

- **Parental smoking** → effects stronger for girls
- **Siblings' smoking** → effect may be stronger than parental smoking
- **Higher quality of adolescent-parent relationship** (closeness, supportiveness) → protective factor
- **Family conflicts** → risk factor

Predictors of tobacco use

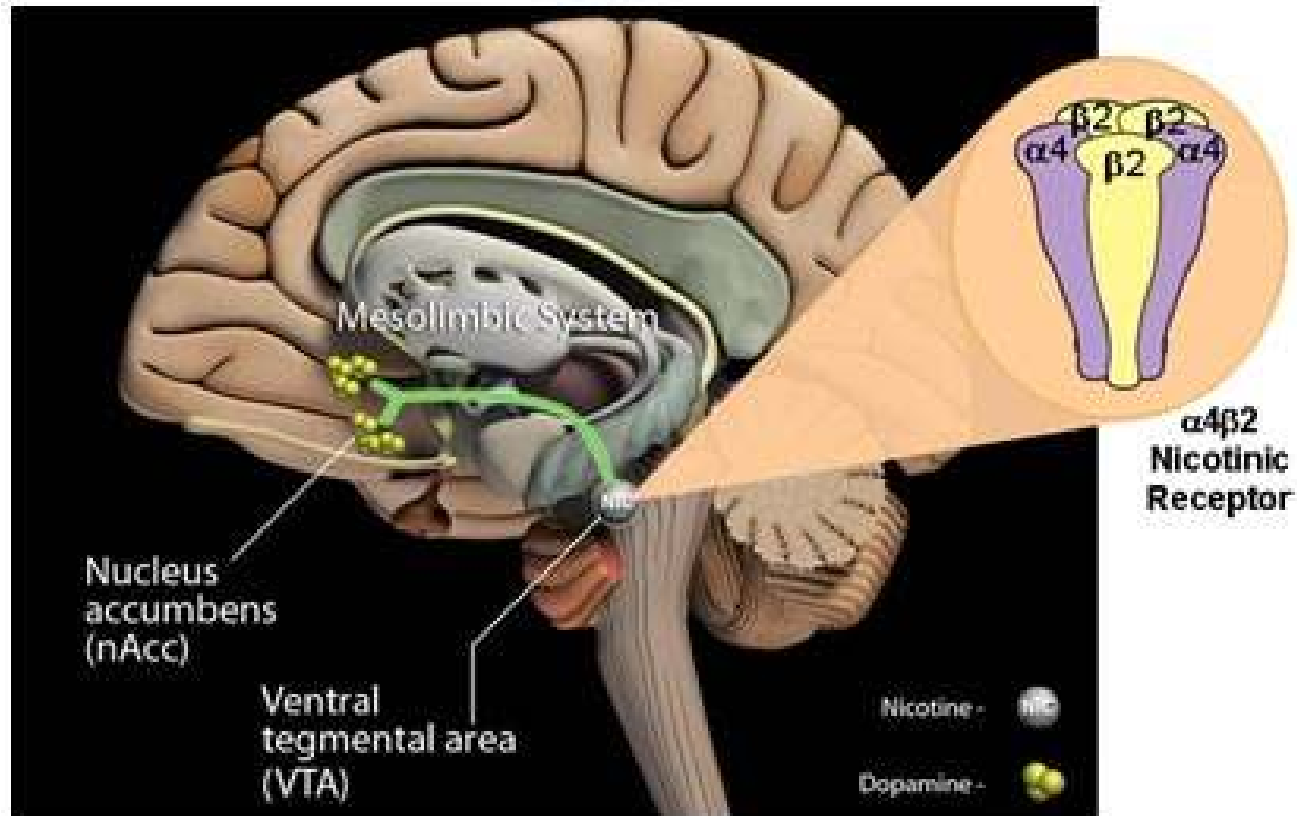
Intrapersonal cognitive and affective process

- **Negative affective states and affect regulation** → risk for initiation and development of cigarette smoking.
- **Depression, anxiety**
- Adolescents who experience greater **subjective mood benefits** of smoking are more likely to progress in their smoking.
- **Beliefs** about the consequences of tobacco use, decision-making capabilities, and the ability to regulate or monitor one's behavior are predictive of tobacco use.
 - E.g., beliefs that tobacco use leads to positive social outcomes and is relatively safe, along with poor decision-making skills and difficulties in self-monitoring, are predictive of later tobacco use.
- **Cognitive factors may be moderated** by family-level protective factors or sociocultural factors (e.g. relatively high SES).

Predictors of tobacco use

Genetic factors, neurobiological and neurodevelopmental processes

- **Heritability for tobacco use** is more strongly **associated with regular use and dependence** than with the early stages of tobacco use,
- **Addiction** to tobacco may have a relatively **strong genetic component**.
- The expression of genetic risk for smoking is **moderated by** small-group factors (e.g., peer smoking, parental monitoring, and engagement in team sports) and larger social environmental factors (e.g., school-level norms, the prevalence of smoking among popular kids).
- Youth at relatively greater risk for tobacco use show relatively **less activation** in brain structures associated with **decision making** and **impulse control** coupled with **impairment in sensitivity to reward**.
- some **youth become dependent on nicotine shortly after trying** tobacco. In addition
- some evidence indicates that a mother's **smoking during pregnancy** may increase the likelihood that her **offspring will become regular smokers**.



■ Nicotine binds predominantly to nicotinic acetylcholine (nACh) receptors in the CNS; the primary is the $\alpha 4 \beta 2$ nicotinic receptor in the Ventral Tegmental Area (VTA)

■ After nicotine binds to the $\alpha 4 \beta 2$ nicotinic receptor in the VTA, it results in a release of dopamine in the Nucleus Accumbens (nAcc) which is linked to reward

Are adolescents more vulnerable to drug abuse than adults?

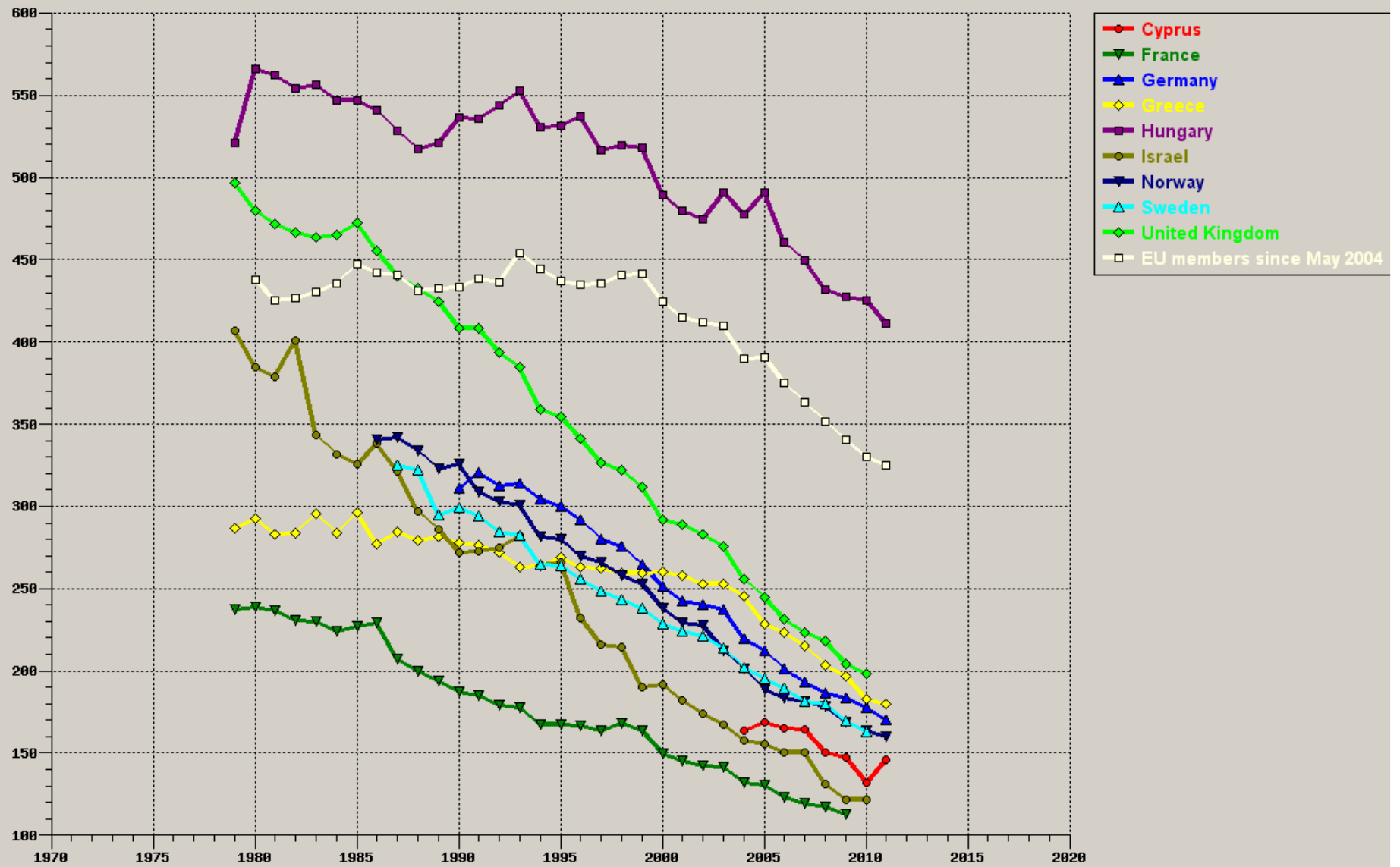
- **Adolescent brain is immature**
- Immature brain → poor judgment, impulsivity, inability to contemplate consequences
- Human brain matures until about age 24
- 3 structures maturing through adolescence
 - **Nucleus accumbens:** pleasure center where drugs produce euphoria and pleasurable effects; modulates how much effort a particular reward is worth
 - ***Adolescent n.Acc.: selects for low efforts, high excitement (e.g. video game, substance use)***
 - **Amygdala:** controls emotional reactions to pleasurable and aversive experiences;
 - ***Adolescents: responsible for explosive reactions rather than controlled responses.***
 - **Prefrontal cortex:** complex information processing, judgment, controls impulses, foreseeing consequences, making plans,
 - ***Adolescents: poor judgment, impulsive behaviors***



Epidemiology of smoking

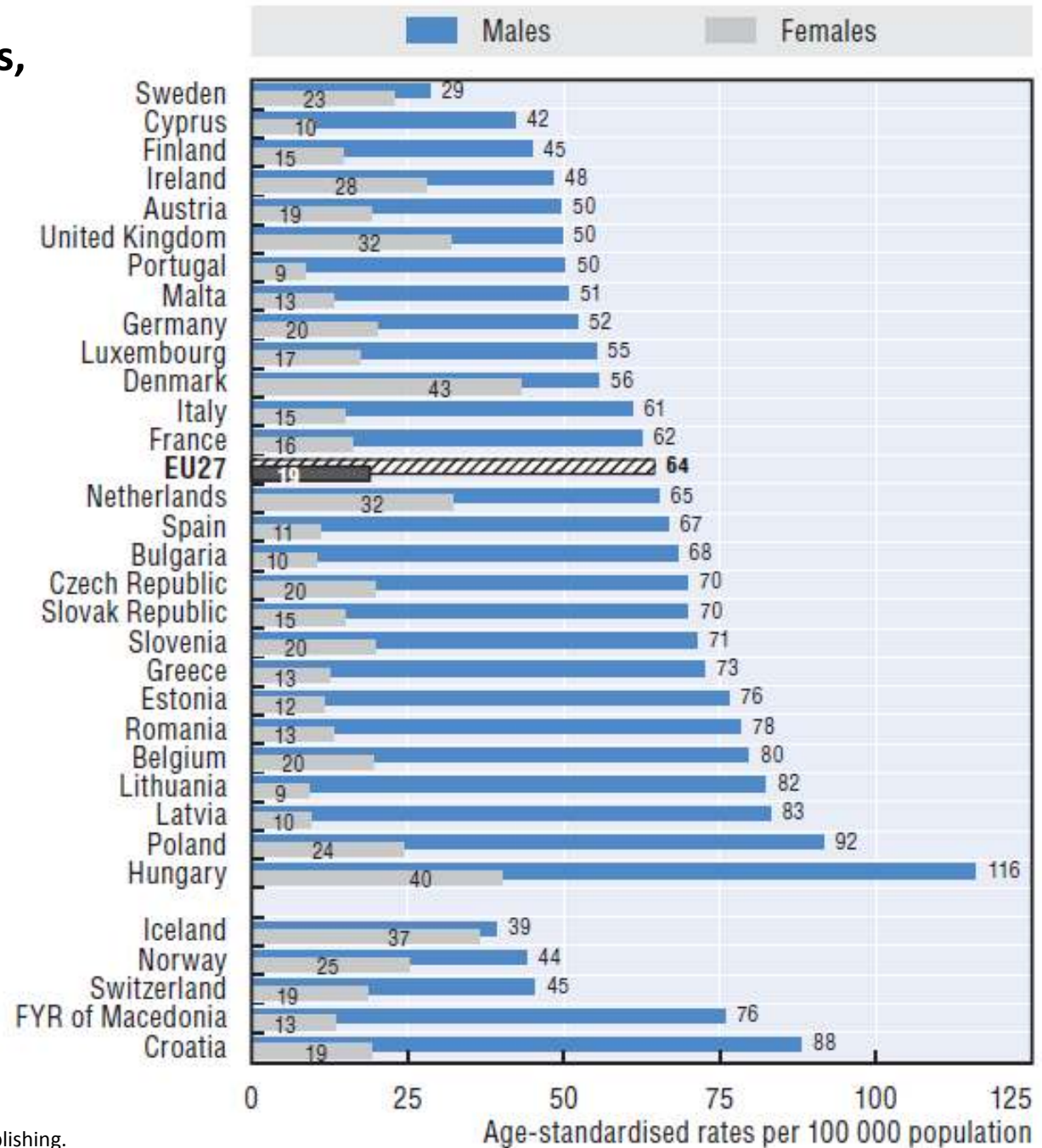


SDR, selected smoking related causes, per 100000

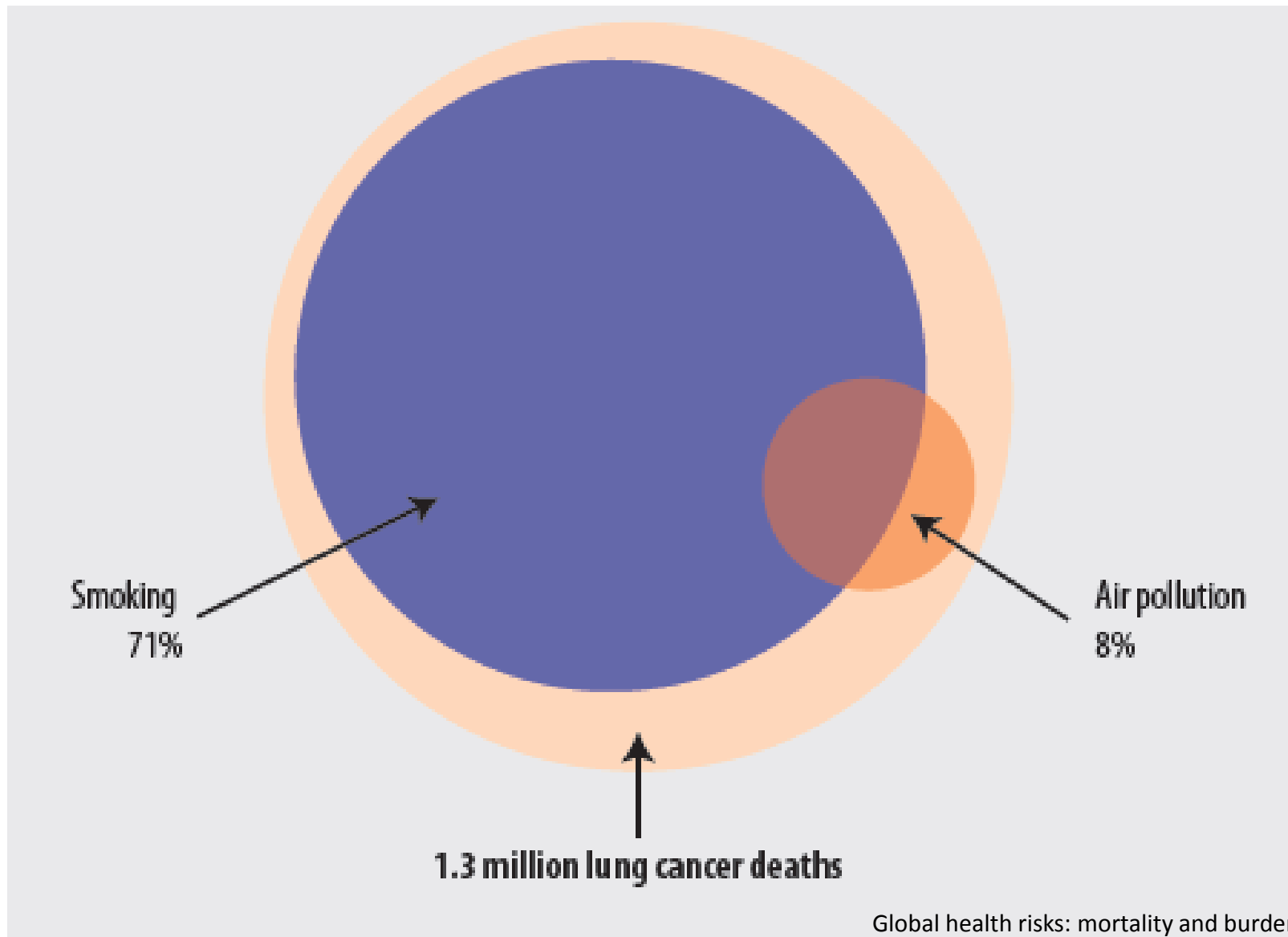


Lung cancer mortality rates, males and females in EU, 2010

(Data are age-standardised to the WHO European standard population.)

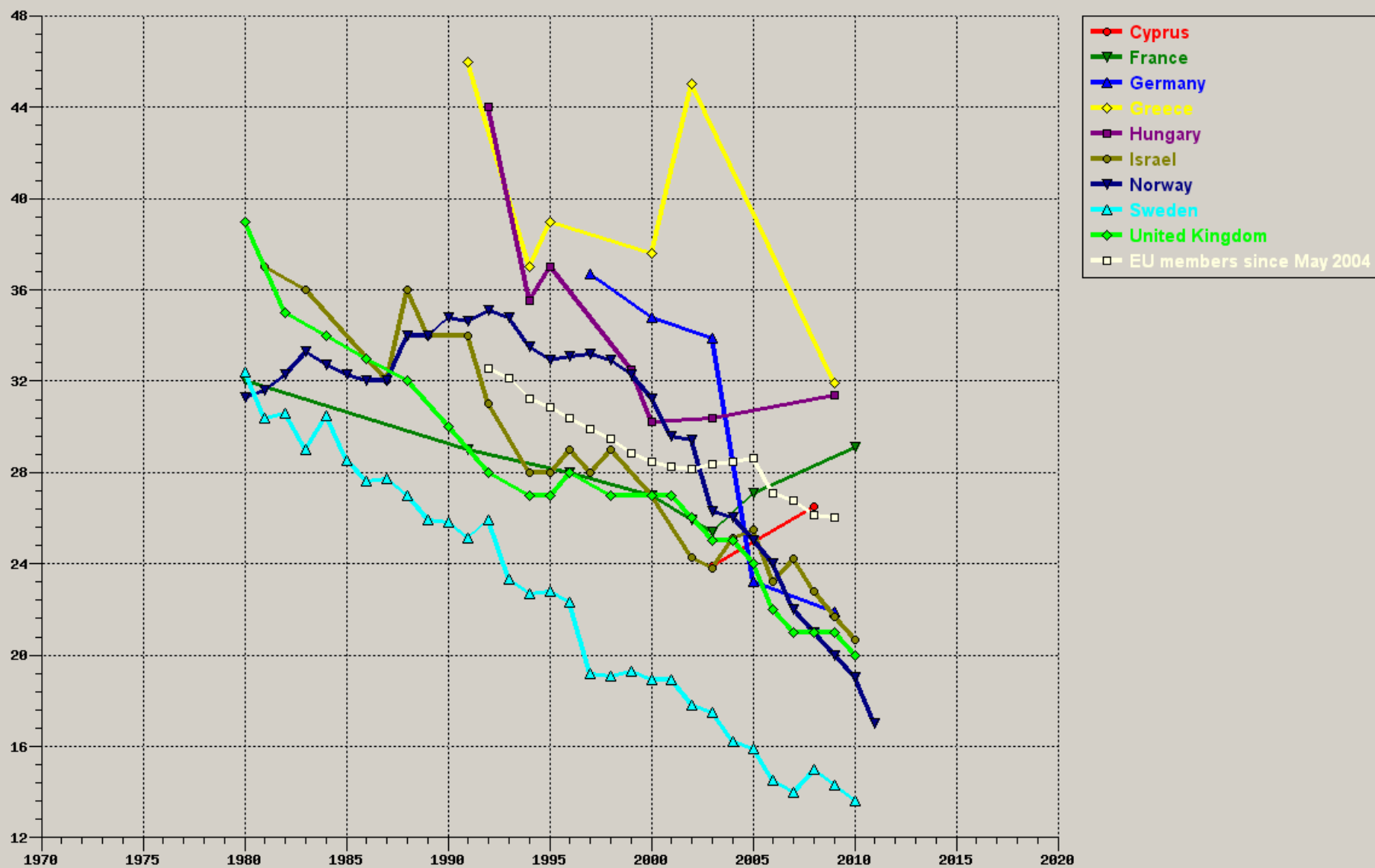


Lung cancer deaths in 2004 in the World



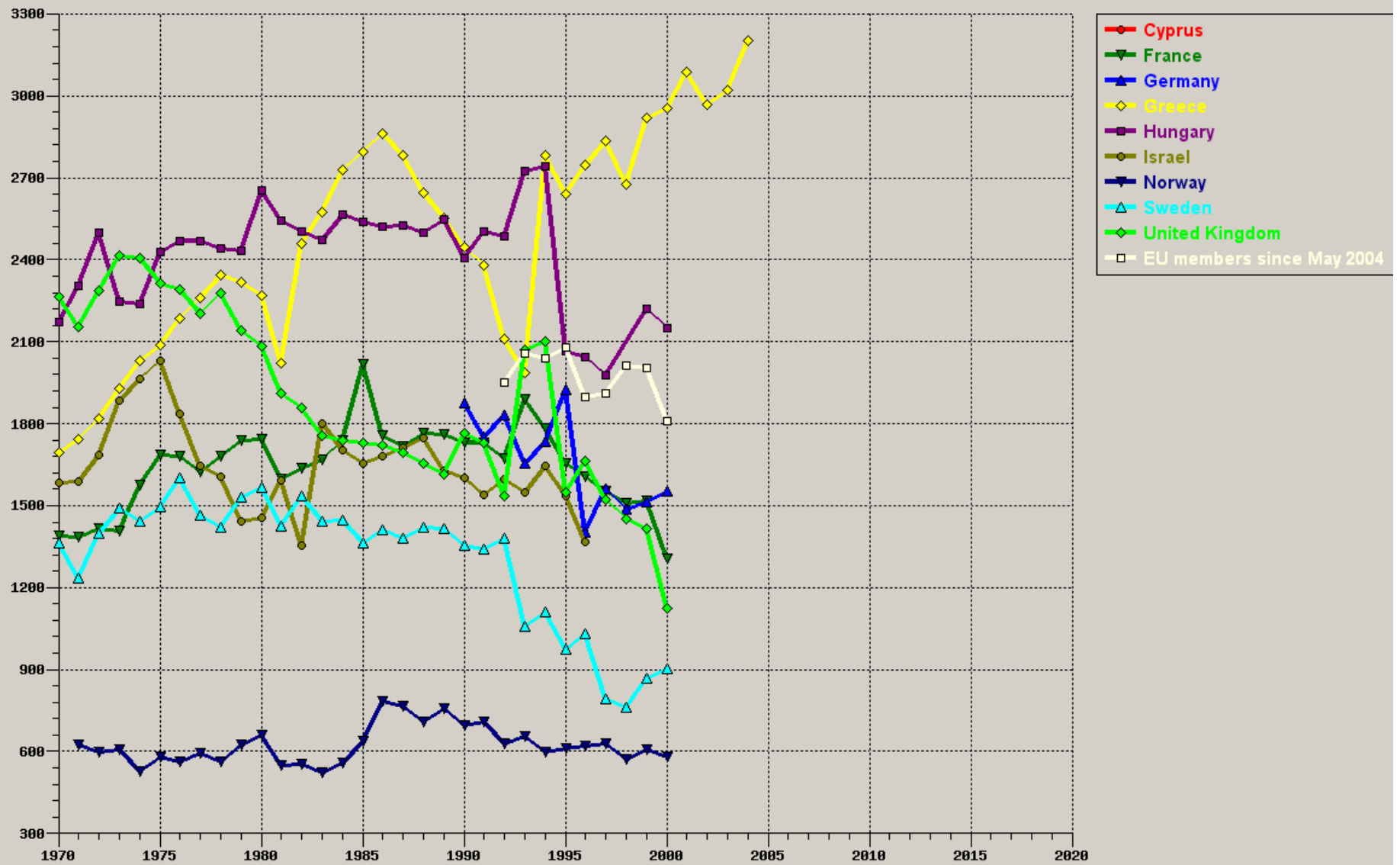
Global health risks: mortality and burden of disease attributable to selected major risks. WHO, 2009

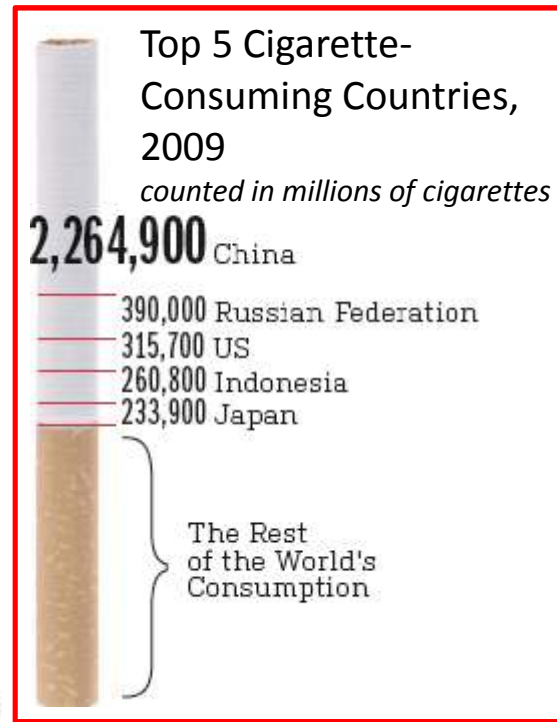
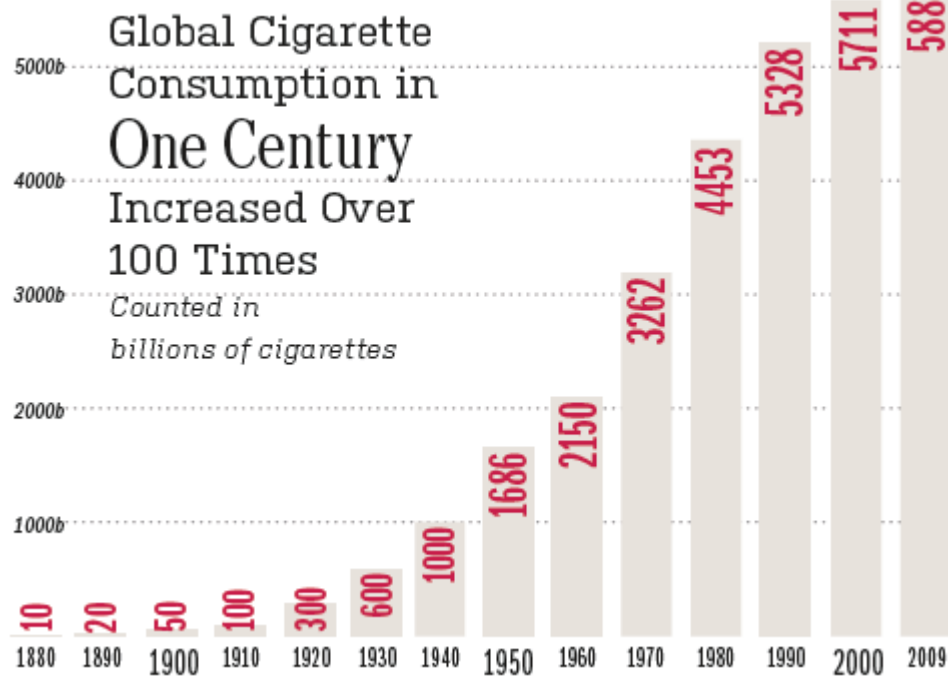
% of regular daily smokers in the population, age 15+



Source: WHO/Europe, European HFA Database, July 2013

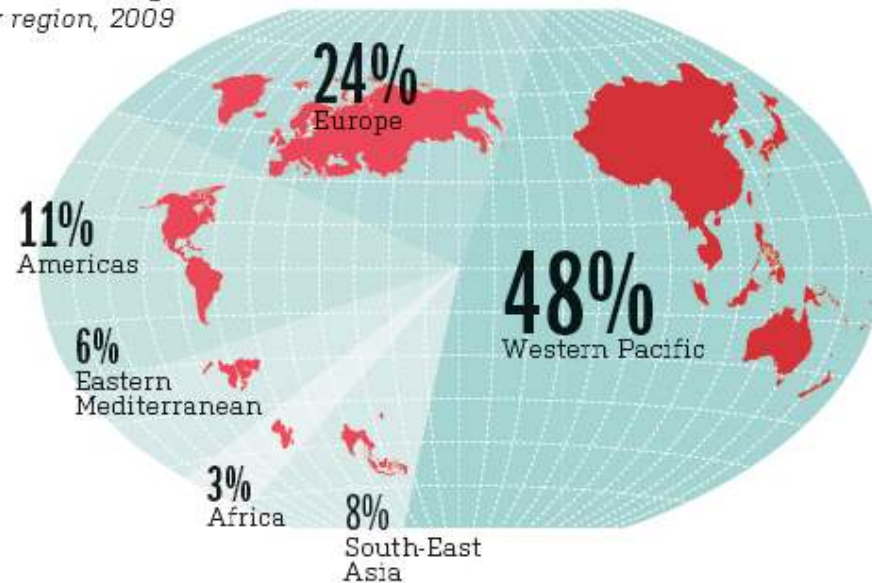
Number cigarettes consumed per person per year



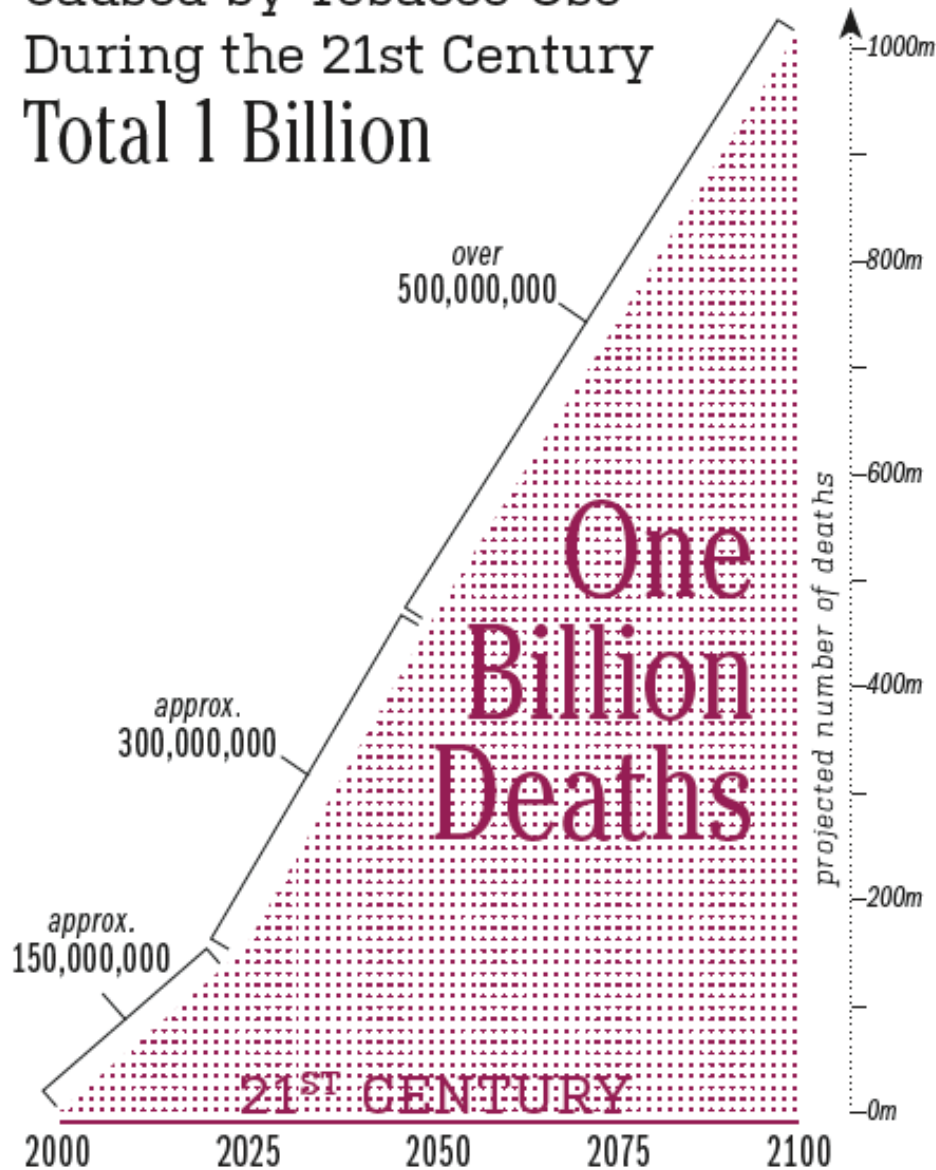


World Cigarette Consumption

By region, 2009



Projected Deaths Caused by Tobacco Use During the 21st Century Total 1 Billion



Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. www.TobaccoAtlas.org

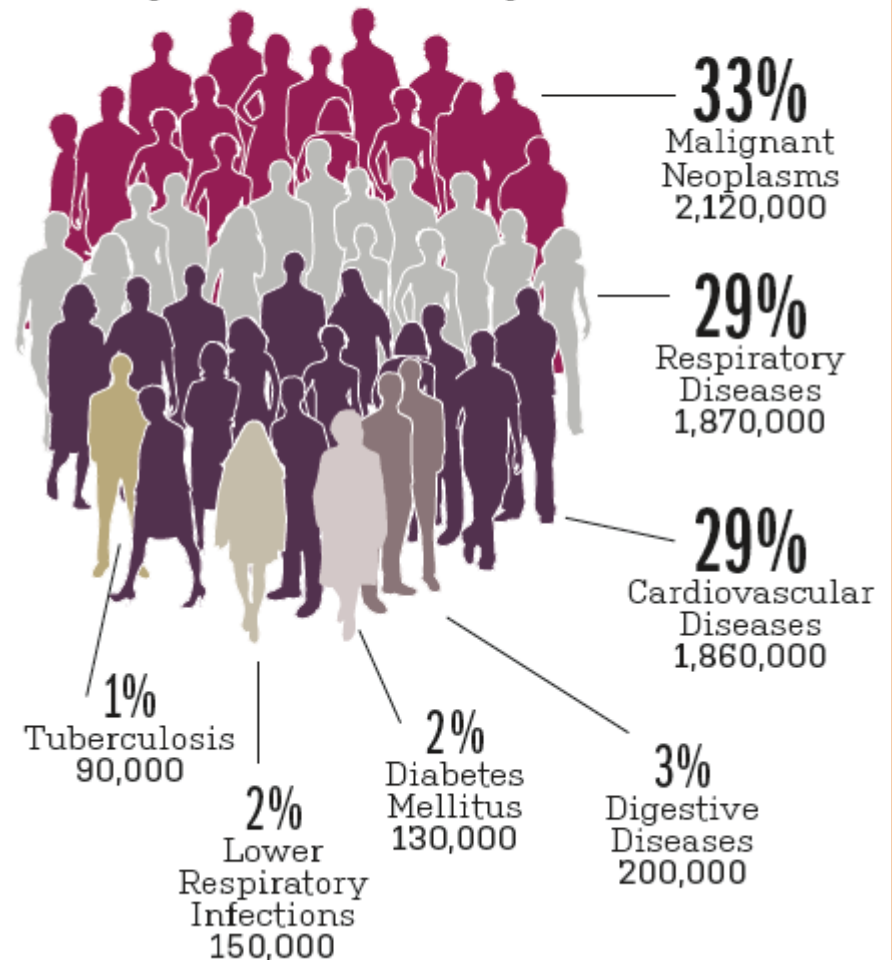
“Dying from smoking is rarely quick... and never painless.”

Anti-smoking campaign, New York City, US, 2011

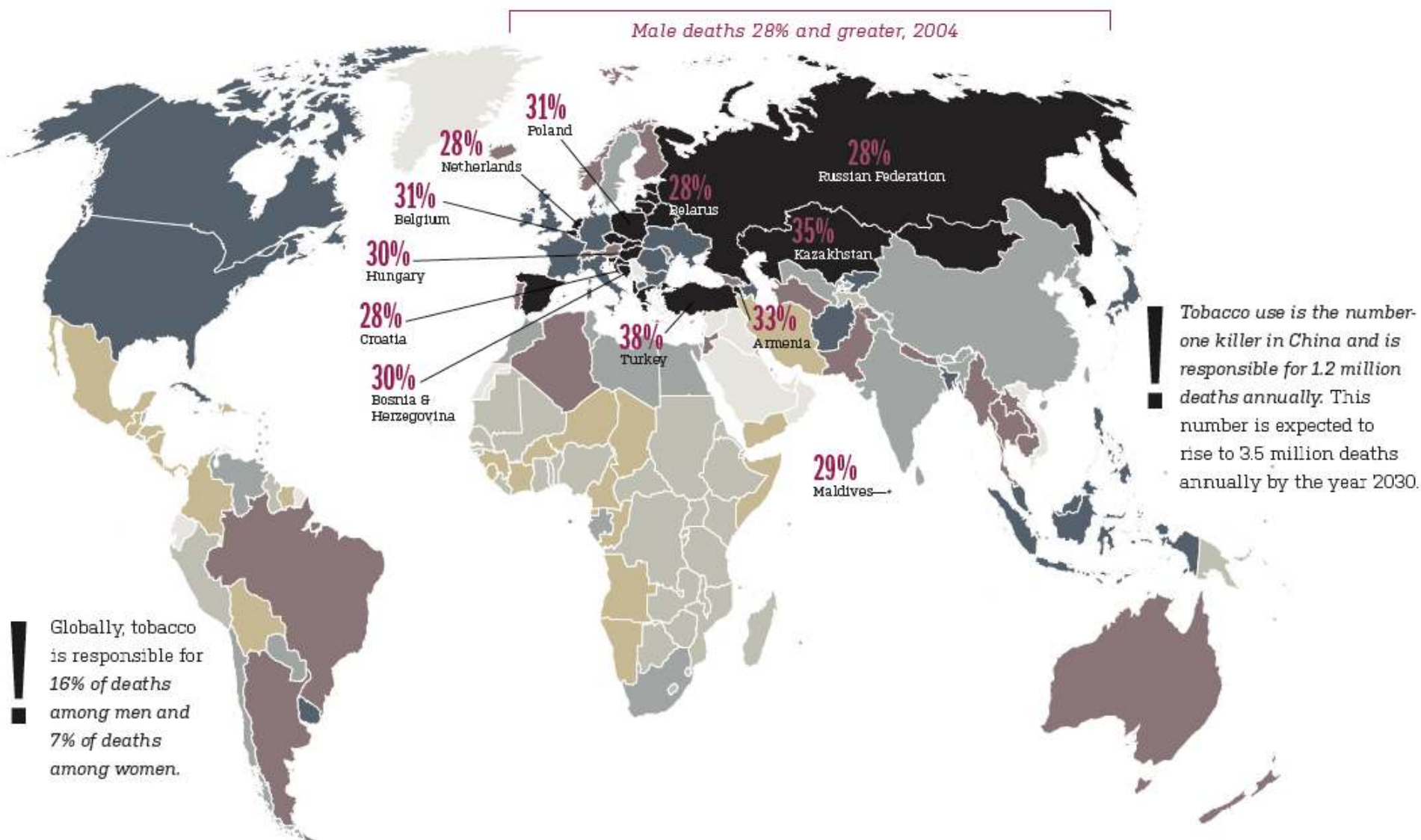
Projected Global Tobacco-Caused Deaths

By cause, 2015 baseline scenario

Totals might not sum due to rounding.



Male Deaths



Female Deaths

Female deaths 20% and greater, 2004

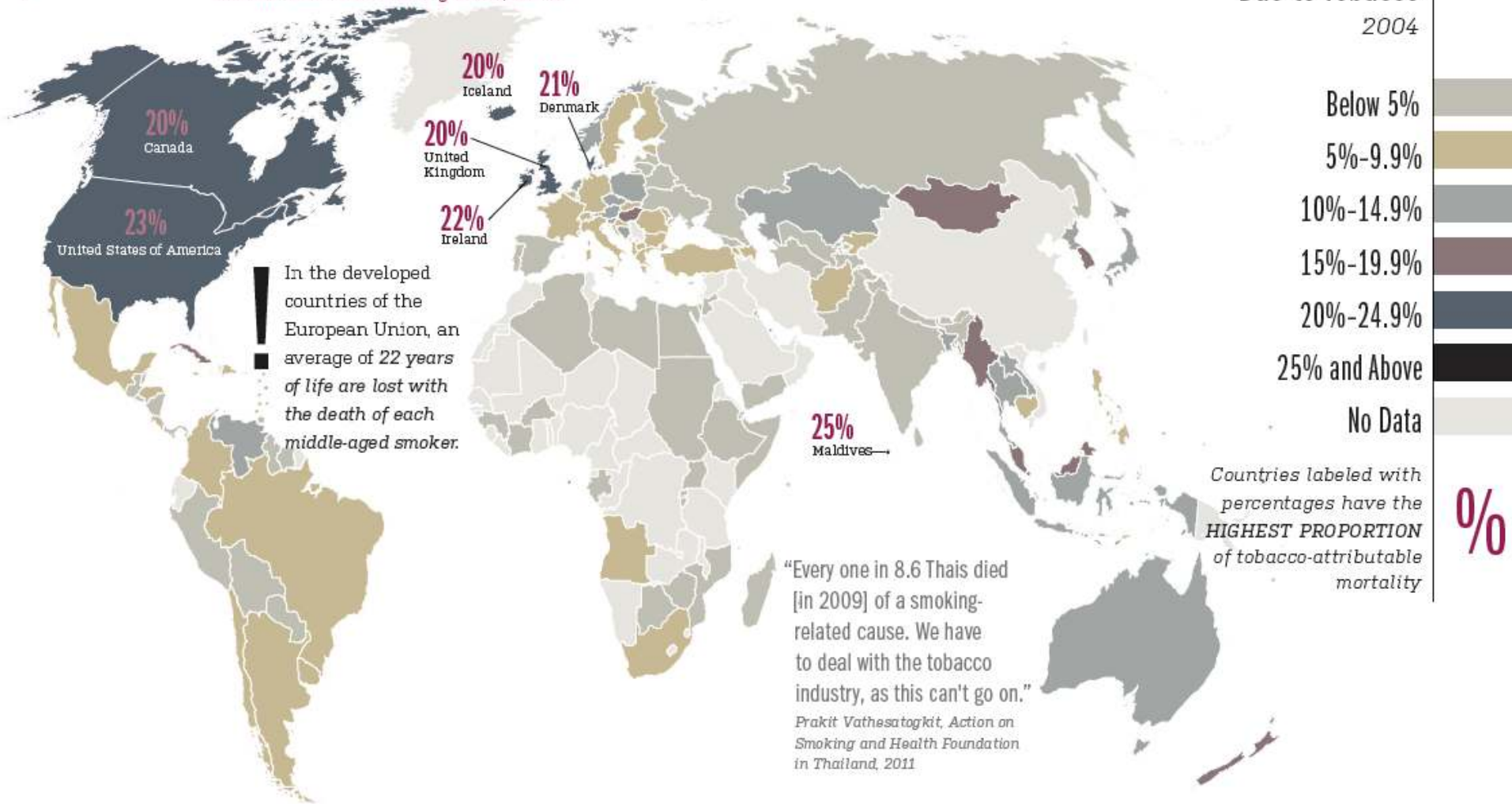
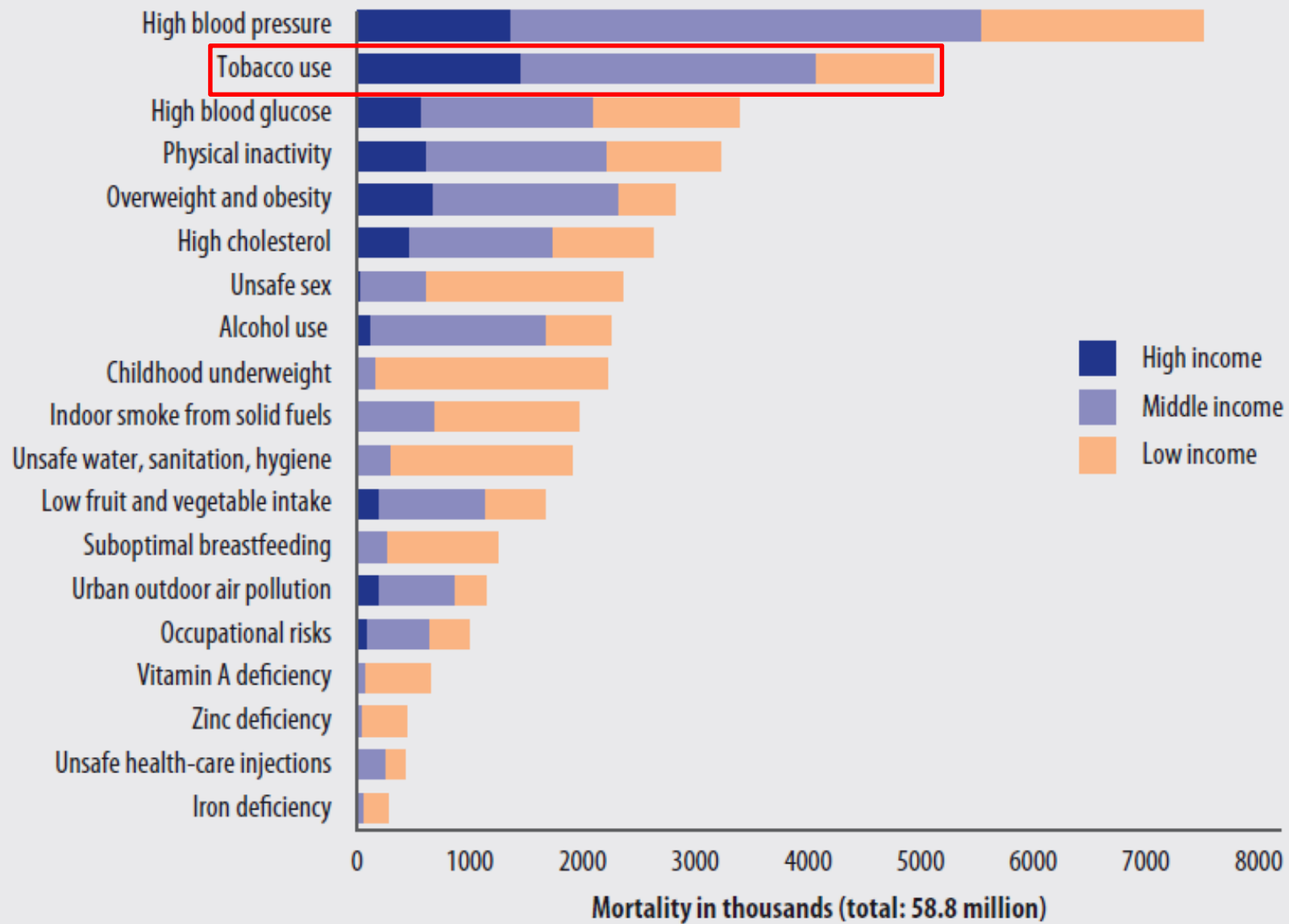


Figure 6: Deaths attributed to 19 leading risk factors, by country income level, 2004.



Global health risks: mortality and burden of disease attributable to selected major risks. WHO, 2009

Tobacco is responsible for

- 9% of global mortality
 - 12% of male deaths
 - 6% of female deaths in the world.
- ~5.1 million deaths globally in 2004, or
- almost one in every eight deaths among adults aged 30 years and over

Figure 11: Percentage of deaths over age 30 years caused by tobacco, 2004.

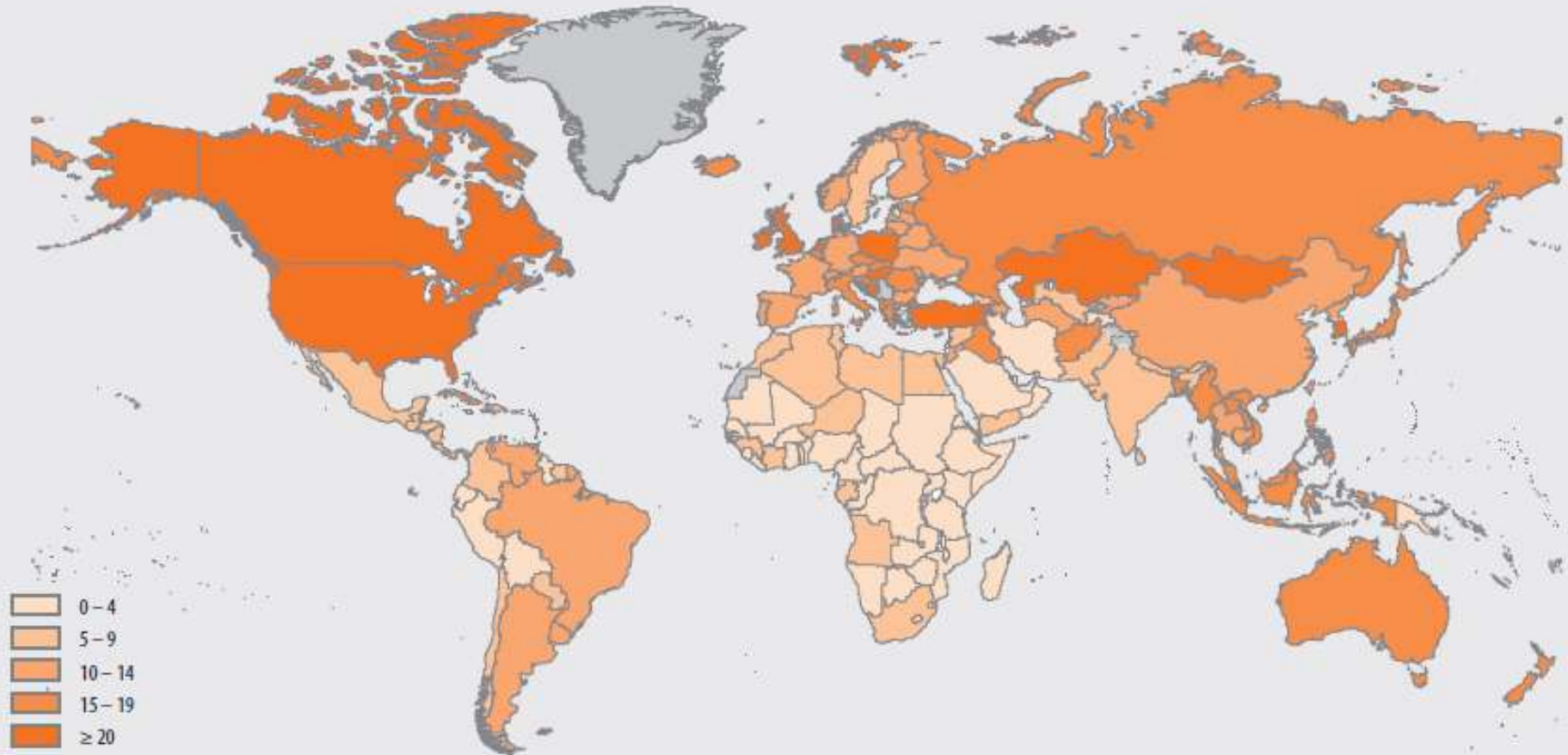
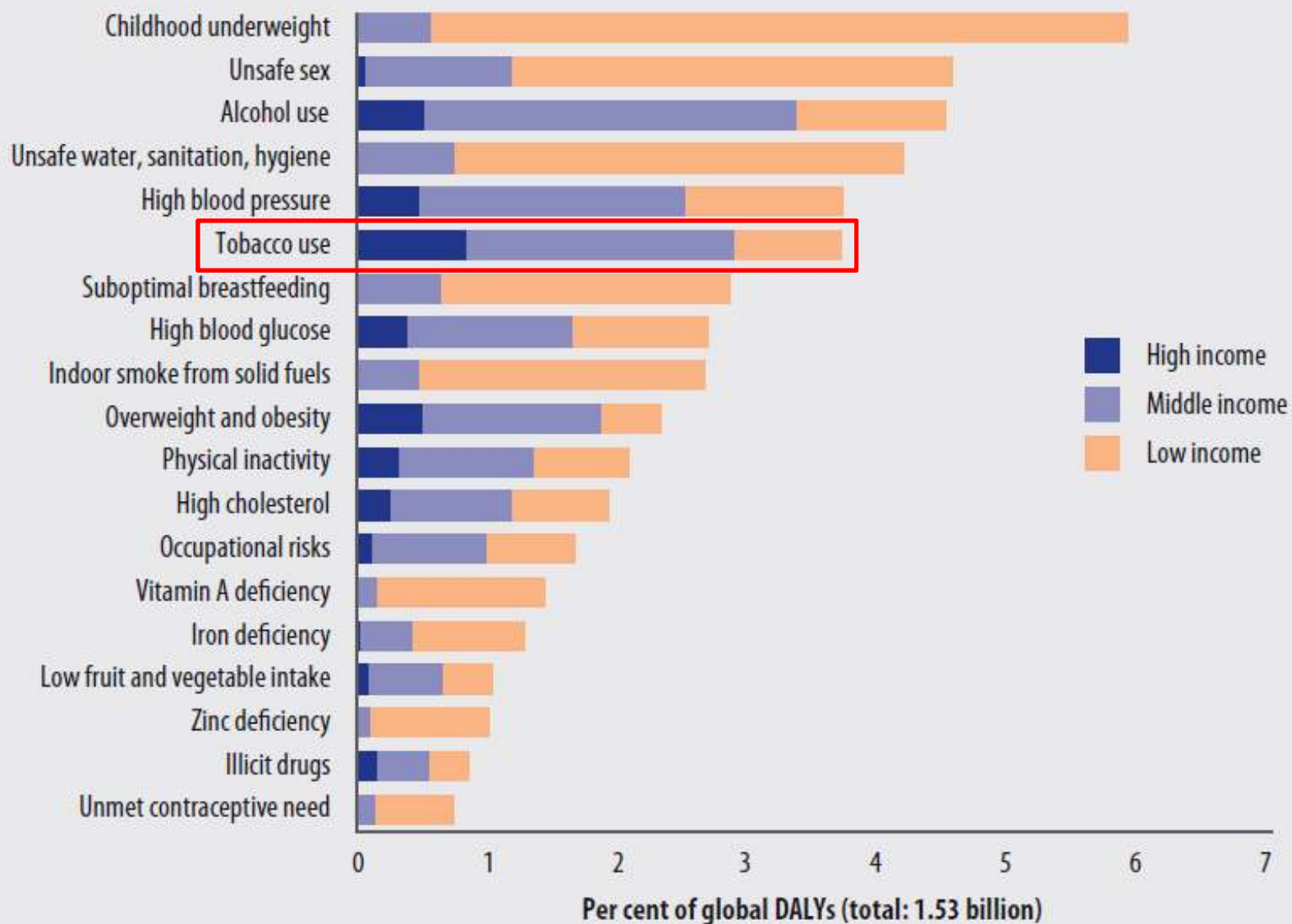


Figure 7: Percentage of disability-adjusted life years (DALYs) attributed to 19 leading risk factors, by country income level, 2004.



Global health risks: mortality and burden of disease attributable to selected major risks. WHO, 2009

Ranking of selected risk factors: 10 leading risk factor causes of death by income group, 2004

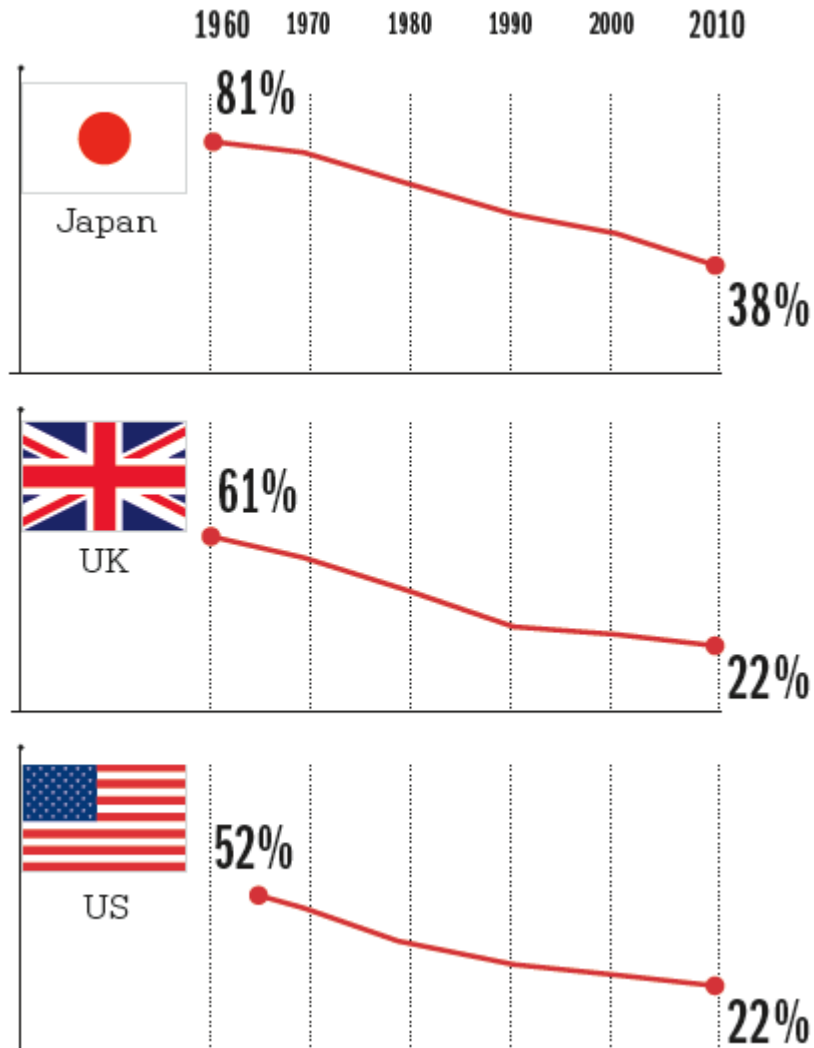
Risk factor		Deaths (millions)	Percentage of total	Risk factor		Deaths (millions)	Percentage of total
<i>World</i>				<i>Low-income countries^a</i>			
1	High blood pressure	7.5	12.8	1	Childhood underweight	2.0	7.8
2	Tobacco use	5.1	8.7	2	High blood pressure	2.0	7.5
3	High blood glucose	3.4	5.8	3	Unsafe sex	1.7	6.6
4	Physical inactivity	3.2	5.5	4	Unsafe water, sanitation, hygiene	1.6	6.1
5	Overweight and obesity	2.8	4.8	5	High blood glucose	1.3	4.9
6	High cholesterol	2.6	4.5	6	Indoor smoke from solid fuels	1.3	4.8
7	Unsafe sex	2.4	4.0	7	Tobacco use	1.0	3.9
8	Alcohol use	2.3	3.8	8	Physical inactivity	1.0	3.8
9	Childhood underweight	2.2	3.8	9	Suboptimal breastfeeding	1.0	3.7
10	Indoor smoke from solid fuels	2.0	3.3	10	High cholesterol	0.9	3.4
<i>Middle-income countries^a</i>				<i>High-income countries^a</i>			
1	High blood pressure	4.2	17.2	1	Tobacco use	1.5	17.9
2	Tobacco use	2.6	10.8	2	High blood pressure	1.4	16.8
3	Overweight and obesity	1.6	6.7	3	Overweight and obesity	0.7	8.4
4	Physical inactivity	1.6	6.6	4	Physical inactivity	0.6	7.7
5	Alcohol use	1.6	6.4	5	High blood glucose	0.6	7.0
6	High blood glucose	1.5	6.3	6	High cholesterol	0.5	5.8
7	High cholesterol	1.3	5.2	7	Low fruit and vegetable intake	0.2	2.5
8	Low fruit and vegetable intake	0.9	3.9	8	Urban outdoor air pollution	0.2	2.5
9	Indoor smoke from solid fuels	0.7	2.8	9	Alcohol use	0.1	1.6
10	Urban outdoor air pollution	0.7	2.8	10	Occupational risks	0.1	1.1

Ranking of selected risk factors: 10 leading risk factor causes of DALYs by income group, 2004

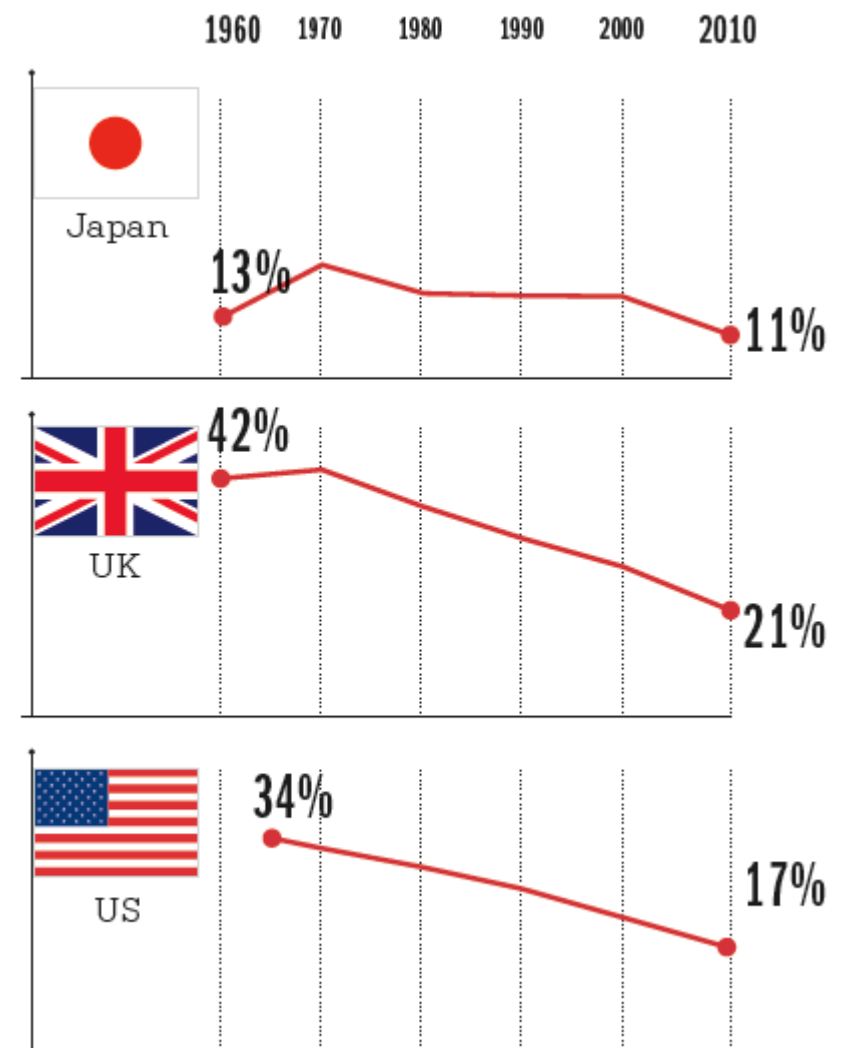
Risk factor	DALYs (millions)	Percentage of total	Risk factor	DALYs (millions)	Percentage of total		
<i>World</i>			<i>Low-income countries^d</i>				
1	Childhood underweight	91	5.9	1	Childhood underweight	82	9.9
2	Unsafe sex	70	4.6	2	Unsafe water, sanitation, hygiene	53	6.3
3	Alcohol use	69	4.5	3	Unsafe sex	52	6.2
4	Unsafe water, sanitation, hygiene	64	4.2	4	Suboptimal breastfeeding	34	4.1
5	High blood pressure	57	3.7	5	Indoor smoke from solid fuels	33	4.0
6	Tobacco use	57	3.7	6	Vitamin A deficiency	20	2.4
7	Suboptimal breastfeeding	44	2.9	7	High blood pressure	18	2.2
8	High blood glucose	41	2.7	8	Alcohol use	18	2.1
9	Indoor smoke from solid fuels	41	2.7	9	High blood glucose	16	1.9
10	Overweight and obesity	36	2.3	10	Zinc deficiency	14	1.7
<i>Middle-income countries^d</i>			<i>High-income countries^d</i>				
1	Alcohol use	44	7.6	1	Tobacco use	13	10.7
2	High blood pressure	31	5.4	2	Alcohol use	8	6.7
3	Tobacco use	31	5.4	3	Overweight and obesity	8	6.5
4	Overweight and obesity	21	3.6	4	High blood pressure	7	6.1
5	High blood glucose	20	3.4	5	High blood glucose	6	4.9
6	Unsafe sex	17	3.0	6	Physical inactivity	5	4.1
7	Physical inactivity	16	2.7	7	High cholesterol	4	3.4
8	High cholesterol	14	2.5	8	Illicit drugs	3	2.1
9	Occupational risks	14	2.3	9	Occupational risks	2	1.5
10	Unsafe water, sanitation, hygiene	11	2.0	10	Low fruit and vegetable intake	2	1.3

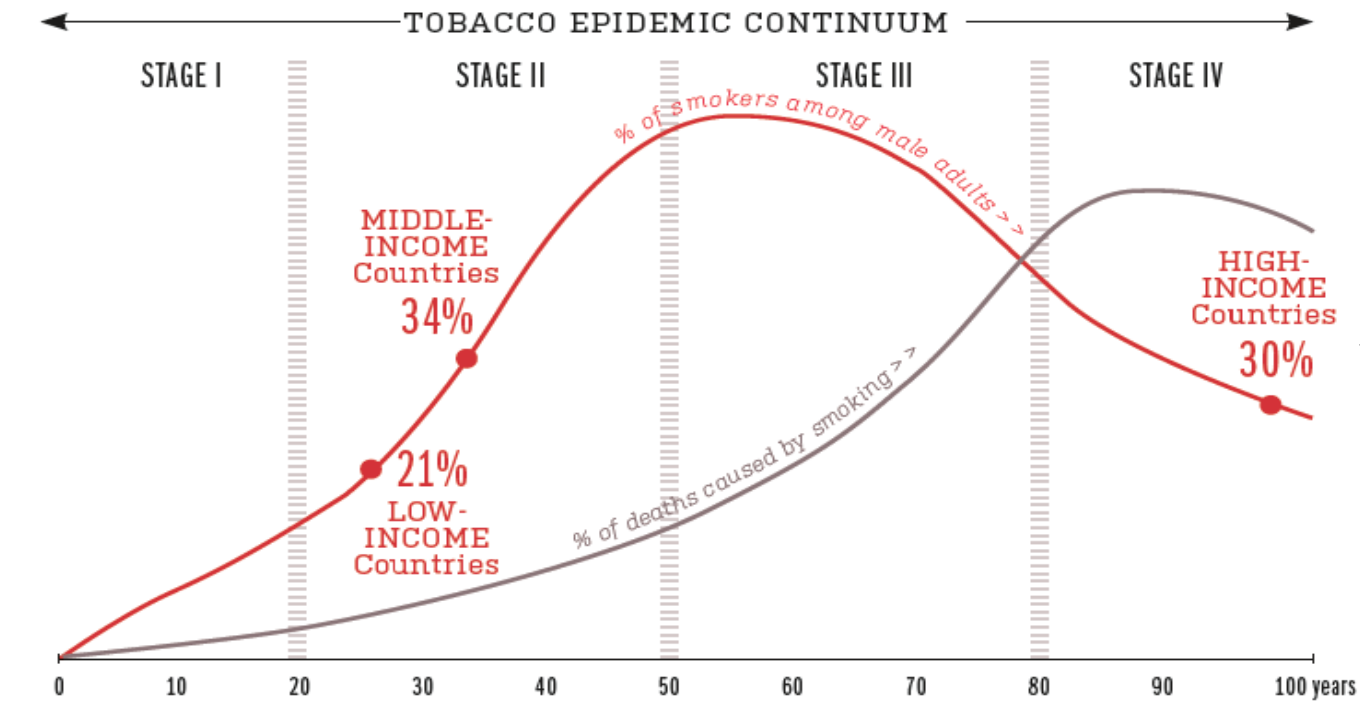
SMOKING TRENDS

Adult male

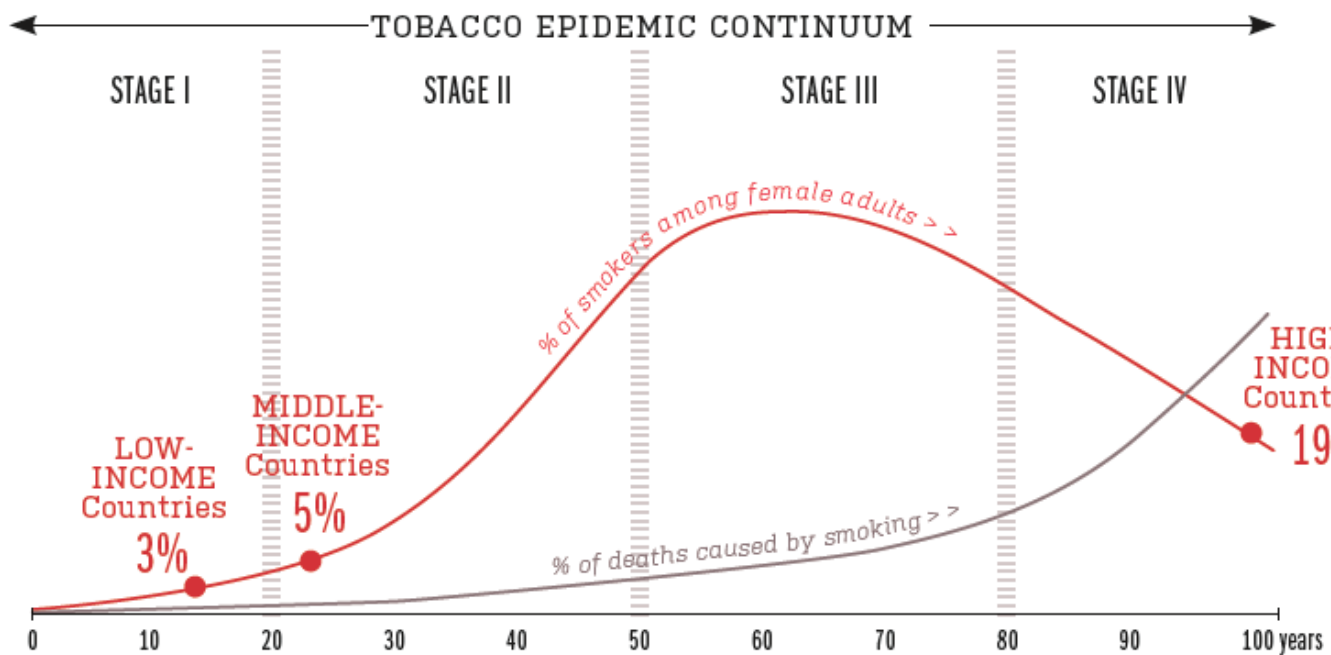
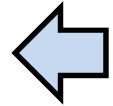


Adult female

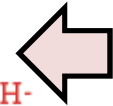




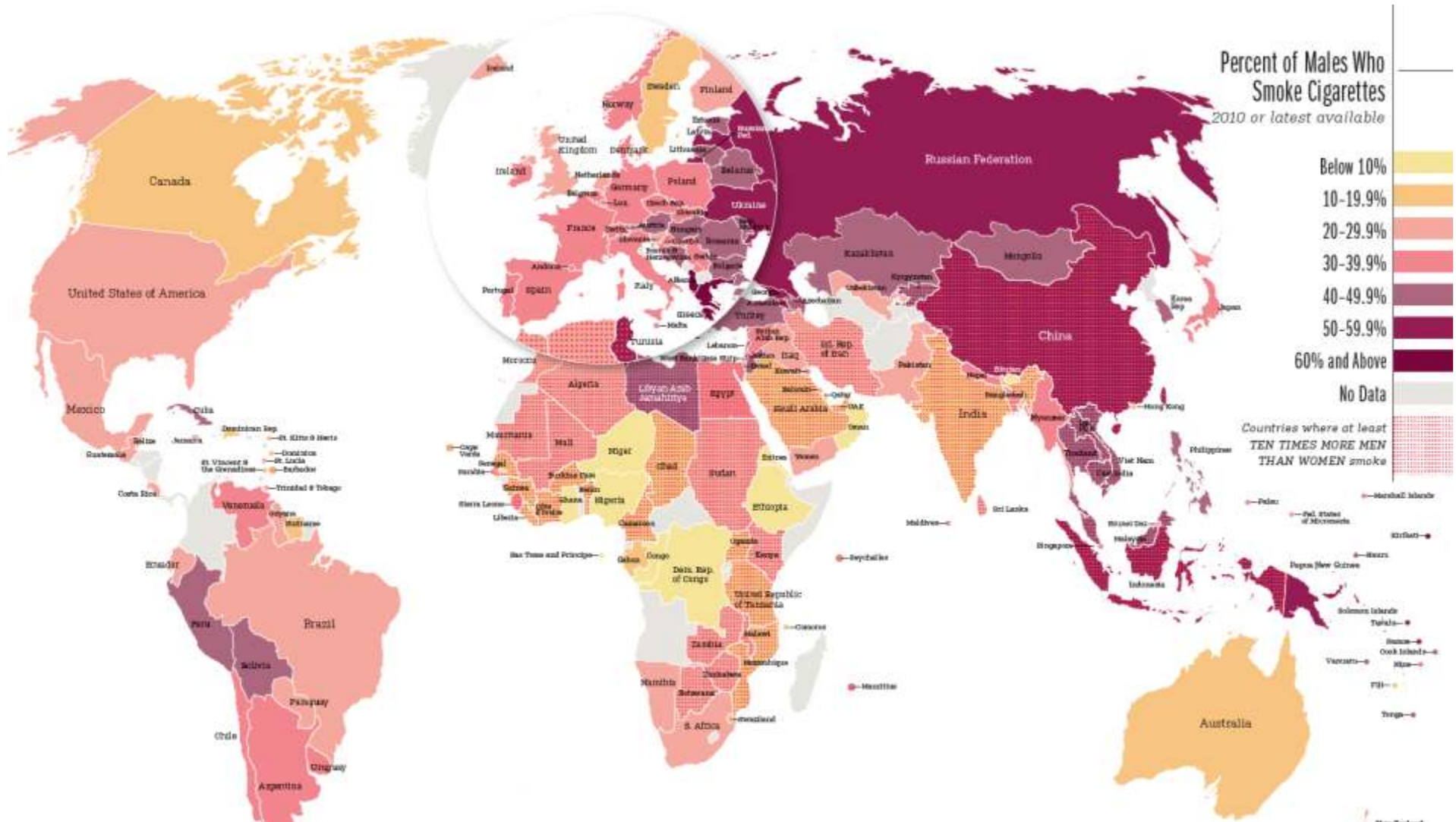
Male Smoking Prevalence and Deaths over a Century
 Weighted average of smoking prevalence, 2010



Female Smoking Prevalence and Deaths over a Century
 Weighted average of smoking prevalence, 2010



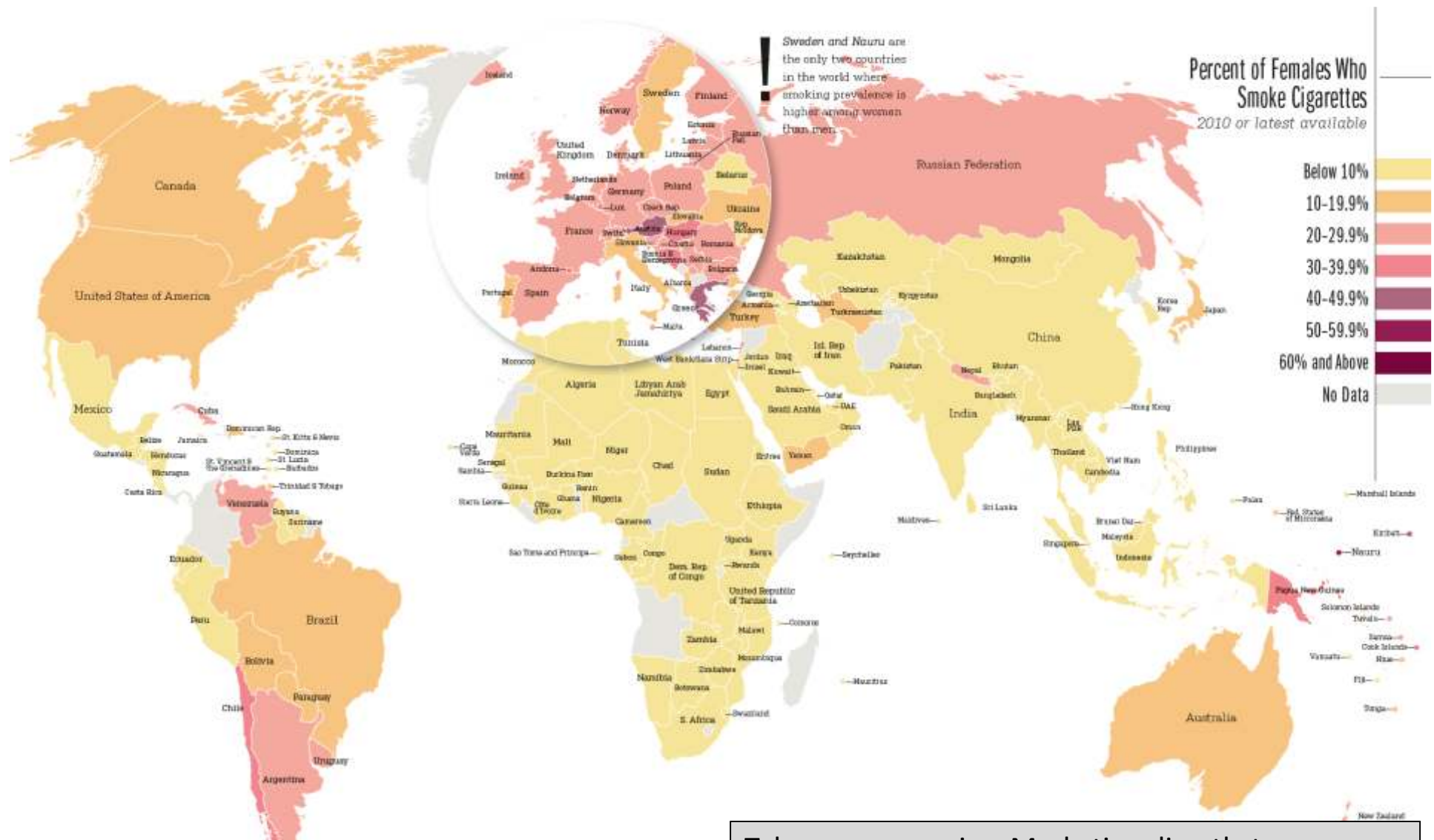
Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. www.TobaccoAtlas.org



- About **800 million adult men** worldwide **smoke** cigarettes.
- Almost 20% of the world's adult male smokers live in high-income countries,
- while over 80% are in low- and middle-income countries.

Smoking **kills ~4 million men** annually.

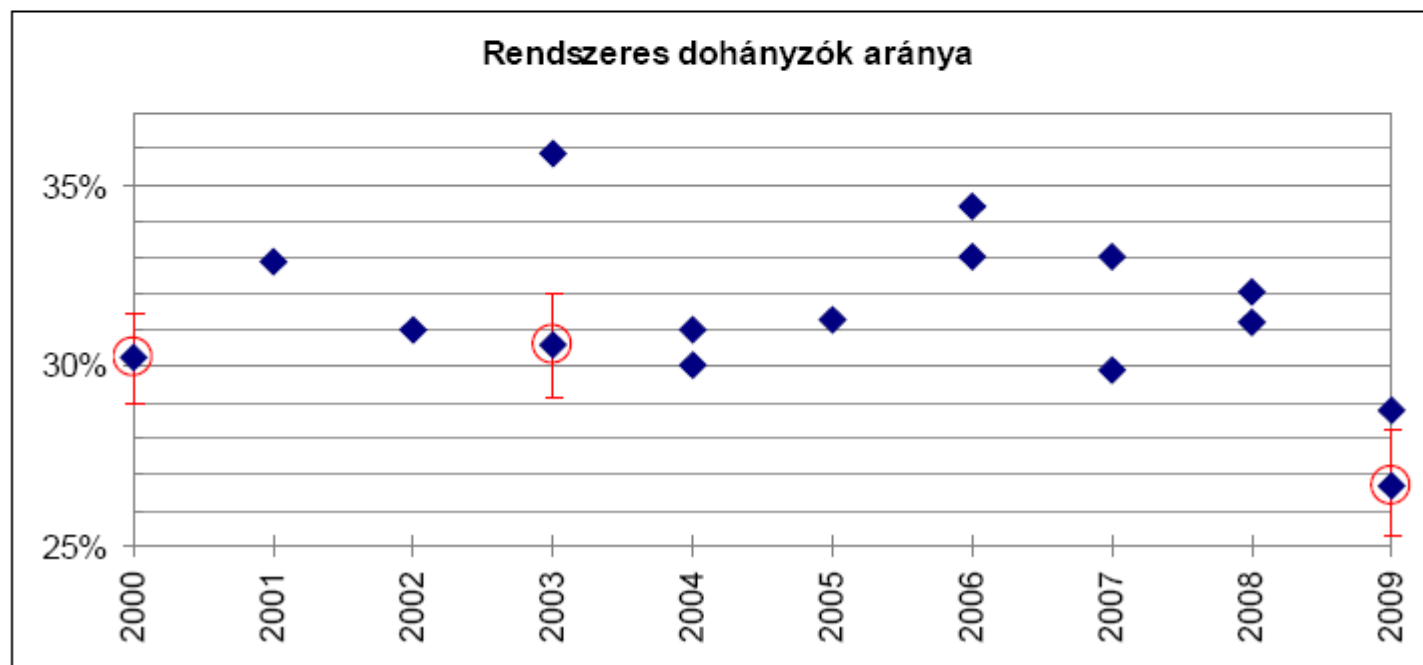
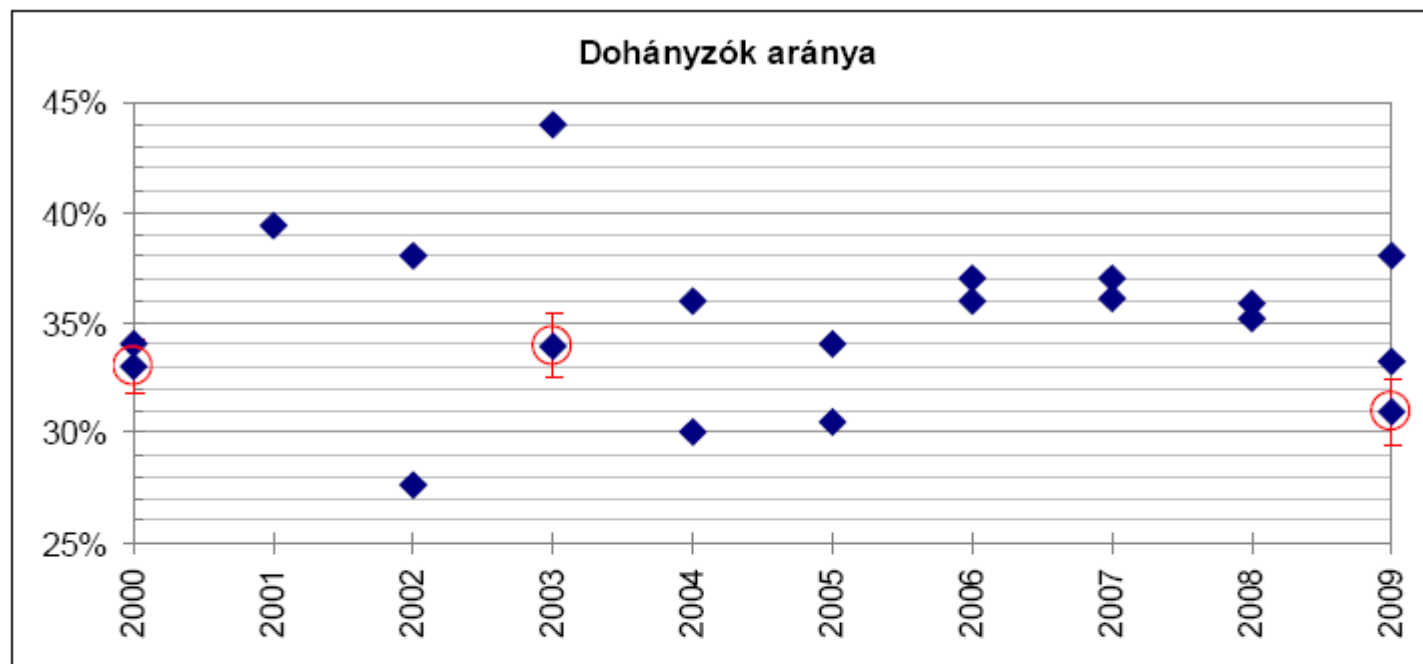
Prevalence rates are declining, but the number of smokers increasing due to general population growth.



- Nearly **200 million adult women** worldwide **smoke** cigarettes.
- In 2010, half of the world's female smokers were in high-income countries and the remaining half in low- and middle-income countries.

Tobacco companies: Marketing directly to women, and create an association between smoking and gender equality.
Today in many low- and middle-income countries where there are potential new smokers and sparse marketing restrictions.

Changes in smoking prevalence between 2000 and 2009 in Hungary.



Demjén T. (szerk.): A felnőttek dohányzására vonatkozó magyarországi felmérések adatai 2000-2009. 2011.

VIRGINIA SLIMS

You've come a long way, baby.

SMOOTH TASTE. SMOOTH TASTE. SMOOTH TASTE.
New Family Pack. New Family Pack. New Family Pack.

© 1987 Philip Morris Inc.

Salem Slim Lights

One Beautiful Moment.
One Beautiful Day.
One Amazingly Slim Day.

Beauty: The Super Guard for Tanned Skin. The Super Guard for Tanned Skin.

We make Virginia Slims especially for women because they are biologically superior to men.

Virginia Slims

You've come a long way, baby.

Virginia Slims really have the working partnership of 1928 iconized.

You've come a long way, baby.

VIRGINIA SLIMS Lights

In the crush-proof purse pack.

Beauty: The Super Guard for Tanned Skin. The Super Guard for Tanned Skin.

Be Happy-Go Lucky!

Come join me at the World's Best Party in the city. I'll be there with my friends. When I'm alone, I'll be there with my friends. When I'm alone, I'll be there with my friends.

Enjoy your cigarette! Enjoy truly fine tobacco that combines both perfect mildness and rich taste in one great cigarette - Lucky Strike!

Further evidence? The best scientific tests conducted by three independent consulting laboratories prove that Lucky Strike is milder than any other premium brand. Rich taste? Yes, the full, rich taste of truly fine tobacco. Only fine tobacco gives you both real mildness and rich taste. And Lucky Strike causes fine tobacco. Be sure you get the happy blending that combines perfect mildness with a rich, true tobacco taste. The Happy-Go Lucky!

LS/M.F.T.-Lucky Strike Means Fine Tobacco

I'll give you all the happiness that ever was or will be. But make a Lucky Strike. It's really so easy!

I wish my child were a sheep. And shepherds, angels and even the good old Lucky Strike. But all my plans to do that!

LUCKY STRIKE CIGARETTES

© 1987 Philip Morris Inc.

IS THIS YOU FIVE YEARS FROM NOW?

When tempted to over-indulge
"Reach for a Lucky instead"

By making the mistake in all things, even in smoking, avoid the heavy shadow of "It's Toasted" and instead, reach for a "Lucky" instead.

Lucky Strike, the finest Cigarette you ever smoked, made of the finest tobacco - The Cream of the Crop - "IT'S TOASTED" - Lucky Strike has an extra, better tasting process. Everyone knows that less nicotine and so 20-25% physicians say that **Lucky** are less irritating to your throat.

LUCKY STRIKE CIGARETTES

"It's toasted"

Your Throat Protection - against irritation - against cough.

*We do not use any smoking Lucky tobacco. We do say when tempted to over-indulge, "Reach for a Lucky instead."

Born gentle

Proud mothers, please forgive us if we too feel something of the pride of a new parent. For new Philip Morris, today's Philip Morris, is delighting smokers everywhere. Enjoy the gentle pleasure, the fresh airburst flavor, of this new cigarette, born gentle, then refined to special gentleness in the making. Ask for new Philip Morris in the smart new package.

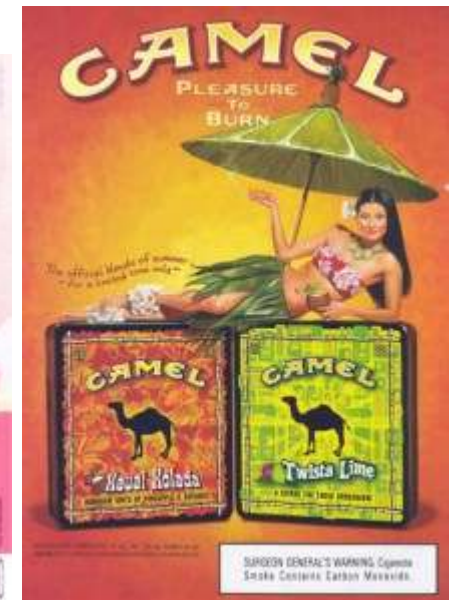
Philip Morris Cigarettes

New Philip Morris...gentle for modern taste.

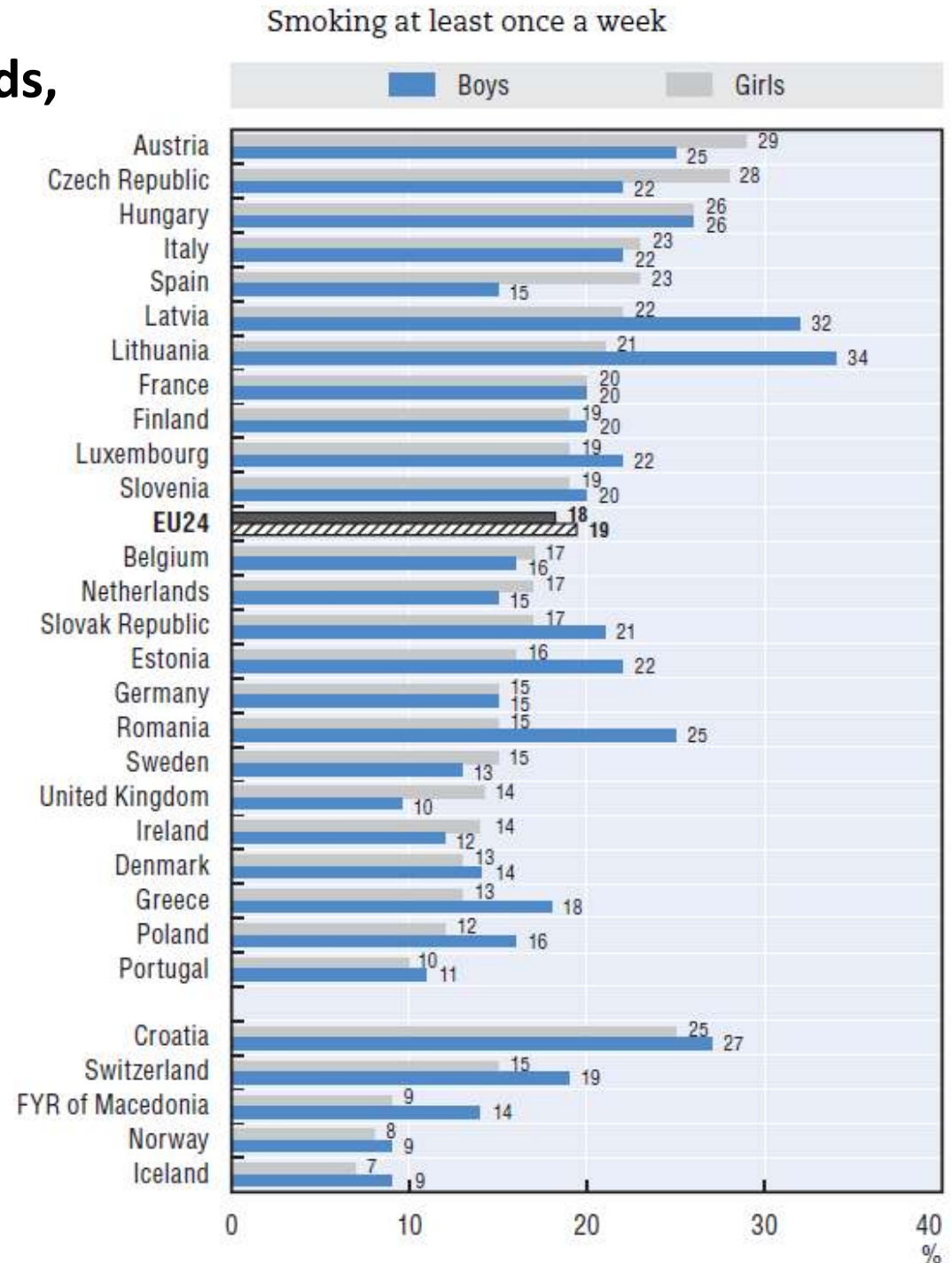
© 1987 Philip Morris Inc.

Designing cigarettes for women and the youth market

- Light cigarettes
- Popular among adolescent girls and women
- Flavor additives
- Modifying pH



Smoking among 15-year-olds, 2009-2010

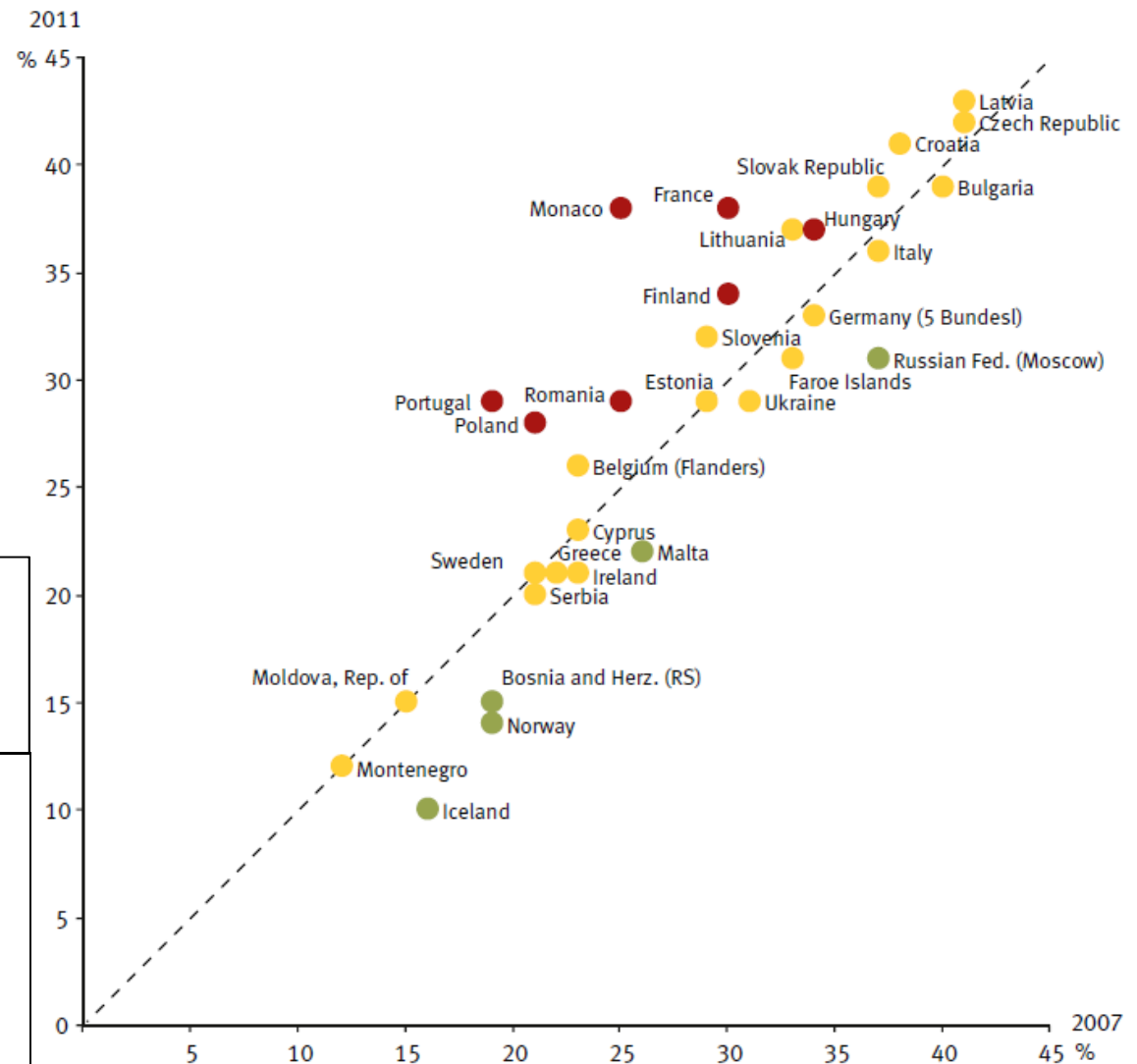


Source: Currie C et al., eds. Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: international report from the 2009/2010 survey

Changes between 2007 and 2011 in cigarette use during the past 30 days.

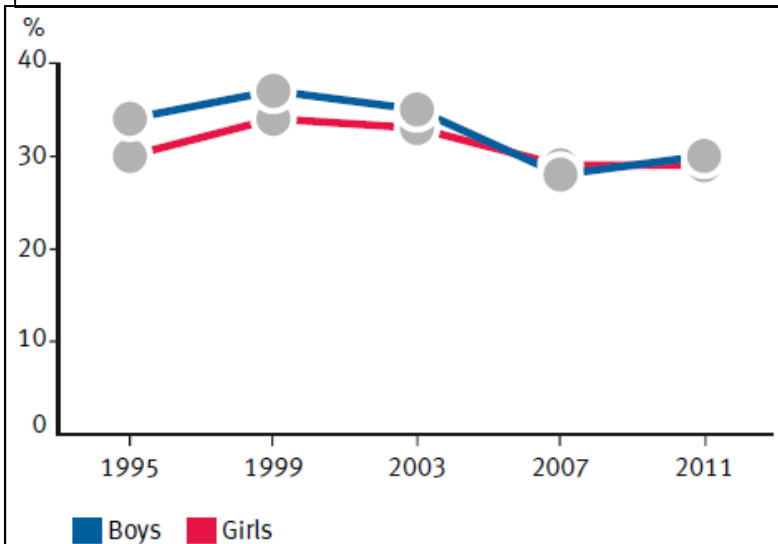
All students. Percentages.

- Significant increase
- No change
- Significant decrease



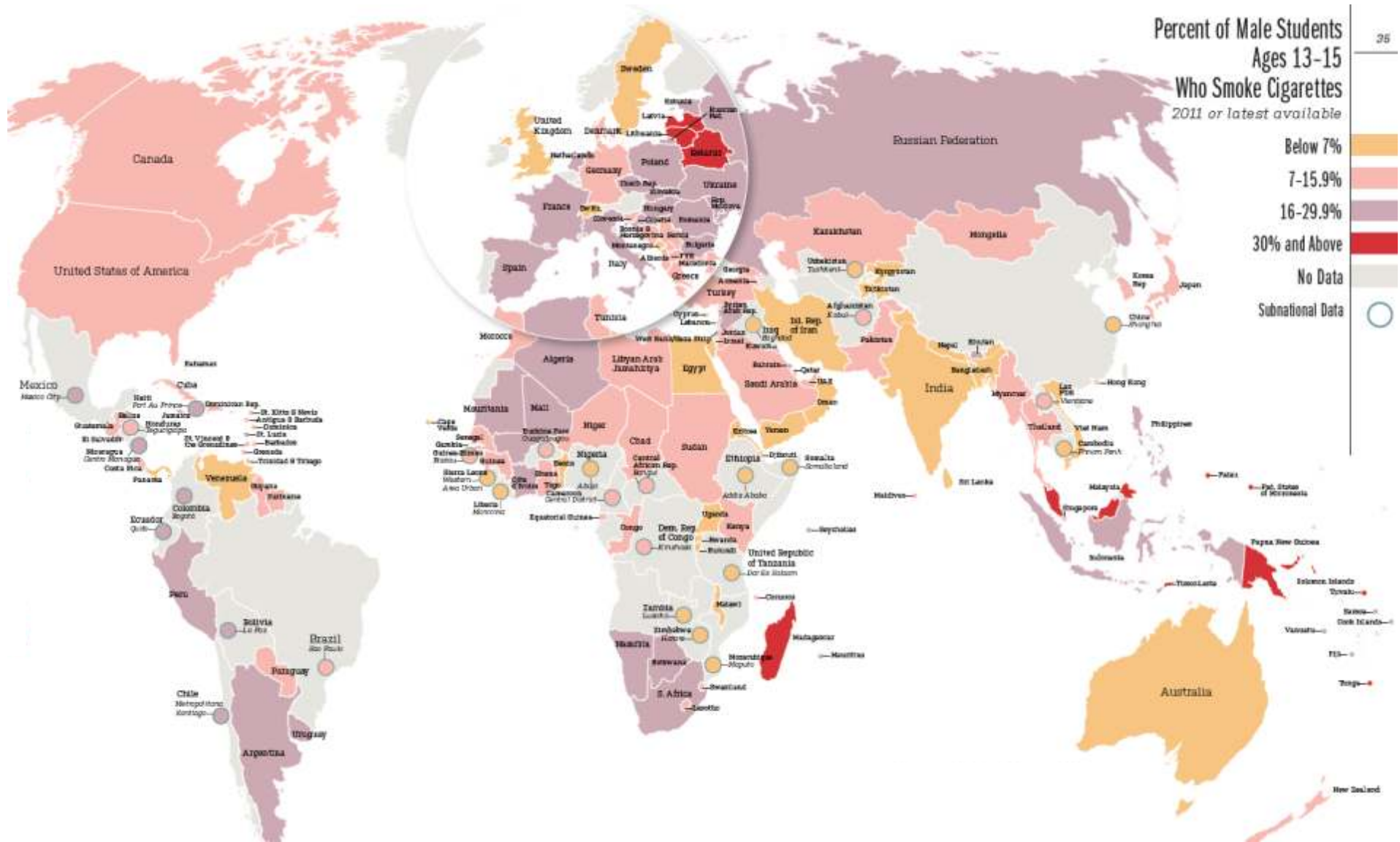
Cigarette use during the past 30 days by gender. 1995–2011.

Averages for 19 countries. Percentages.



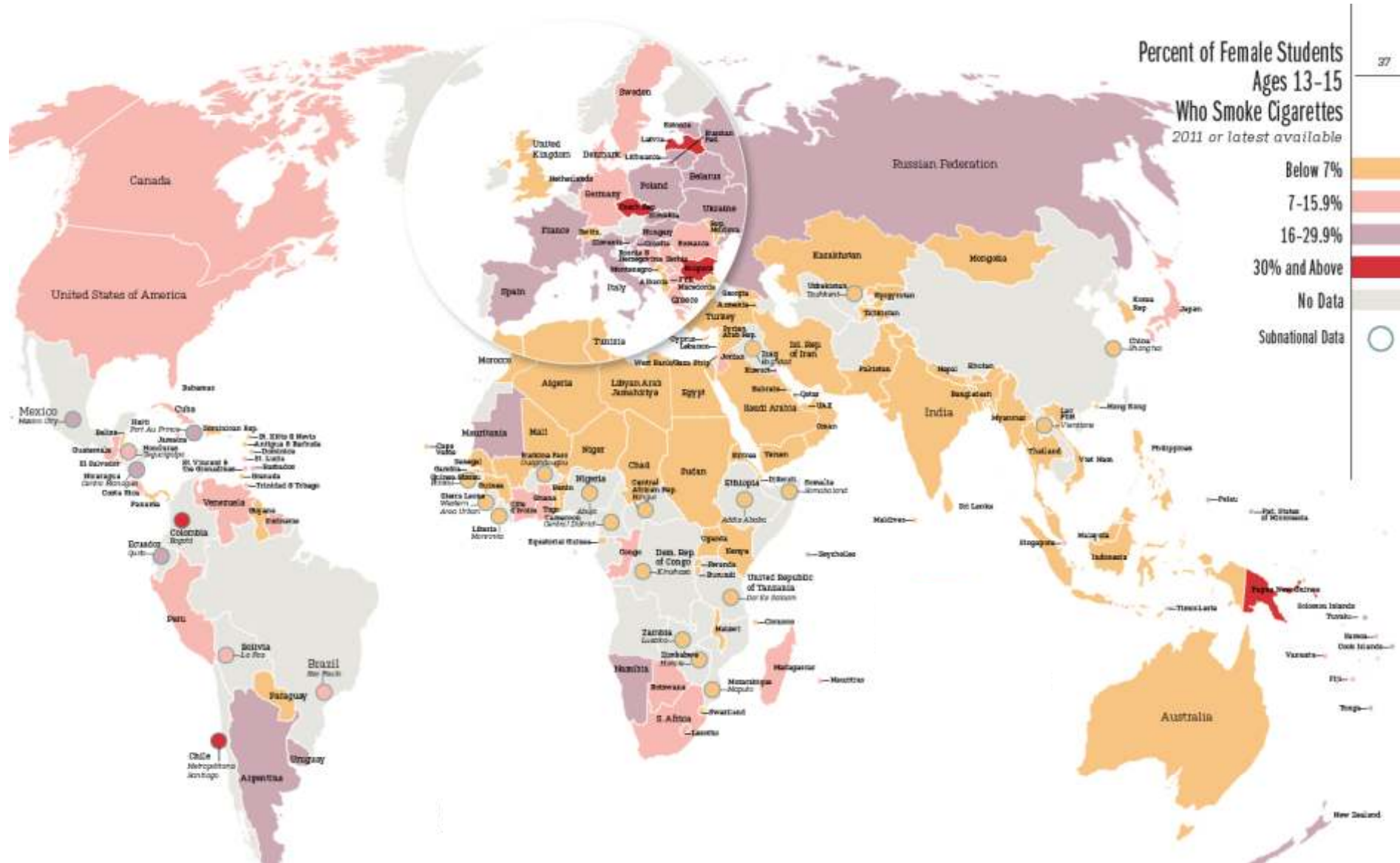
Source: Hibell B et al., eds. The 2011 ESPAD Report. Substance use among students in 36 European countries.

Percent of male students ages 13-15 who smoke cigarettes



Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. www.TobaccoAtlas.org

Percent of female students ages 13-15 who smoke cigarettes



Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. www.TobaccoAtlas.org

The Costs of Tobacco Use to Society

The social burden of tobacco smoking

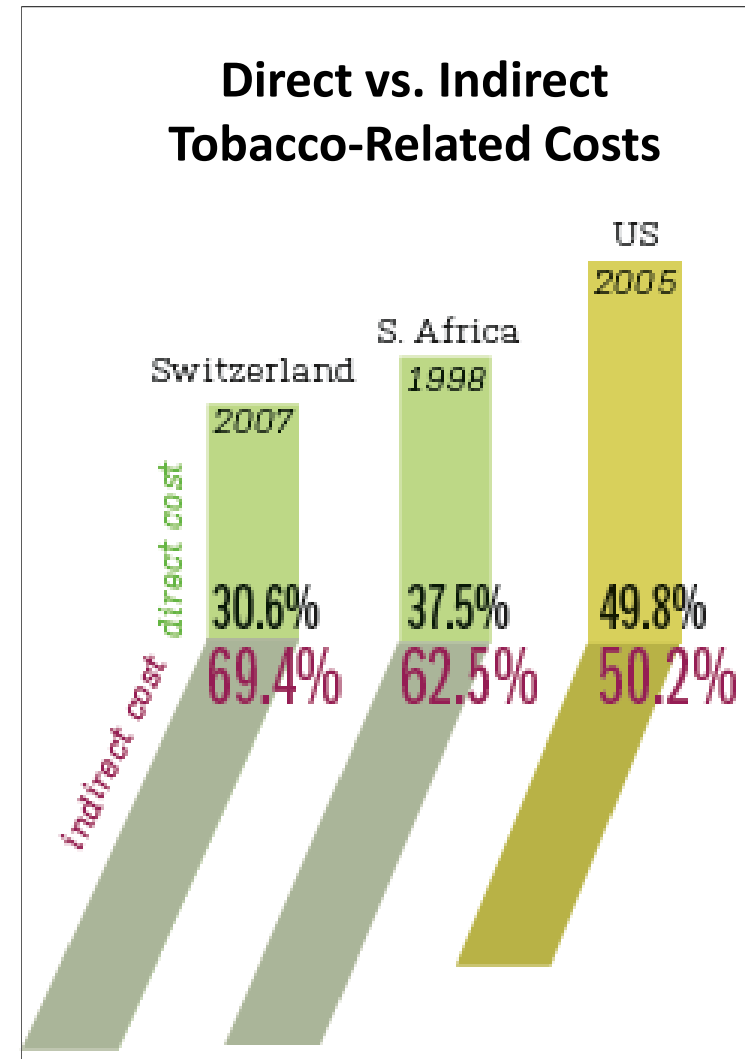
Direct costs:

- Healthcare expenditures
- Drug expenditures
- Sick allowance
- Disability pension

Indirect costs:

- Income loss because of premature death
- Income loss due to illness
- Loss in labor productivity
- Fire damage
- Loss of taxes and contributions to the state budget

From 2000 to 2004, the value of cigarettes sold in the US averaged \$71 billion per year, while *cigarette smoking was responsible for an estimated \$193 billion in annual health-related economic losses* (\$96 billion in direct medical costs and approximately \$97 billion in lost productivity).



The Costs of Smoking to Society in Hungary

Costs (billion HUF)		Income (billion HUF)	
Direct expenditures	354	Taxes and other	360
Drug expenditure	108		
Inpatient care	88		
Premature death	78		
Disability pension	73		
Other	7		
Indirect expenditures	87		
Total	441	Total	360

-81 billion HUF

Bodrogi J.: Economic impact of tobacco smoking. In: Balázs P.: Increasing capacity for tobacco research in Hungary 2008–2013. Budapest, 2013



Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. www.TobaccoAtlas.org

Types of Tobacco Use



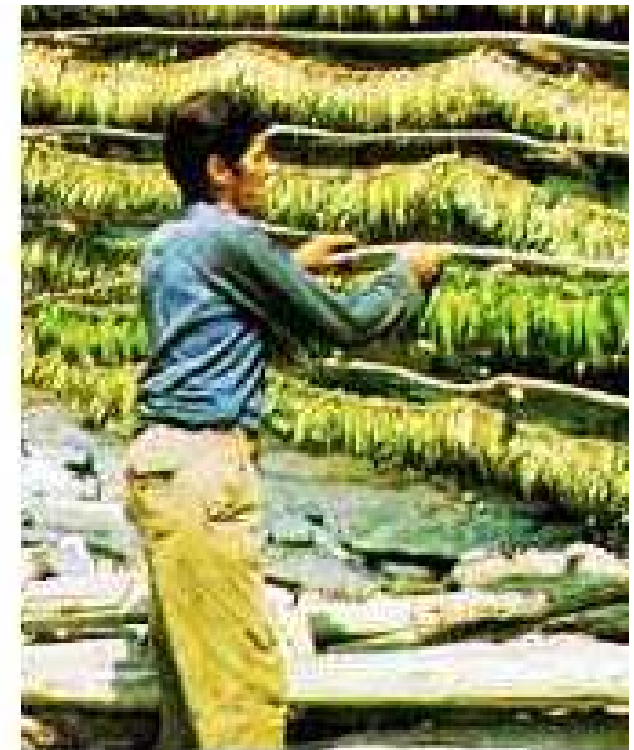
Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. Also available at www.TobaccoAtlas.org



Virginia



Burley



Oriental

Types of tobacco use

SMOKING TOBACCO

- Tobacco smoking is the act of **burning** dried or cured **leaves of the tobacco** plant and inhaling the smoke.
- Combustion uses heat to **create new chemicals** that are not found in unburned tobacco, such as tobacco-specific nitrosamines (TSNAs) and benzopyrene, and allows them to be absorbed through the lungs.

SMOKELESS TOBACCO

- Smokeless tobacco is usually **consumed orally or nasally, without burning** or combustion.
- Smokeless tobacco increases the risk of cancer and **leads to nicotine addiction** similar to that produced by cigarette smoking.
- There are different types of smokeless tobacco: chewing tobacco, snuff, and dissolvables.

Types of Smoking Tobacco



1. Manufactured cigarettes

- most commonly consumed
- consist of shredded or reconstituted tobacco, processed with hundreds of chemicals and various flavors
- rolled into a paper-wrapped cylinder.
- tipped with a cellulose acetate filter, they are lit at one end and inhaled through the other.
- *Most prevalent: Worldwide*



2. Roll-your-own (RYO) cigarettes

- hand-filled by the smoker from fine-cut loose tobacco and a cigarette paper.
- RYO cigarette smokers are exposed to high concentrations of tobacco particulates, tar, nicotine, and TSNAs, and are at increased risk for developing cancers of the mouth, pharynx, larynx, lungs, and esophagus.
- *Most prevalent: Europe and New Zealand*

Types of Smoking Tobacco



3. Cigars

- made of air-cured and fermented tobaccos rolled in tobacco-leaf wrappers.
- The long aging and fermentation process produces high concentrations of carcinogenic compounds that are released upon combustion.
- The concentrations of toxins and irritants in cigars are higher than in cigarettes.
- Cigars come in many shapes and sizes
- *Most prevalent: Worldwide*



4. Kreteks

- clove-flavored cigarettes, they may also contain a wide range of exotic flavorings and eugenol, which has an anesthetic effect, allowing for deeper and more harmful smoke inhalation.
- *Most prevalent: Indonesia*

Types of Smoking Tobacco



5. Bidis

- consist of a small amount of crushed tobacco, hand-wrapped in dried temburni or tendu leaves, and tied with string.
- Despite their small size, bidis tend to deliver more tar and carbon monoxide than manufactured cigarettes because users must puff harder to keep them lit.
- *Most prevalent: South Asia (and are the most heavily consumed smoked tobacco products in India)*



6. Water pipes

- also known as shisha, hookah, narghile, or hubble-bubble,
- Operate by water filtration and indirect heat.
- Flavored tobacco is burned in a smoking bowl covered with foil and coal.
- The smoke is cooled by filtration through a basin of water and consumed through a hose and mouthpiece.
- *Most prevalent: North Africa, the Mediterranean region, and parts of Asia, but now spreading around the world.*



Types of Smokeless Tobacco



1. Chewing tobacco

- oral smokeless tobacco product
- placed in the mouth, cheek, or inner lip and sucked or chewed.
- “spit tobacco” because of the tendency by users to spit out the built-up tobacco juices and saliva.
- *Most prevalent: Worldwide*
- Pan masala or betel quid consists of tobacco, areca nuts (*Areca catechu*), slaked lime (calcium hydroxide), sweeteners, and flavoring agents wrapped in a betel leaf (*Piper betle*).
- *Most prevalent: India*

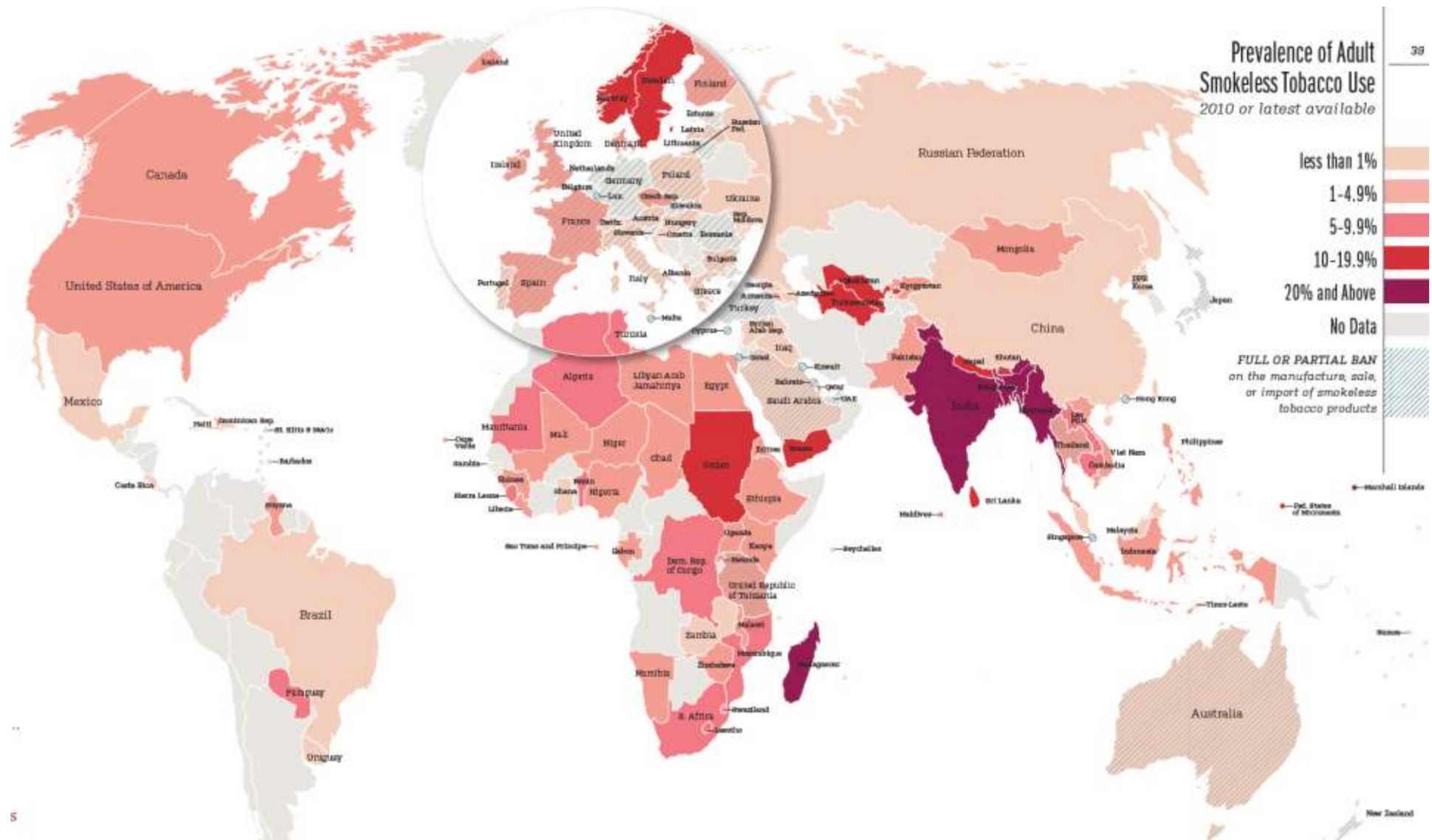


2. Moist snuff

- ground tobacco held in the mouth between the cheek and the gum.
- Manufacturers are increasingly packaging moist snuff into small paper or cloth packets to make the product more convenient.
- Also known as snus, khaini, shammaah, nass, or naswa.
- Tobacco pastes or powders are similarly used, placed on the gums or teeth
- *Most prevalent: Scandinavia and US but becoming worldwide*



Snus is a finely ground and moistened tobacco, a bolus of which is placed under the upper lip for around an hour.



Differences in use by gender:

- More men use eg. Finland and Egypt, men (products are perceived as masculine);
- More women use eg. South Africa, Thailand, and Bangladesh, women (a discreet way to consume tobacco).

Types of Smokeless Tobacco



3. Dry snuff

- powdered tobacco that is inhaled through the nose or taken orally.
- the use of dry snuff is in decline.
- *Most prevalent: Europe*



4. Dissolvable smokeless tobacco products

- dissolve in the mouth without expectoration; they contain tobacco and numerous added constituents whose purpose is to deliver nicotine to the user via oral mucosal absorption.
- They are often extensions of well-known cigarette brands, such as Camel Sticks, Strips, and Orbs; Marlboro Sticks; products by Star Scientific (Ariva, Stonewall); and Zerostyle Mint by Japan Tobacco.
- These newest oral smokeless tobacco products are developed for use by smokers in any situation where they cannot or choose not to smoke.
- *Most prevalent: High-income nations*



Despite the introduction of many new forms of tobacco, ***there is still no safe way of using tobacco*** — *whether inhaled, sniffed, sucked, or chewed*; whether some of the harmful ingredients are reduced; or whether it is mixed with other ingredients.

New Products

- **Tobacco companies** understand the importance of nicotine and want to continue to be the providers of choice for nicotine products, but they also understand the dangers created by the combustion of tobacco products, most notably that customers routinely die from their use. Therefore, tobacco companies are creating new products
- to **keep individuals addicted to nicotine** while
- **reducing toxic exposures** caused by combustion.
- *Dissolvable smokeless tobacco products*
- **ENDS** (Electronic Nicotine Delivery Systems)

Products bypassing tobacco bans

- Electronic cigarettes
- Nicotinic lollipops
- Nicotine water
- products are **unregulated**,
- the **side effects and dangers are unknown**.
- Although e-cigarettes are marketed as a “safe” alternative to smoking, laboratory analyses found carcinogens and toxic chemicals in these products.



E-cigarette use



- **Hungarian** 13–15 years old – used in the past 30 days
 - 13%; boys 16%, girls 10%; 4,7% nonsmoker (GYTS 2012)
- 15+ years Hungarian people (Special Eurobarometer 385, 2012)
 - 9% ever tried
 - 3% regularly/occasionally used

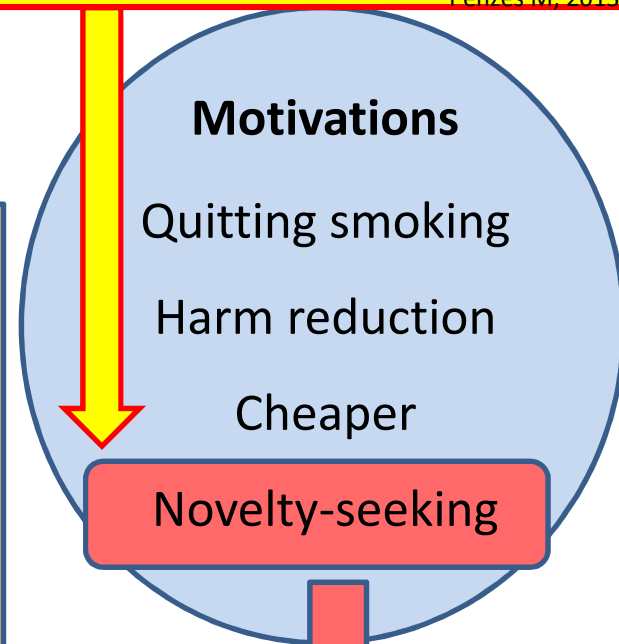
- Hungary – SU, ELTE (N=717)
 - Motivation: Curiosity/taste variety
 - 26,4% ever tried
 - 18,1% nonsmokers

Pénczes M, 2013

- (EU –7% ever tried; 2% regularly/occasionally used)
- **USA** – grade 6–12 students (CDC, 2012)
 - Ever used e-cigarette: 10%

- **Poland** – 15–24 years, (M. Goniewicz, 2012)
 - 20% ever tried (boy > girl)
 - 7% used in the past 30 days (smokers > nonsmokers)
- **USA** – 20–28 years old, (K. Choi, 2013)
 - 7% ever tried
 - 1,2% used in the past 30 days

- **USA** – College students (mean age: 20,5 years) – (E. Sutfin, 2013)
 - 4,9% ever tried, (12% nonsmokers)
 - 1,5% used in the past 30 days



J.F. Etter, 2011

Designing cigarettes for the youth market

- Nicotine is one of the harshest chemicals in tobacco smoke and the most important factor in tobacco dependence
- Highly aversive for first-time users
- To enhance initiation, it is important that a product balances the innate harshness of smoke with masking agents that allow inhalation.

MENTHOL FLAVORING
stimulating cold receptors
increased ventilation

A close-up photograph of a lit cigarette against a black background. The cigarette is positioned diagonally from the bottom left towards the center. The tip is glowing red and orange, with a small amount of ash and charred tobacco visible. A thick, white plume of smoke rises from the tip, curling and swirling upwards and to the right. The smoke is rendered with a soft, ethereal glow, showing intricate patterns of light and shadow. The overall composition is stark and dramatic due to the high contrast between the white smoke and the black background.

**Components of
cigarette smoke**

Components of cigarette smoke



Tobacco smoke contains:

- 7000 chemicals
 - Hundreds are toxic
 - 69 carcinogens

Components of cigarette smoke

- **Nicotine**
- N-nitrosamines, **TSNAs**
- Polycyclic Aromatic Hydrocarbons (**PAH**)
- Volatile Compounds including Aldehydes (**VOCs**), eg. toluene, benzene, acetaldehyde, acrolein, formaldehyde; acetone, 2-butanone; methane, ethane, butane; HCN, acetonitrile, acrylonitrile.
- **Heavy metals**, eg. cadmium, mercury, lead, arsenic, cobalt, chromium, polonium
- **Aromatic amines**, eg. aniline, naphthylamine, toluidine.
- **Additives**: specific purposes → pH adjustment, maintenance of moisture (humectants: glycerol and propylene glycol), amelioration of the harshness of smoke, control of the burn rate, desirable flavor to the smoke (menthol, eugenol [clove cigarettes], fruit extracts, honey, cinnamon, chocolate, lavender, anise, licorice, ginger, vanillin).
 - ***Appetite suppressants*** (since 1960s)

Table 1 Substances investigated and/or added for body weight control by tobacco industry and their putative mechanism(s) of action

Substances	Putative mechanism(s) of action
Tartaric acid	Appetite-suppressant effect via drying of the mouth: tartaric acid volatilizes and is reformed in the mouth. Tartaric acid acts on the membranes in the mouth and produces a dryness that has an appetite-reducing effect.
2-Acetylpyridine	Appetite-suppressant effect via neutralization of the olfactory stimulus.
Catecholamine: ephedrine, amphetamine	Appetite-suppressant effect via dopaminergic stimulation.
Laughing gas	Appetite-suppressant effect via modifications of the taste of food.
Menthol	Appetite modifications via diminution of upper airways irritation.
Mariolide	Anorectic effect not eventually described.
Propylene glycol	Potential appetite-suppressant effect not eventually described.
Reserpine	Decrease of brain activity resulting in a decrease in salty food intake in rats.



1-800-QUIT-NOW

WARNING: Cigarettes cause fatal lung disease.



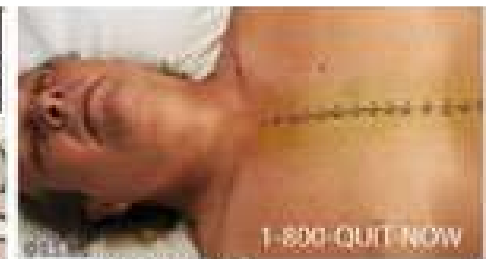
WARNING: Tobacco smoke causes fatal lung disease in nonsmokers.

1-800-QUIT-NOW



WARNING: SMOKING DURING PREGNANCY CAN HARM YOUR BABY.

1-800-QUIT-NOW



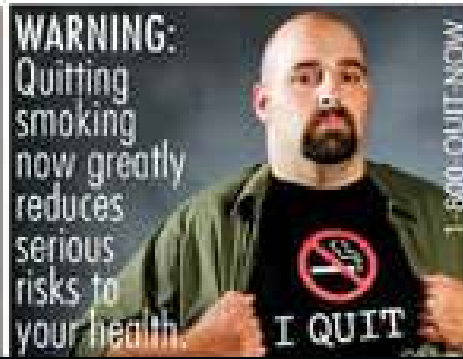
1-800-QUIT-NOW

WARNING: Smoking can kill you.



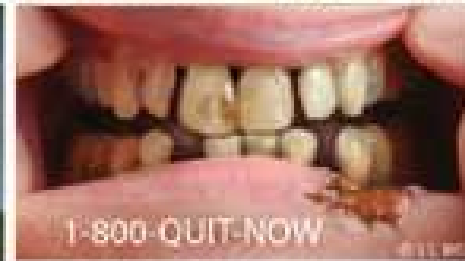
WARNING: TOBACCO SMOKE CAN HARM YOUR CHILDREN.

1-800-QUIT-NOW



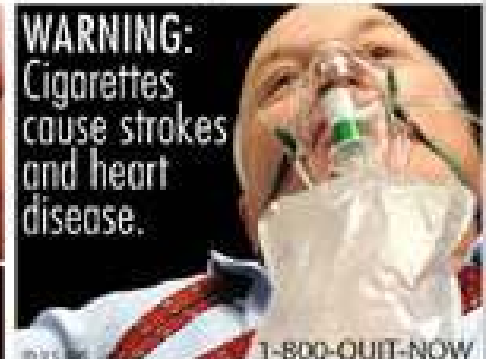
WARNING: Quitting smoking now greatly reduces serious risks to your health.

1-800-QUIT-NOW



1-800-QUIT-NOW

WARNING: Cigarettes cause cancer.



WARNING: Cigarettes cause strokes and heart disease.

1-800-QUIT-NOW

VÍTIMA DESTA PRODUTO	HORROR	PERIGO	GANGRENA	INFARTO
<p>O Ministério da Saúde alerta: Este produto lesa a mãe e o bebê, causando parto prematuro e morte.</p>	<p>O Ministério da Saúde alerta: Este produto causa reações alérgicas graves e morte.</p>	<p>O Ministério da Saúde alerta: O risco de danos cerebrais é maior com o uso deste produto.</p>	<p>O Ministério da Saúde alerta: O uso deste produto contribui para a formação de coágulos.</p>	<p>O Ministério da Saúde alerta: O uso deste produto causa morte por doença do coração.</p>
PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997
PRODUTO TÓXICO	IMPOTÊNCIA	SOFRIMENTO	MORTE	FUMAÇA TÓXICA
<p>O Ministério da Saúde alerta: Este produto contém substâncias tóxicas que lesam ao desenvolvimento e à morte.</p>	<p>O Ministério da Saúde alerta: O uso deste produto causa impotência e morte.</p>	<p>O Ministério da Saúde alerta: A dependência da nicotina causa sofrimento, dor e morte.</p>	<p>O Ministério da Saúde alerta: O uso deste produto leva à morte por câncer de pulmão e enfisema.</p>	<p>O Ministério da Saúde alerta: Passar a fumar este produto causa pneumonia e bronquite.</p>
PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997	PARA DE FUMAR PROTEJA SUAS CIGARETAS 0800 61 1997

The health consequences of smoking

How Tobacco Harms You

Eyes
Blindness (macular degeneration)
Cataracts
Stinging, excessive tearing and blinking

Ears
Hearing loss
Ear infection

Nose
Cancer of nasal cavities and paranasal sinuses
Impaired sense of smell

Heart
Coronary thrombosis (heart attack)
Atherosclerosis; damage and occlusion of coronary vasculature

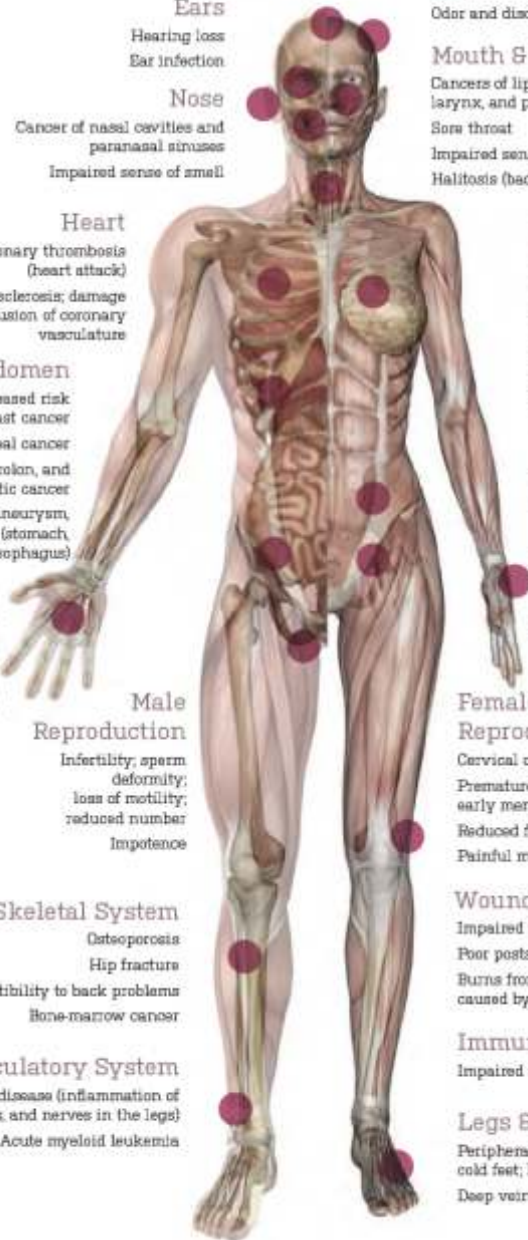
Chest & Abdomen
Possible increased risk of breast cancer
Esophageal cancer
Gastric, colon, and pancreatic cancer
Abdominal aortic aneurysm, peptic ulcer (stomach, duodenum, and esophagus)

Hands
Peripheral vascular disease; poor circulation (cold fingers)

Male Reproduction
Infertility; sperm deformity; loss of motility; reduced number
Impotence

Skeletal System
Osteoporosis
Hip fracture
Susceptibility to back problems
Bone-marrow cancer

Circulatory System
Buerger's disease (inflammation of arteries, veins, and nerves in the legs)
Acute myeloid leukemia



Brain & Psyche
Stroke (cerebrovascular accident)
Addiction/withdrawal
Altered brain chemistry
Anxiety about tobacco's health effects

Hair
Odor and discoloration

Mouth & Throat
Cancers of lips, mouth, throat, larynx, and pharynx
Sore throat
Impaired sense of taste
Halitosis (bad breath)

Teeth
Periodontal (gum) disease
gingivitis; periodontitis
Loose teeth, tooth loss
Root-surface caries, plaque
Discoloration and stains

Lungs
Lung, bronchus, and tracheal cancer
Chronic obstructive pulmonary disease (COPD); emphysema
Chronic bronchitis
Respiratory infection; influenza; pneumonia; tuberculosis
Shortness of breath; asthma
Chronic cough; excessive sputum production

Liver **Kidneys & Bladder**
Liver cancer Kidney and bladder cancer

Skin
Psoriasis
Loss of skin tone; wrinkling; premature aging

Female Reproduction
Cervical cancer
Premature ovarian failure; early menopause
Reduced fertility
Painful menstruation

Wounds & Surgery
Impaired wound healing
Poor postsurgical recovery
Burns from cigarettes and from fires caused by cigarettes

Immune System
Impaired resistance to infection

Legs & Feet
Peripheral vascular disease; cold feet; leg pain; gangrene
Deep vein thrombosis (DVT)

Health Risks of Smoking During Pregnancy



Mother
Abruptio placentae
Placenta previa
Premature rupture of membranes
Premature birth
Spontaneous abortion/ miscarriage
Ectopic pregnancy

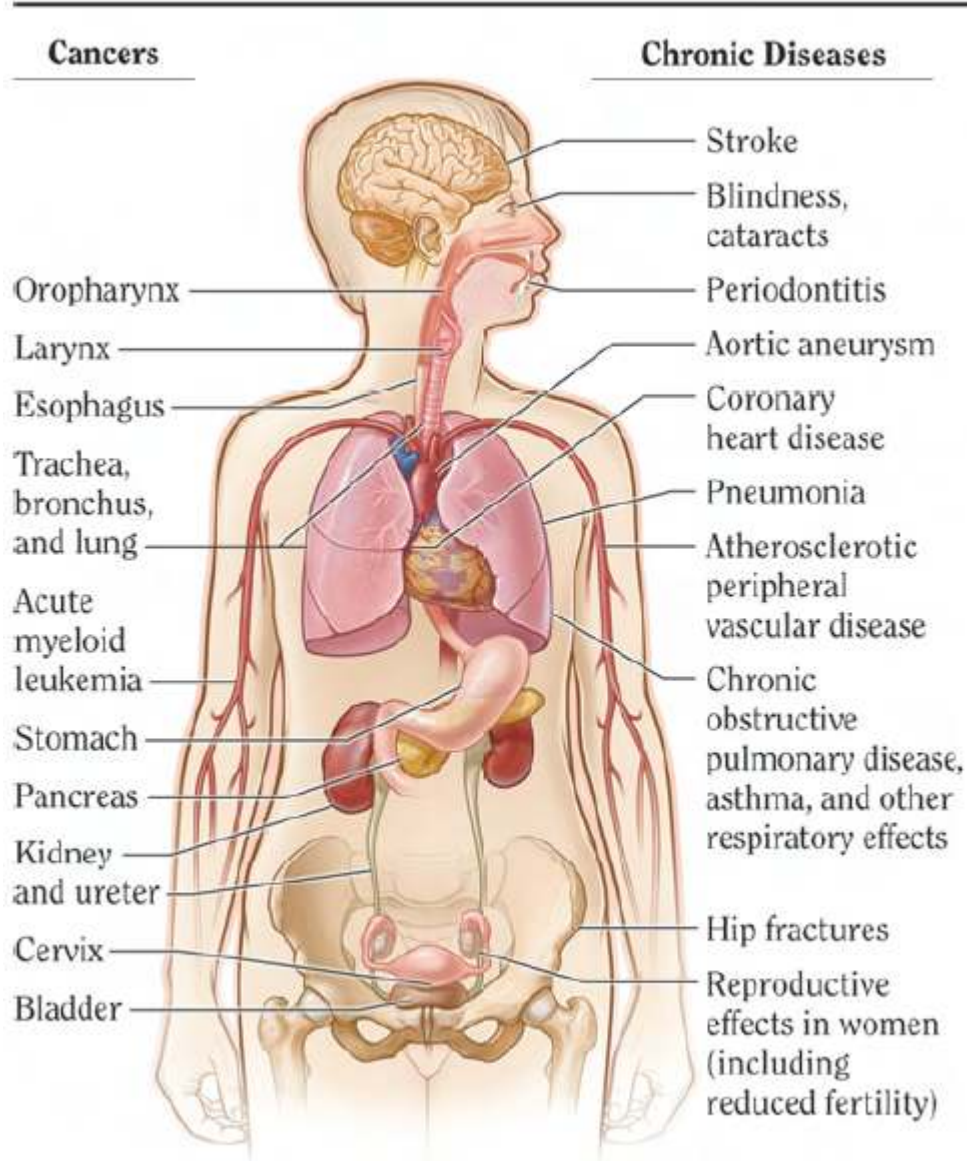
Fetuses, Infants, Children
Stunted gestational development
Stillbirth
Sudden Infant Death Syndrome (SIDS)
Reduced lung function and impaired lung development
Asthma exacerbation
Acute lower respiratory infection; bronchitis; pneumonia
Respiratory irritation; cough; phlegm; wheezes
Childhood cancers
Oral cleft

No tobacco products have been scientifically proven to reduce the risk of tobacco-related diseases.

Eriksen M, Mackay J, Ross H. *The Tobacco Atlas*. Fourth Ed. Atlanta, GA: American Cancer Society; New York, NY: World Lung Foundation; 2012. Also available at www.TobaccoAtlas.org

The health consequences causally linked to smoking

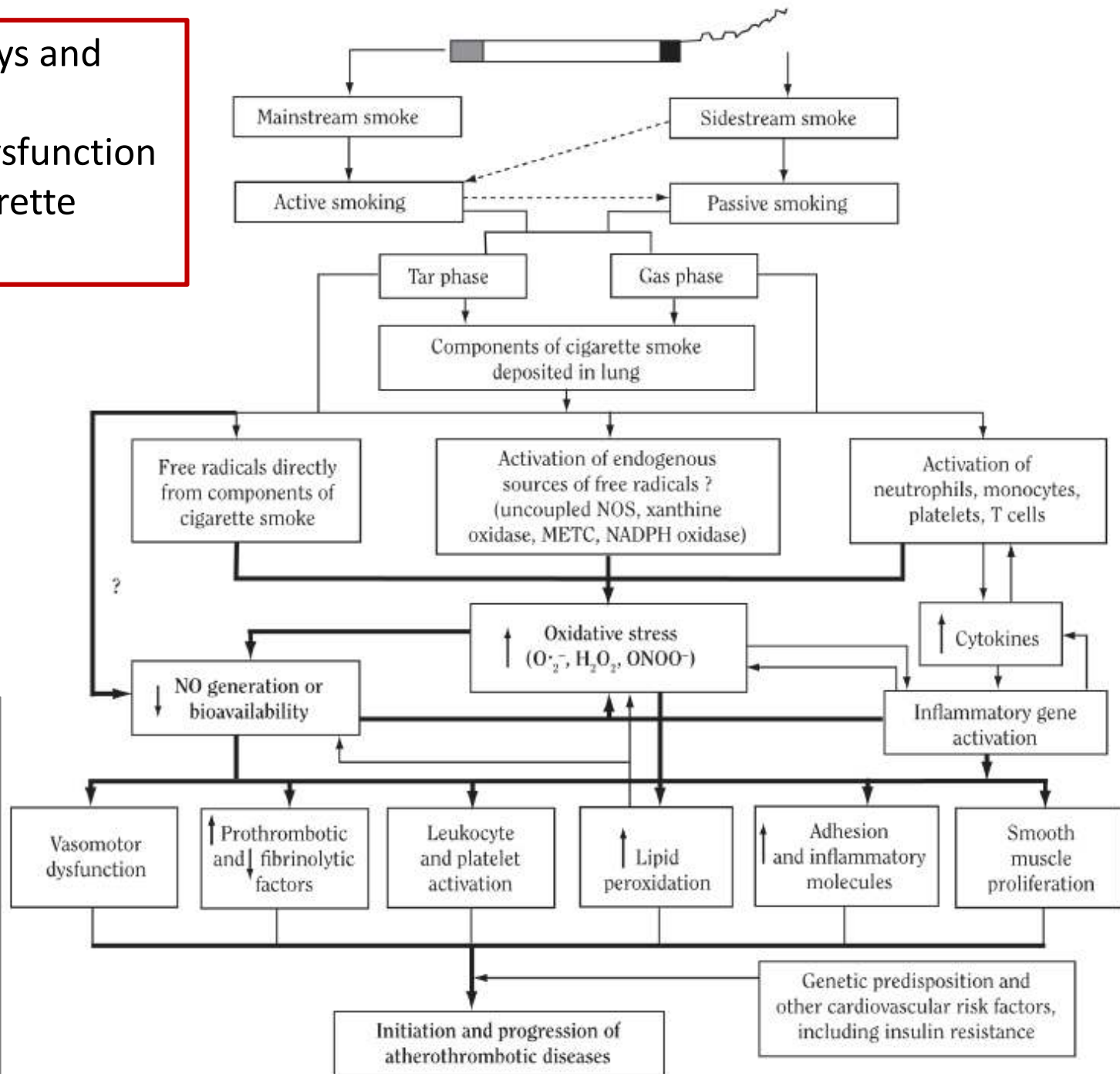
Smoking



Source: USDHHS 2004, 2006.

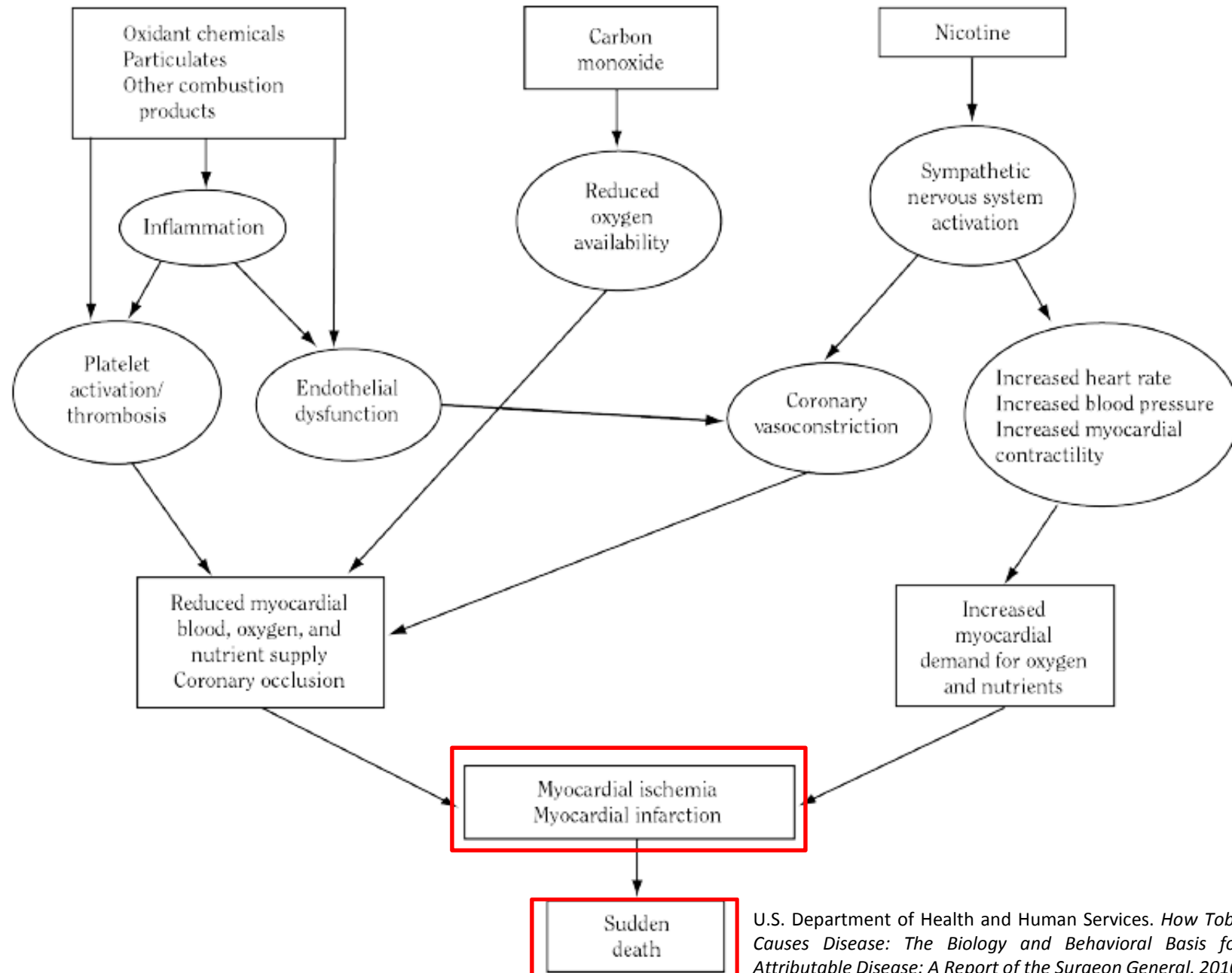
U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. 2010.

Potential pathways and mechanisms for cardiovascular dysfunction mediated by cigarette smoking



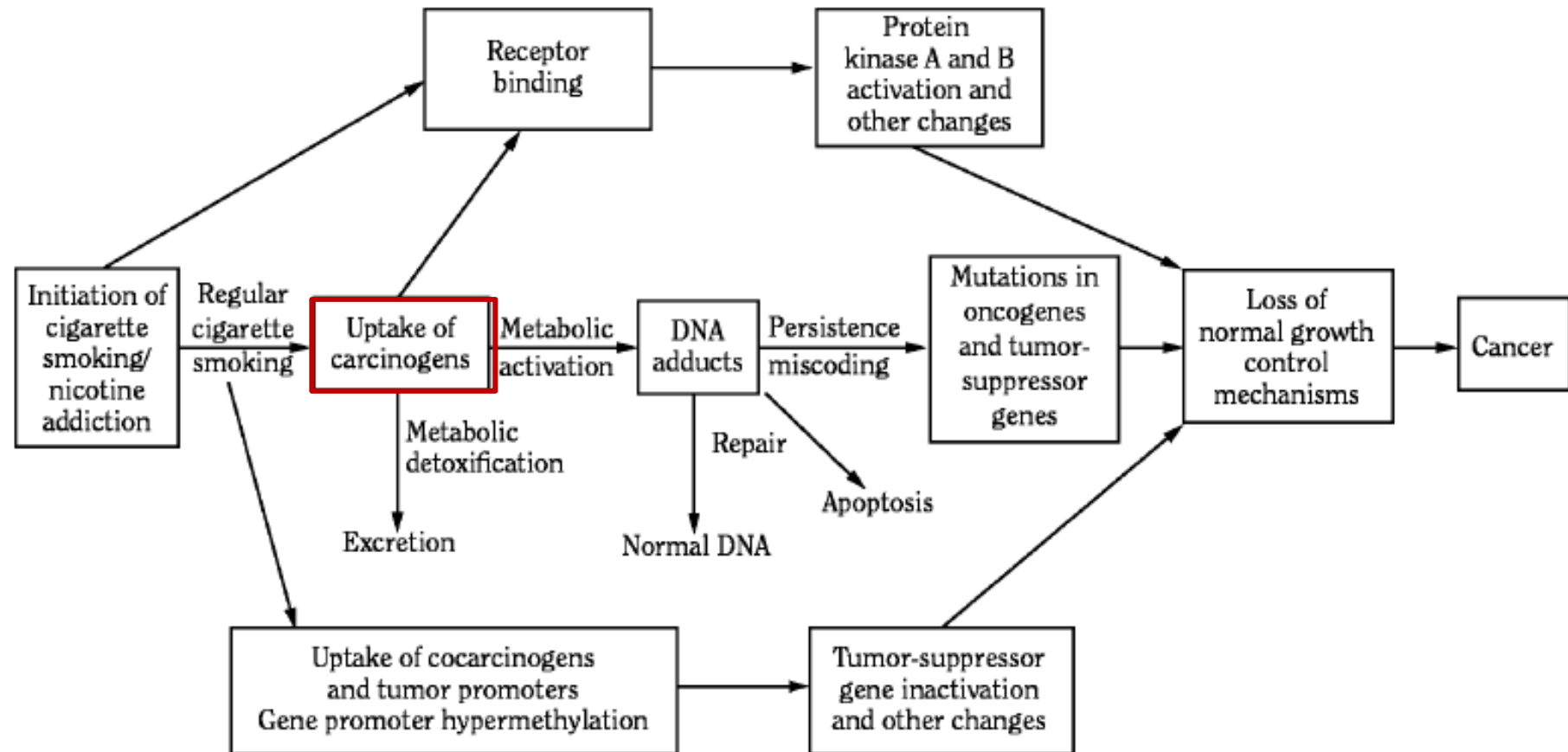
Source: Ambrose and Barua 2004.
 Note: The bold boxes and arrows in the flow diagram represent the probable central mechanisms in the complex pathophysiology of atherothrombotic disease mediated by cigarette smoking.
H2O2 = hydrogen peroxide; **METC** = mitochondrial electron transport chain; **NADPH** = reduced nicotinamide adenine dinucleotide phosphate; **NO** = nitric oxide; **NOS** = nitric oxide synthase; **O₂⁻** = superoxide anion; **ONOO⁻** = peroxynitrite.

Overview of mechanisms by which cigarette smoking causes an acute cardiovascular event



U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. 2010.

Link between cigarette smoking and cancer through carcinogens in tobacco smoke



Carcinogen ^a	Quantity (per cigarette)	IARC evaluations of evidence of carcinogenicity in humans			IARC Monograph ^c (volume, year)
		In animals	In humans	IARC group ^b	
Polycyclic aromatic hydrocarbons					
Benzo[<i>a</i>]anthracene	20–70 ng	Sufficient		2A	32, 1983; S7, 1987
Benzo[<i>b</i>]fluoranthene	4–22 ng	Sufficient		2B	32, 1983; S7, 1987
Benzo[<i>j</i>]fluoranthene	6–21 ng	Sufficient		2B	32, 1983; S7, 1987
Benzo[<i>k</i>]fluoranthene	6–12 ng	Sufficient		2B	32, 1983; S7, 1987
Benzo[<i>a</i>]pyrene	8.5–17.6 ng	Sufficient	Limited	1	32, 1983; S7, 1987; 92, in press
Dibenzo[<i>a,h</i>]anthracene	4 ng	Sufficient		2A	32, 1983; S7, 1987
Dibenzo[<i>a,i</i>]pyrene	1.7–3.2 ng	Sufficient		2B	32, 1983; S7, 1987
Dibenzo[<i>a,e</i>]pyrene	Present	Sufficient		2B	32, 1983; S7, 1987
Indeno[1,2,3- <i>cd</i>]pyrene	4–20 ng	Sufficient		2B	32, 1983; S7, 1987
5-methylchrysene	ND–0.6 ng	Sufficient		2B	32, 1983; S7, 1987
Heterocyclic compounds					
Furan	20–40 µg	Sufficient		2B	63, 1995a
Dibenzo[<i>a,h</i>]acridine	ND–0.1 ng	Sufficient		2B	32, 1983; S7, 1987
Dibenzo[<i>a,j</i>]acridine	ND–10 ng	Sufficient		2B	32, 1983; S7, 1987
Dibenzo[<i>c,g</i>]carbazole	ND–0.7 ng	Sufficient		2B	32, 1983; S7, 1987
Benzo[<i>b</i>]furan	Present	Sufficient		2B	63, 1995a
N-nitrosamines					
N-nitrosodimethylamine	0.1–180 ng	Sufficient		2A	17, 1978; S7, 1987
N-nitrosoethylmethylamine	ND–13 ng	Sufficient		2B	17, 1978; S7, 1987
N-nitrosodiethylamine	ND–25 ng	Sufficient		2A	17, 1978; S7, 1987
N-nitrosopyrrolidine	1.5–110 ng	Sufficient		2B	17, 1978; S7, 1987
N-nitrosopiperidine	ND–9 ng	Sufficient		2B	17, 1978; S7, 1987
N-nitrosodiethanolamine	ND–36 ng	Sufficient		2B	17, 1978; 77, 2000
N'-nitrososornicotine	154–196 ng	Sufficient	Limited	1	37, 1985; S7, 1987; 89, in press
4-(methylnitrosamino)-1-(3-pyridyl) 1-butanone	110–133 ng	Sufficient	Limited	1	37, 1985; S7, 1987; 89, in press
Aromatic amines					
2-toluidine	30–200 ng	Sufficient	Limited	2A	S7, 1987; 77, 2000
2,6-dimethylaniline	4–50 ng	Sufficient		2B	S7, 1993
2-naphthylamine	1–22 ng	Sufficient	Sufficient	1	4, 1974; S7, 1987
4-aminobiphenyl	2–5 ng	Sufficient	Sufficient	1	1, 1972; S7, 1987
Heterocyclic aromatic amines					
2-amino-9 <i>H</i> -pyrido[2,3- <i>b</i>]indole	25–260 ng	Sufficient		2B	40, 1986; S7, 1987
2-amino-3-methyl-9 <i>H</i> -pyrido[2,3- <i>b</i>]indole	2–37 ng	Sufficient		2B	40, 1986; S7, 1987
2-amino-3-methylimidazo[4,5- <i>f</i>]quinoline	0.3 ng	Sufficient		2A	S7, 1987; 56, 1993
3-amino-1,4-dimethyl-5 <i>H</i> -pyrido[4,3- <i>b</i>]indole	0.3–0.5 ng	Sufficient		2B	31, 1983; S7, 1987
3-amino-1-methyl-5 <i>H</i> -pyrido[4,3- <i>b</i>]indole	0.8–1.1 ng	Sufficient		2B	31, 1983; S7, 1987
2-amino-6-methylpyrido[1,2- <i>a</i> :3',2'- <i>d'</i>]imidazole	0.37–0.89 ng	Sufficient		2B	40, 1986; S7, 1987
2'- <i>d'</i>]imidazole					
2-aminodipyrido[1,2- <i>a</i> :3',2'- <i>d'</i>]imidazole	0.25–0.88 ng	Sufficient		2B	40, 1986; S7, 1987
2-amino-1-methyl-6-phenylimidazo[4,5- <i>b</i>]pyridine	11–23 ng	Sufficient		2B	56, 1993

Carcinogen ^a	Quantity (per cigarette)	IARC evaluations of evidence of carcinogenicity in humans			IARC Monograph ^c (volume, year)
		In animals	In humans	IARC group ^b	
Aldehydes					
Formaldehyde	10.3–25 µg	Sufficient	Sufficient	1	S7, 1987; 62, 1995b
Acetaldehyde	770–864 µg	Sufficient		2B	S7, 1987; 71, 1999
Phenolic compounds					
Catechol	50–81 µg	Sufficient		2B	S7, 1987; 71, 1999
Caffeic acid	<3 µg	Sufficient		2B	56, 1993
Volatile hydrocarbons					
1,3-butadiene	20–40 µg	Sufficient	Limited	2A	S7, 1987; 71, 1999
Isoprene	450–1,000 µg	Sufficient		2B	60, 1994; 71, 1999
Benzene	12–50 µg	Sufficient	Sufficient	1	29, 1982; S7, 1987
Nitrohydrocarbons					
Nitromethane	0.5–0.6 µg	Sufficient		2B	77, 2000
2-nitropropane	0.7–1.2 ng	Sufficient		2B	S7, 1987; 71, 1999
Nitrobenzene	25 µg	Sufficient		2B	65, 1996
Miscellaneous organic compounds					
Acetamide	38–56 µg	Sufficient		2B	S7, 1987; 71, 1999
Acrylamide	Present	Sufficient		2A	S7, 1987; 60, 1994
Acrylonitrile	3–15 µg	Sufficient		2B	S7, 1987; 71, 1999
Vinyl chloride	11–15 ng	Sufficient	Sufficient	1	19, 1979; S7, 1987
1,1-dimethylhydrazine	Present	Sufficient		2B	4, 1974; 71, 1999
Ethylene oxide	7 µg	Sufficient	Limited	1	60, 1994; S7, 1987
Propylene oxide	0–100 ng	Sufficient		2B	60, 1994; S7, 1987
Urethane	20–38 ng	Sufficient		2B	7, 1974; S7, 1987
Metals and inorganic compounds					
Arsenic	40–120 ng	Sufficient	Sufficient	1	84, 2004
Beryllium	0.5 ng	Sufficient	Sufficient	1	S7, 1987; 58, 1993
Nickel	ND–600 ng	Sufficient	Sufficient	1	S7, 1987; 49, 1990
Chromium (hexavalent)	4–70 ng	Sufficient	Sufficient	1	S7, 1987; 49, 1990
Cadmium	41–62 ng	Sufficient	Sufficient	1	S7, 1987; 58, 1993
Cobalt	0.13–0.20 ng	Sufficient		2B	52, 1991
Lead (inorganic)	34–85 ng	Sufficient	Limited	2A	23, 1980; S7, 1987; 87, in press
Hydrazine	24–43 ng	Sufficient		2B	S7, 1987; 71, 1999
Radioisotope polonium-210 picocurie	0.03–1.0	Sufficient		1	78, 2001

U.S. Department of Health and Human Services. *How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General*. 2010.

Note: IARC = International Agency for Research on Cancer; **ND** = not detected; **ng** = nanograms; **S7** = Supplement 7; **µg** = micrograms.

^aVirtually all these compounds are known carcinogens in experimental animals, and IARC found sufficient evidence for carcinogenicity in animals for all the compounds. ^bUsing data on cancer in humans and, in some cases, other data, **IARC** established classifications for compounds as **group 1 (carcinogenic to humans), group 2A (probably carcinogenic to humans), and group 2B (possibly carcinogenic to humans)**. ^cIf more than two IARC evaluations were performed, only the two most recent monographs are listed.

Nicotine and other drugs

- Dependence

Nicotine > heroin > cocaine > alcohol > caffeine

- Tolerance

(alcohol = heroin = nicotine) > cocaine > caffeine

- Severity of withdrawal symptoms

alcohol > heroin > nicotine > cocaine > caffeine

- The difficulty of maintaining abstinence

(alcohol = cocaine = heroin = nicotine) > caffeine

- Mortality

nicotine > alcohol > (cocaine = heroin) > caffeine

- Prevalence

caffeine > nicotine > alcohol > (cocaine = heroin)

Nicotine is the **key chemical compound** that causes and sustains the powerful addicting effects of commercial tobacco products.

Inherited **genetic variation** in genes such as *CYP2A6* contributes to the differing patterns of smoking behavior and smoking cessation.

Nicotine dependence

- Physical
- Psychological
- Motivation approach

Motivational components nicotine dependence

- Automatism
- better cognitive function
- withdrawal
- Social and situational motivations
- Loss of control
- Weight-control
- Tolerance
- emotional attachment to cigarette
- Negative reinforcement
- Behavioral choose
- Positive reinforcement
- Key factors remembering to smoking
- Taste and sensory experiences

Nicotine withdrawal symptoms (DSM IV)

- Dysphoria or depression
- Insomnia
- Irritability, frustration, anger
- Anxiety
- Concentration disorder
- Decreased heart rate
- Increased appetite or weight gain

Table 4.1 **Criteria for substance (nicotine) dependence**

<i>DSM-IV</i>	<i>ICD-10</i>
<p>A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by 3 or more of the following criteria, occurring at any time in the same 12-month period</p>	
<ul style="list-style-type: none"> • Tolerance—need increased amounts of substance to achieve desired effect, or diminished effect with continued use of same amount • Withdrawal symptoms • Substance often taken in larger amounts or over longer period than intended • Persistent desire or unsuccessful efforts to cut down or control substance use • Great deal of time spent in activities necessary to obtain substance, use substance, or recover from its effects • Important social, occupational, or recreational activities given up or reduced because of substance use • Substance use continued despite knowledge of having persistent or recurrent physical or psychological problem likely to have been caused or exacerbated by substance 	<ul style="list-style-type: none"> • Increased tolerance • Physical withdrawal at times • Strong desire to take drug • Difficulty controlling use • Higher priority given to drug use than to other activities and obligations • Persistent use despite harmful consequences

Source: Adapted from Royal College of Physicians of London 2000 with permission from Royal College of Physicians, © 2000.

Note: **DSM-IV** = *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed.; **ICD-10** = *International Classification of Diseases, Tenth Revision*.

Fagerstrom Test for Nicotine Dependence

PLEASE TICK (✓) ONE BOX FOR EACH QUESTION			
How soon after waking do you smoke your first cigarette?	Within 5 minutes	<input type="checkbox"/>	3
	5-30 minutes	<input type="checkbox"/>	2
	31-60 minutes	<input type="checkbox"/>	1
Do you find it difficult to refrain from smoking in places where it is forbidden? e.g. Church, Library, etc.	Yes	<input type="checkbox"/>	1
	No	<input type="checkbox"/>	0
Which cigarette would you hate to give up?	The first in the morning	<input type="checkbox"/>	1
	Any other	<input type="checkbox"/>	0
How many cigarettes a day do you smoke?	10 or less	<input type="checkbox"/>	0
	11 – 20	<input type="checkbox"/>	1
	21 – 30	<input type="checkbox"/>	2
	31 or more	<input type="checkbox"/>	3
Do you smoke more frequently in the morning?	Yes	<input type="checkbox"/>	1
	No	<input type="checkbox"/>	0
Do you smoke even if you are sick in bed most of the day?	Yes	<input type="checkbox"/>	1
	No	<input type="checkbox"/>	0
Total Score			
SCORE	1- 2 = low dependence		5 - 7= moderate dependence
	3-4 = low to mod dependence		8 + = high dependence

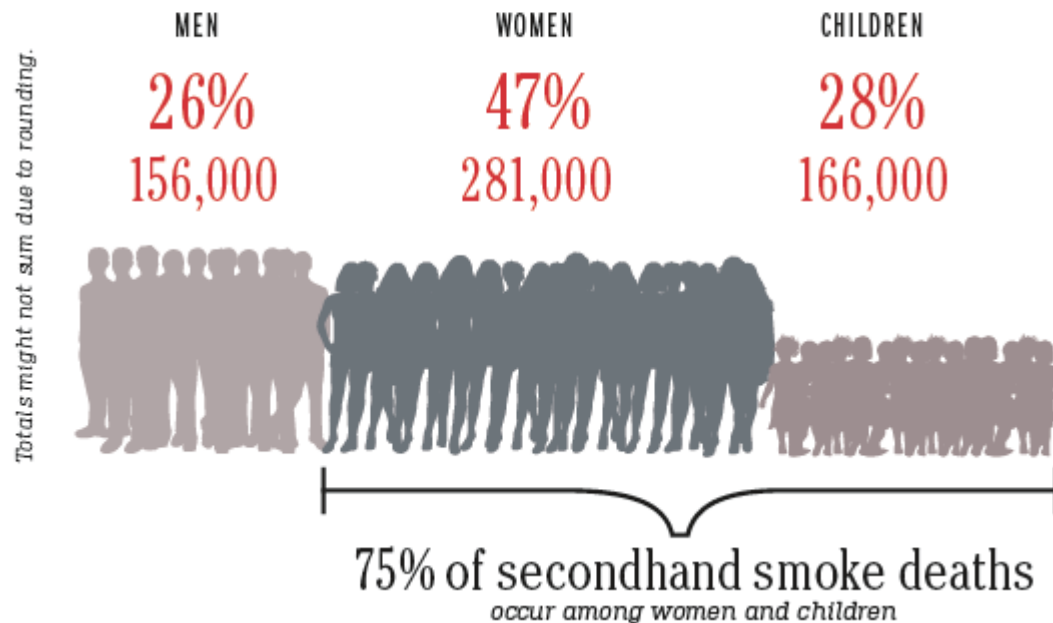
Secondhand smoke (SHS) or environmental tobacco smoke (ETS)

- Mixture of sidestream smoke from the burning tip of a cigarette/cigar/pipe, and mainstream smoke which smokers exhale.
- Sidestream smoke contains higher concentration of carcinogens than mainstream smoke.

There is no safe level of exposure to SHS.

Number of Global Deaths Caused by Secondhand Smoke in Nonsmokers

2004



Health consequences of SHS exposure

1. More than **50 carcinogens** have been identified in sidestream and SHS.
2. Increased risk for **lung cancer** (20-30% increase if living with a smoker).
3. **Breast cancer**
4. **Nasal sinus cancer**
5. Increased **coronary heart disease** morbidity and mortality (relative risk increase: 25-30%).
6. **Stroke**
7. **Atherosclerosis**
8. Exposure to SHS has a **prothrombotic effect**.
9. causes **endothelial cell dysfunctions**,
10. **Odor annoyance**
11. **Nasal irritation**
12. **acute respiratory symptoms** including cough, wheeze, chest tightness, and difficulty breathing among persons with asthma as well as among healthy persons.
13. **chronic respiratory symptoms**.
14. Short-term SHS exposure and an acute **decline in lung function** in persons with asthma.
15. **adult-onset asthma**;
16. **worsening of asthma control**.
17. Risk for **COPD**

Health consequences of exposure to SHS in the fetus and children

1. Maternal exposure to secondhand smoke during pregnancy and **preterm delivery**.
2. **Sudden Infant Death**
3. **Low birth weight**
4. **Childhood cancer**: prenatal and postnatal exposure to secondhand smoke and childhood leukemias, lymphomas, brain tumors.
5. **lower respiratory illnesses** in infants and children (especially smoking by the mother).
6. parental smoking and **middle ear disease** in children, including acute and recurrent otitis media and chronic middle ear effusion.
7. **cough, phlegm, wheeze, and breathlessness** among children of school age.
8. Ever having **asthma** among children of school age.
9. Onset of wheeze illnesses in early childhood and childhood asthma.
10. maternal smoking during pregnancy and persistent **adverse effects on lung function** across childhood.
11. exposure to secondhand smoke after birth and a lower level of lung function during childhood.

Health consequences of tobacco use among adolescents

- For many of the chronic diseases caused by smoking, the **risks increase with the duration and cumulative amount** of this behavior
- The **age of starting to smoke** has consequences for the age at which the risks of smoking become manifest.

Health consequences of tobacco use among adolescents

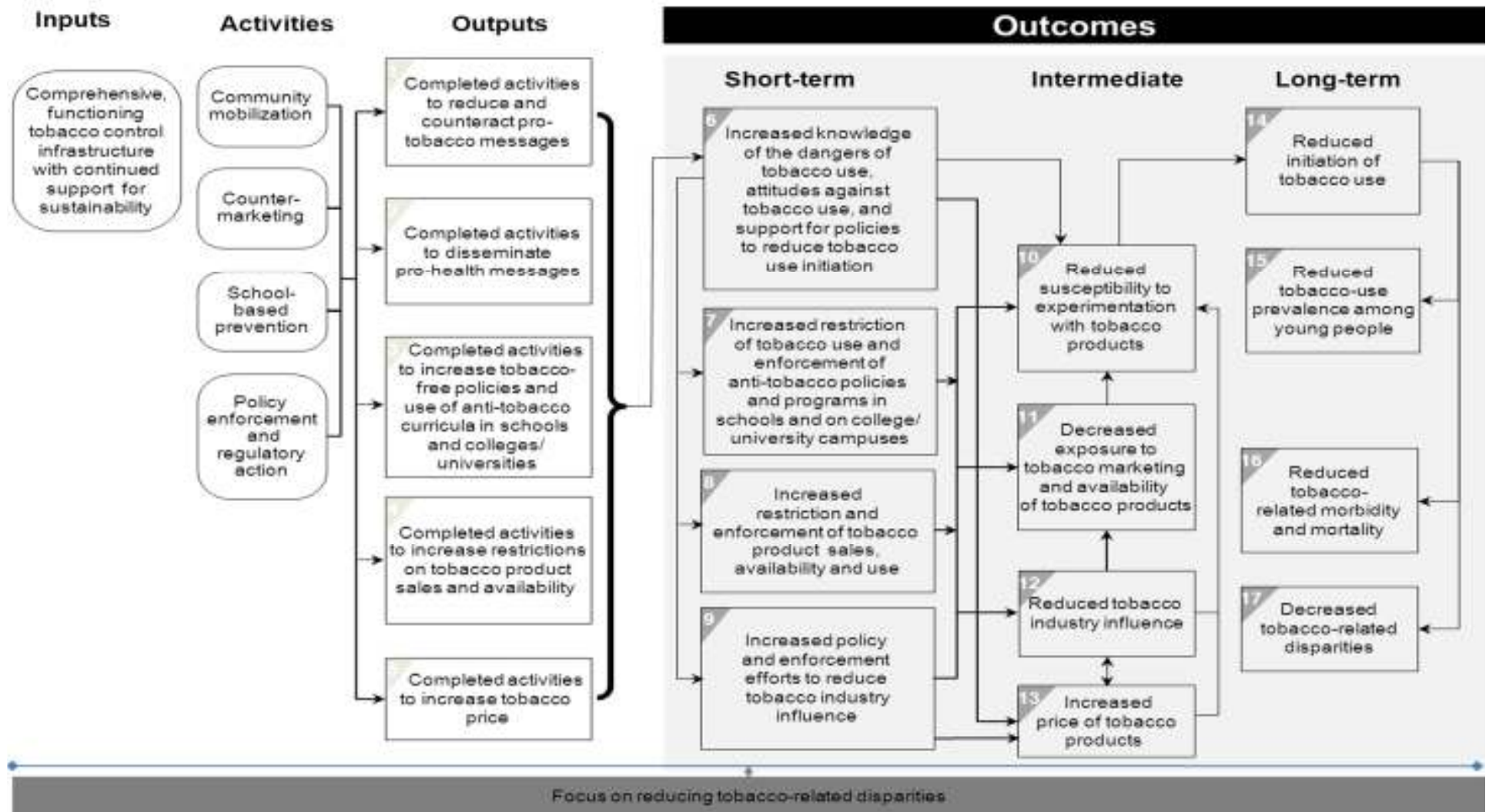
1. The evidence is sufficient to conclude that there is a causal **relationship between smoking and addiction to nicotine**, beginning in adolescence and young adulthood.
2. The evidence is suggestive but not sufficient to conclude that **smoking contributes to future use of marijuana and other illicit drugs**.
3. The evidence is suggestive but not sufficient to conclude that **smoking** by adolescents and young adults **is not associated with significant weight loss**, contrary to young people's beliefs.
4. The evidence is sufficient to conclude that there is a causal relationship between **active smoking and both reduced lung function and impaired lung growth** during childhood and adolescence.
5. The evidence is sufficient to conclude that there is a causal relationship between **active smoking and wheezing** severe enough to be diagnosed as asthma in susceptible child and adolescent populations.
6. The evidence is sufficient to conclude that there is a causal relationship between smoking in adolescence and young adulthood and **early abdominal aortic atherosclerosis** in young adults.
7. The evidence is suggestive but not sufficient to conclude that there is a causal relationship between smoking in adolescence and young adulthood and **coronary artery atherosclerosis** in adulthood.



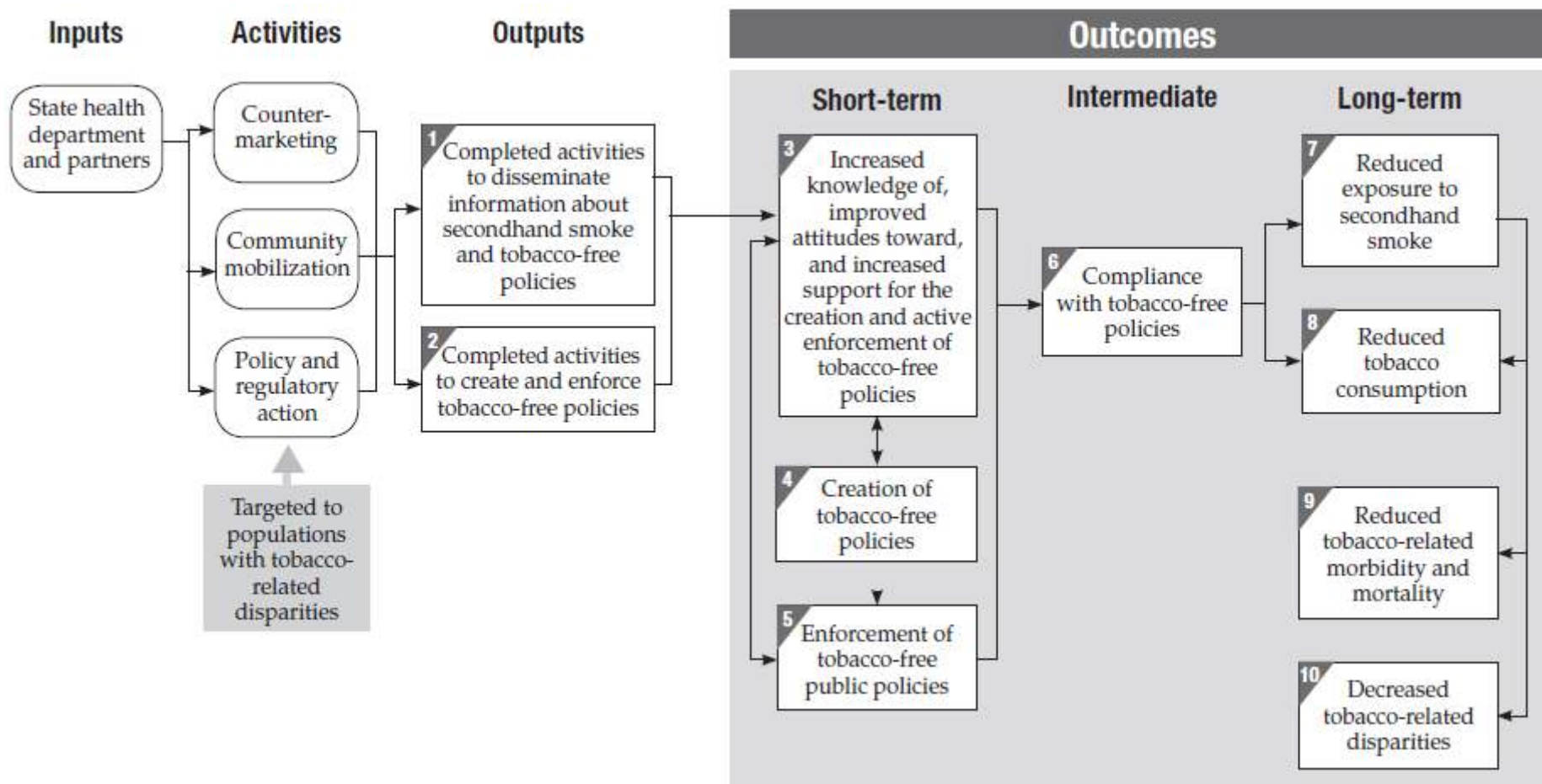
Prevention Tobacco control



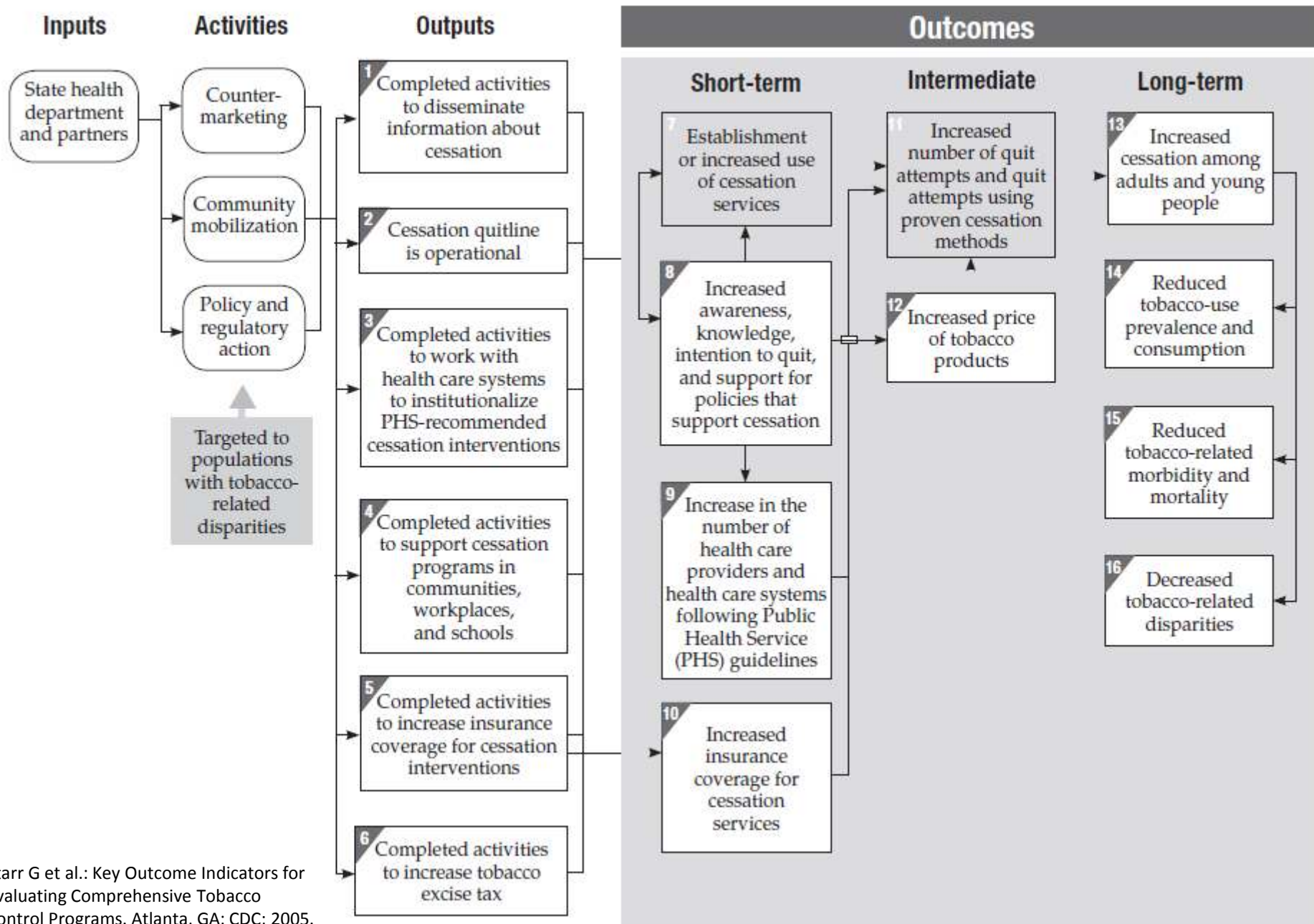
Preventing Initiation of Tobacco Use Among Young People



Eliminating Nonsmokers' Exposure to Secondhand Smoke



Promoting Quitting Among Adults and Young People



WHO FCTC

WHO Framework Convention on Tobacco Control

- An evidence-based treaty that reaffirms the right of all people to the highest standard of health.
- It was developed in response to the globalization of the tobacco epidemic.
- Opened for signature in 2003; entered into force February 2005.
- Parties to this Convention [are] determined to give priority to their right to protect public health,
- the WHO FCTC is a global trend-setter.

WHO FRAMEWORK
CONVENTION ON
TOBACCO CONTROL



FCTC

WHO FRAMEWORK CONVENTION
ON TOBACCO CONTROL

WHO **mPOWER** package: Six measures to assist in country-level implementation of WHO FCTC

- m**onitor tobacco use and prevention policies
- p**rotect people from tobacco smoke
- o**ffer help to quit tobacco use
- w**arn about the dangers of tobacco
- e**nforce bans on tobacco advertising, promotion and sponsorship
- r**aise taxes on tobacco



WHO FCTC

The core **DEMAND REDUCTION PROVISIONS** in the WHO FCTC are contained in articles 6-14:

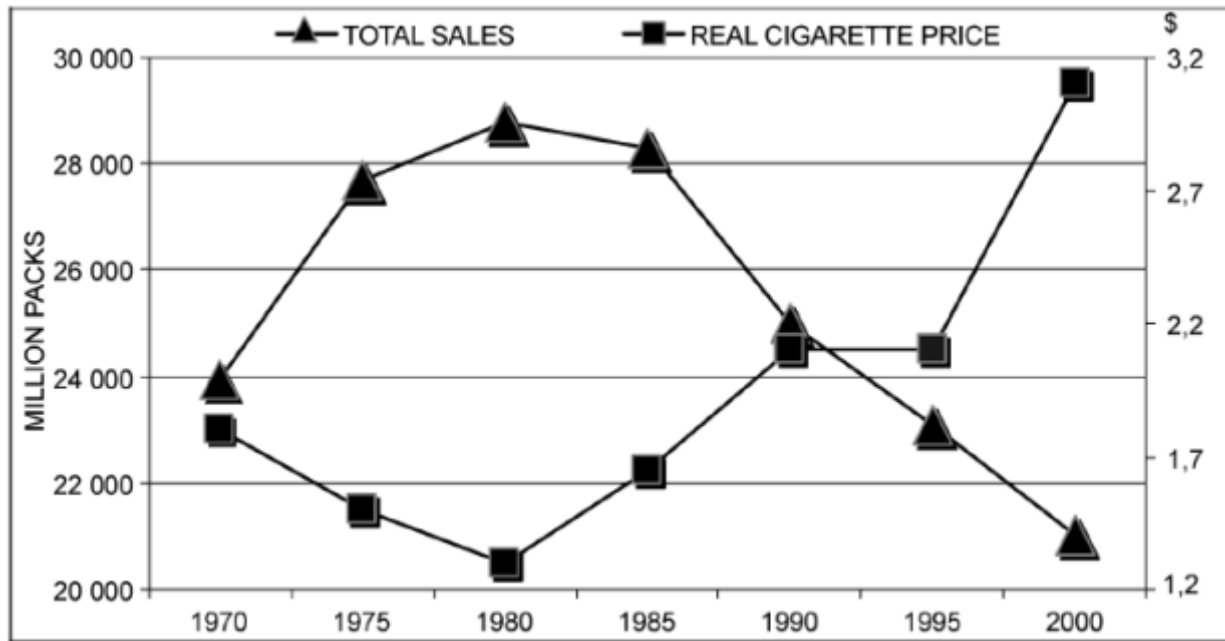
6. **Price and tax** measures to reduce the demand for tobacco, and
7. Non-price measures to reduce the demand for tobacco, namely:
8. **Protection from exposure to tobacco smoke;**
9. Regulation of the **contents of tobacco products;**
10. Regulation of tobacco **product disclosures;**
11. **Packaging and labelling** of tobacco products;
12. **Education, communication, training and public awareness;**
13. Tobacco **advertising, promotion** and sponsorship;
14. Demand reduction measures concerning tobacco dependence and **cessation.**

The core **SUPPLY REDUCTION PROVISIONS** in the WHO FCTC are contained in articles 15-17:

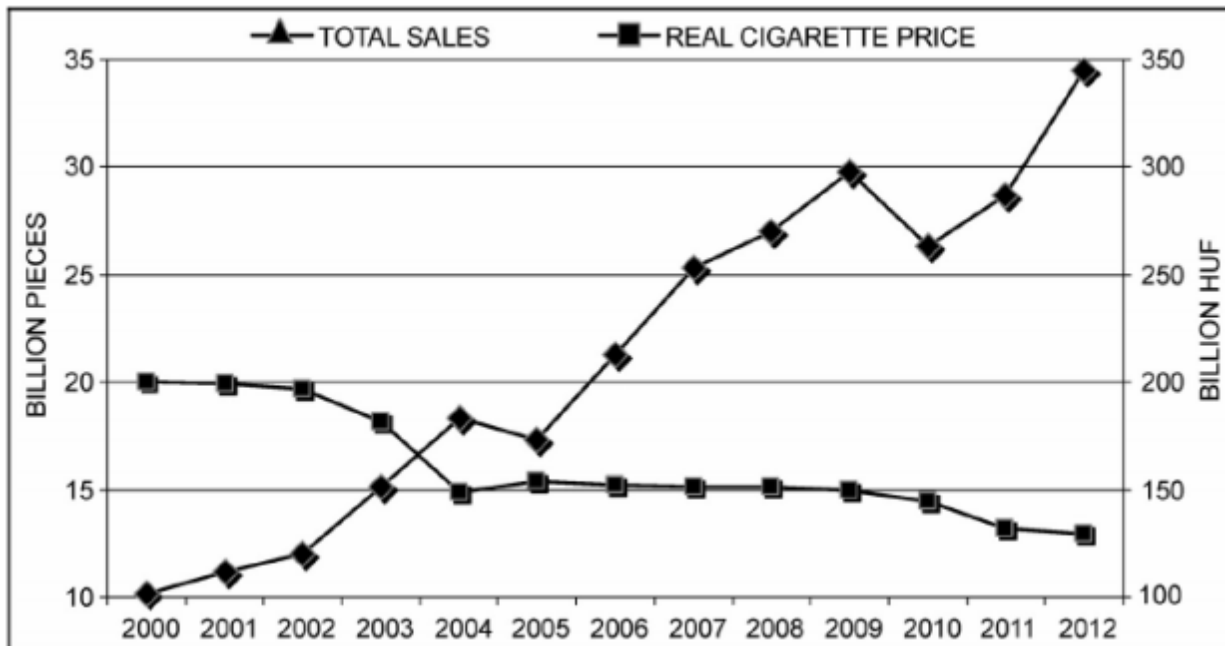
15. **Illicit trade** in tobacco products;
16. Sales to and by **minors;** and,
17. Provision of support for economically viable **alternative activities.**

Article 6 – Taxation and pricing

1. Increases in cigarette prices lead to **reductions in the prevalence of smoking**.
 - 10% tax increase will trigger 3-5 % consumption decrease in developed countries.
 - 10 % tax increase produce 5-8% consumption decrease in developing countries.
2. The effects of price on smoking prevalence involve both a **decrease in initiation** of smoking among youth and an **increase in cessation** among adults.
3. Adolescents and young adults are **more responsive** than adults to changes in cigarette prices.
4. Higher cigarette prices will **prevent young adults from progressing** into higher intensities of smoking.
5. Inverse relationship among adolescents between product-specific tobacco taxes (or prices) and the propensity to use smokeless tobacco, the intensity of its use, and the prevalence of cigar smoking.



Total cigarette sales and cigarette prices in the US, 1970–2000



Cigarette consumption and excise tax in Hungary, 2000-2012

Bodrogi J.: Economic impact of tobacco smoking. In: Balázs P.: Increasing capacity for tobacco research in Hungary 2008–2013. Budapest, 2013

● - Total ban on indoor smoking
 ○ - Ban on indoor smoking, while providing for separate enclosed smoking rooms / Obligation for employer to protect employees

○ - Partial ban on indoor smoking, e.g. smoking zones or exemptions for certain categories of venues
 X - Recommendations, suggestions, or no ban

	General Workplace	Enclosed Public Places	Restaurants	Bars	Health Care Facilities	Education Facilities	Public Transport	Hotels & Accommodation	Residential Care	Prisons
Austria ⁱ	○	○	○	○	○	○	○	○	○	○
Belgium ⁱⁱ	○	○	○	○	○	○	○	○	○	○
Bulgaria ⁱⁱⁱ	●	●	●	●	●	●	○	●	●	●
Cyprus ^{iv}	○	●	●	●	●	●	●	●	X	○
Czech Republic ^v	○	○	X	X	○	○	○	○	○	○
Denmark ^{vi}	○	○	○	○	○	○	○	○	○	○
Estonia ^{vii}	○	○	○	○	○	○	○	○	○	○
Finland ^{viii}	○	○	○	○	○	○	○	○	○	○
France ^{ix}	○	○	○	○	○	○	○	○	○	○
Germany ^x	○	○	○	○	○	○	○	○	○	○
Greece ^{xi}	○	○	○	○	○	○	○	○	○	○
Hungary ^{xii}	●	●	●	●	○	○	○	○	○	○
Ireland ^{xiii}	○	○	○	○	○	○	○	○	○	○
Italy ^{xiv}	○	○	○	○	○	○	○	○	○	○
Latvia ^{xv}	○	○	○	○	○	○	○	○	○	○
Lithuania ^{xvi}	○	○	○	○	○	○	○	○	○	○
Luxembourg ^{xvii}	○	○	○	○	○	○	○	○	○	○
Malta ^{xviii}	○	○	○	○	○	○	○	○	○	○
Netherlands ^{xix}	○	○	○	○	○	○	○	○	○	○
Poland ^{xx}	○	○	○	○	○	○	○	○	○	○
Portugal ^{xxi}	○	○	○	○	○	○	○	○	○	○
Romania ^{xxii}	○	○	○	○	○	○	○	○	○	○
Slovakia ^{xxiii}	○	○	○	X	○	○	○	○	○	○
Slovenia ^{xxiv}	○	○	○	○	○	○	○	○	○	○
Spain ^{xxv}	○	○	○	○	○	○	○	○	○	○
Sweden ^{xxvi}	○	○	○	○	○	○	○	○	○	○
Unit. Kingdom ^{xxvii}	○	○	○	○	○	○	○	○	○	○
Turkey ^{xxviii}	○	○	○	○	○	○	○	○	○	○
Former Yugoslav Republic of Macedonia	○	○	○	○	○	○	○	○	○	○
Norway ^{xxix}	○	○	○	○	○	○	○	○	○	○
Serbia ^{xxx}	○	○	○	○	○	○	○	○	○	○
Iceland	○	○	○	○	○	○	○	○	○	○
Croatia	○	○	○	○	○	○	○	○	○	○

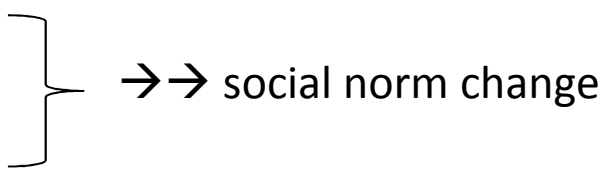
Article 8

Smoke-free legislation in the EU, January 2013

Hungarian Act XLI of 2011, amendment of Act XLII of 1999 on the protection of non-smokers and the regulation of tobacco sales, marketing and use. (Entered into force 1st January 2012)

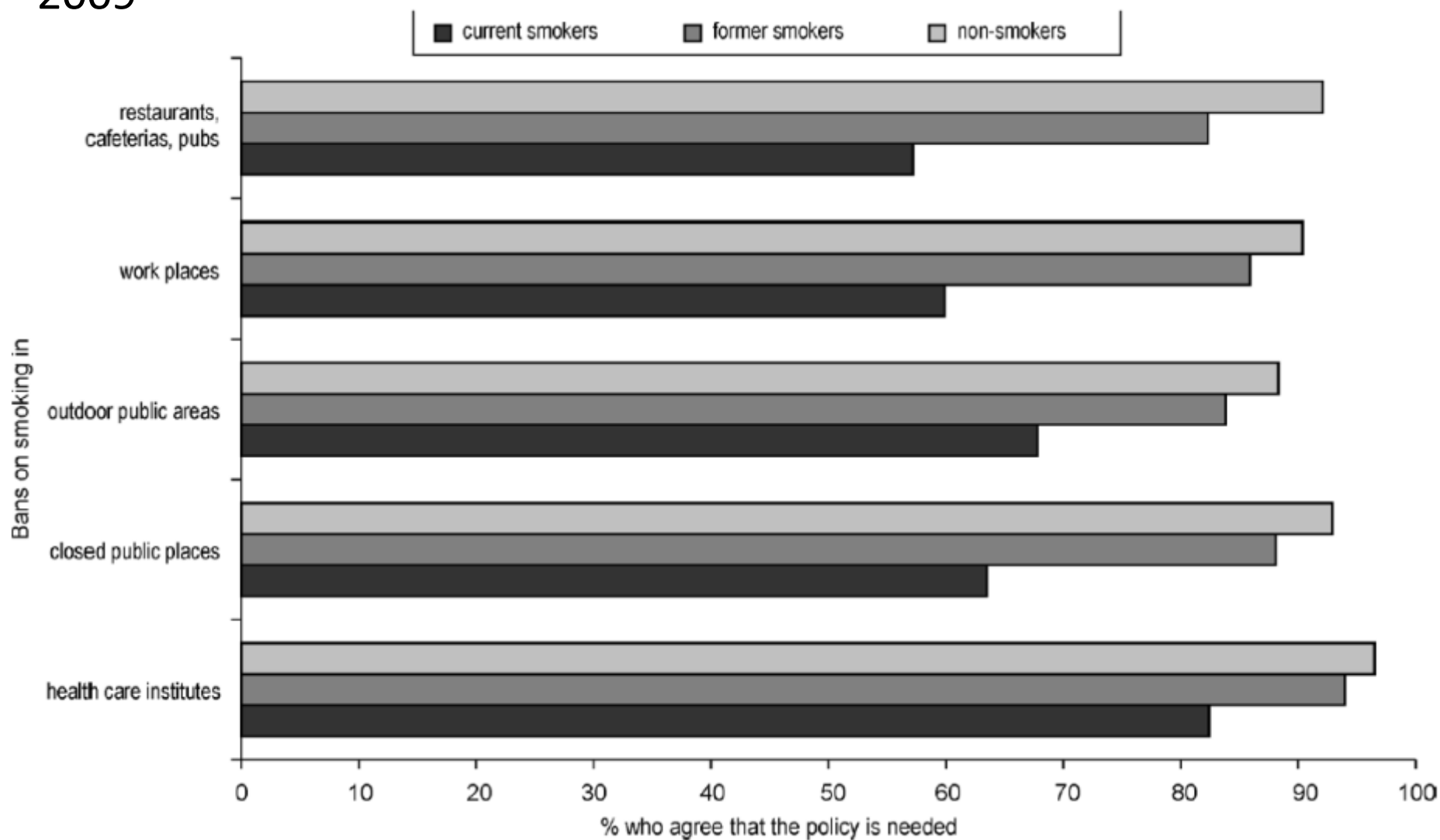
Fully smoke-free indoor public places, workplaces.
 Partially smoke-free outdoor public places.

Article 8 – Protection from exposure to tobacco smoke

- **Full enforcement of smoke-free laws, immediately after enactment**
 - Public enforcement
 - Government authority enforcement

→→ social norm change
- **Full protection = full indoor smoking ban**
 - Ventilation and designated smoking rooms are not effective (partial protection)
- **Health benefits of smoke-free regulations**
 - Reduce respiratory symptoms
 - Reduce illness from heart disease
 - Reduce lung cancer
 - Helps smokers to reduce smoking and successful quitting
 - Encourage establishment of smoke-free homes.
- **Smoke-free regulations are supported by the public**
- **Smoke-free laws causes no financial harm to business.**

Support for tobacco control policies and smoking status in Hungary, 2009



Paulik E.: Social determinants of smoking and quitting in Hungary. In: Balázs P.: Increasing capacity for tobacco research in Hungary 2008–2013. Budapest, 2013

Article 11 – Packaging and labelling tobacco products

Well-designed health warnings and messages are part of a range of effective measures to communicate health risks and to reduce tobacco use.

Text-only health warnings

Pictorial health warnings

Text and pictorial warnings

Large pictorial and text warnings

Plain packaging with large pictorial and text warnings



Australia, 1 December 2012
Use of all brand logos and colours have been replaced with generic **brown colour**.
Graphic pictorial health warning labels, cover **75% of the front** and **90% of the back** of the package with **additional text warnings** on the package sides, and also include the **national quit line number**.

Hungary: http://net.jogtar.hu/jr/gen/hjegy_doc.cgi?docid=A1300039.KOR 2013. 01.01.

Article 12 – Education, communication, training and public awareness

Key information needed to educate and communicate:

- Addictiveness of tobacco
- Risks and harms of tobacco consumption
- Risks and harms of SHS
- Adverse health, economic and environmental consequences of tobacco production and consumption.

Communicate
ALL

Communicate
NOT ONLY

- **Tobacco control focal point:** national government catalyse, coordinate and facilitate delivery of tobacco-related education, communication and training programmes, and monitor and evaluate them.
- **Involving civil society:** key community tobacco control leadership.
- **International cooperation:** sharing information and best practices.
- **Monitoring** of implementation and revision of the guidelines
- **Anti-tobacco mass media campaigns.**

Article 13 – Tobacco advertising, promotion and sponsorship (TAPS)

Scope of comprehensive ban

All type (direct and indirect) of TAPS should be banned:

- 1. Retail sale and display:** display and visibility of tobacco products at points of sale and vending machines constitutes advertising and promotion.
- 2. Packaging and product design** is TAP. Attractive designs to consumers should be banned. Adapting plain packaging.
- 3. Internet sales**
- 4. Brand stretching and sharing:** a tobacco brand name, emblem, trademark, logo or trade insignia or any other distinctive feature is connected with a non-tobacco product or service to link the two.
- 5. Corporate social responsibility:** tobacco companies seek to portray themselves as good corporate citizens. *Contributions of any kind to any event, activity or individual should be banned.* Publicity given to “socially responsible” business practices of the tobacco industry should also be banned, as it constitutes a form of advertising and promotion. (Eg. Sponsoring research, sponsoring tobacco prevention program.)
- 6. Depiction of tobacco in entertainment media:** traditional media (print, television and radio) and all media platforms, including Internet, mobile telephones and other new technologies, as well as films.

Article 14 – Demand reduction measures concerning tobacco dependence and cessation

At least **3 types of clinical treatment** should be included in a tobacco control programme:

1. Cessation intervention (advice) in primary health care

2. Quit lines:

- effective population-level approach to help tobacco users quit;
- easily accessible and toll-free telephone quit lines should be included in any comprehensive tobacco control programme.

3. Pharmacological therapy (NRT)

Other elements of successful cessation:

- The knowledge that ***tobacco use is highly addictive***: education of negative consequences and health benefits.
- ***Support*** for tobacco users in their ***cessation efforts***.
- Essential: ***clinicians and health care*** delivery system consistently ***identify and document tobacco use status*** and treat every tobacco user (minimal cessation intervention).
- ***Government*** must support cessation treatment
- ***Widely available***, accessible cessation service

Hierarchy of cessation

- Leaflets, web-based self-cessation service
- Minimal intervention in health care
 1. Ask
 2. Advice
 3. Asses
 4. Assist
 5. Arrange follow-up
- Quit line (reactive or proactive)
- Individual, group counseling
 - **cognitive-behavioral strategies** (self-monitoring, coping skills) and achieving a sufficient dosage of programming
 - **Social influence strategies** (addressing social influences that serve to promote or maintain smoking)
 - **Motivational strategies** (techniques to clarify desire for change and reduce ambivalence toward change)
- Organized cessation service (with educated health professional, long-term, cognitive-behavioral strategy)

The 5A's

Minimal Intervention

- **Ask** each patient about his or her **tobacco use status** at every visit and record the patient's response.
- **Advise** clear, nonjudgmental, and **personalized suggestions for quitting**. Tell patients that you understand quitting is difficult and challenging, but it can also be the most important thing they can do for their own health and for their families.
- **Assess** each **patient's readiness and interest in quitting**. The patient's response to your questions about his/her willingness and readiness to quit will affect the next step in the process. If he or she is willing to quit, you'll offer resources and assistance (next). If not, you'll help the patient determine the barriers to cessation.
- **Assist** each patient with a **specific cessation plan**. This will include materials, resources, pharmaceuticals, or referrals. Patients should be encouraged to pick a quit date and given support and feedback.
- **Arrange follow up visits**. If patients relapse, let them know you and your staff members will be there to help them dust off and start over again. Help them keep in mind that quitting takes practice, and often is not achieved after the first attempt.



CALL SMOKEFREE: 0800 022 4 332
Mon to Fri 9am to 8pm, Sat and Sun 11am to 4pm
[Chat to an adviser online](#)

Search our Website

GO

Ways to quit

Real life quitters

Advice & information

Quit tools

Why quit?

Smoking & pregnancy

[Ask an expert](#) [South Asian tobacco use](#) [FAQs](#) [Trying again](#) [Message wall](#) [Behind the Campaign](#)

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Advice and information

Find further information here, read answers to commonly asked questions and ask our experts your own. You can also share your own experiences by posting to our [message wall](#) where you can find out about other people's stories too.



"It becomes so much easier with the right information"

Need more information? Find the answer in these valuable sources or ask our experts.

FAQs



Ask an expert



NHS Smoking Helpline



Local NHS Stop Smoking Services



Help when quitting:

[Handy quit tools](#)

[Order a Smokefree Kit](#)

[Order a Quit Kit](#)

[Meet real life quitters](#)

<http://smokefree.nhs.uk/>

Frequently Asked Questions

Who is eligible?

This program is designed for adults who are quitting smoking, but anyone at least 13 years old with an unlimited texting plan on their mobile phone can sign up. If you don't have unlimited texts, you can still sign up, but please contact your mobile phone company for text message rates.

What do the messages say?

Here are some sample messages:

"SmokefreeTXT: Wow, 2 weeks smokefree! Think about how much time, energy, health, & money you have saved. You deserve to treat yourself - make today awesome."

"SmokefreeTXT: What makes you want to smoke? Stress? Boredom? Drinking? Write down your top 3 smoking triggers. Knowing them is the only way to avoid them!"

"SmokefreeTXT: Your dog, cat, bird, or iguana can get sick & die from 2nd hand smoke. It sinks into fur, feathers, eyes, & skin. Think again before lighting up."

How long does the program last?

You can sign up for SmokefreeTXT up to 30 days before your designated quit date. The text program will start two weeks before your quit date and last for six weeks following your quit date. We will also follow up at one, three, and six months after the program ends to see how you are doing.

How do I sign up?

Visit <http://smokefree.gov/smokefreetxt/default.aspx> to sign up. Or sign up from your mobile phone! Send a text message with the word QUIT to IQUIT (47848), answer a few questions, and you'll start receiving text messages from SmokefreeTXT.

What kind of information will I have to provide to sign up?

SmokefreeTXT collects your mobile phone number, specified quit date, age, gender, smoking frequency, and whether your mobile phone has Internet capabilities. This information is used to enroll you into the messaging service and to personalize your experience. No information is used for any commercial purposes.

Is there a cost to sign up?

There is no additional fee for this service. However, message and data rates may apply. If you pay for individual texts, this program may not be for you. If you aren't sure if you pay for individual texts, check with your mobile carrier before signing up, just to be safe.

What if I don't have an unlimited text messaging plan? Can I still participate?

You bet! We have designed this program to give you the kind of support you want, while controlling the number of text messages you receive from us. You do not need to fully opt in to SmokefreeTXT to send us a keyword message at any time. Without signing up, you can text CRAVE, MOOD, or SLIP to IQUIT (47848) at any time to receive supportive messages from SmokefreeTXT. If you are no longer interested in this option and do not wish to receive messages from us, just simply stop sending keyword texts.

What if I want to start over and pick a new quit date?

No problem. We will automatically ask you a status question every week that will give you the option to keep going or start over. If you want to pick a new quit date or start from the beginning of the program, simply opt out, and then sign up again at <http://smokefree.gov/smokefreetxt/default.aspx>. You can also opt out at any time by texting STOP to IQUIT (47848). Even if you choose to opt out, you can always sign back up by visiting <http://smokefree.gov/smokefreetxt/default.aspx>—even on the same day!

What if I change my mobile number?

If you change your mobile number between the time you sign up for our program and six weeks after your quit date (the end of the program), you will need to

Need some extra support to get you through the day?	
Luckily, SmokefreeTXT isn't a one-way street! Send us a text whenever you need an extra boost. You can use these keywords anytime. The support you need is only a text message away!	
Keywords	When do I use this?
CRAVE	Having a bad craving & need a reminder of why you shouldn't pick up that cig? Text CRAVE to: 47848
MOOD	Having a rough day & need a positive message sent your way? We could all use a little boost sometimes. Text MOOD to: 47848
SLIP	Slip up? That doesn't mean you have to start from the beginning! Get the extra encouragement to keep on going. Text SLIP to: 47848
STOP	Want to stop receiving messages? No matter what your reason, you can opt out of our program whenever you want. Text STOP to: 47848. You can sign up again at any time by visiting our website!

Országos Dohányzás Leszokás Támogatási Módszertani Központ

Keresés...



Ingyenesen hívható zöldszám:
06-80-44-20-44

[»» Címlap](#) [» Hírek](#)<http://dohanyzasleszokas.koranyi.hu/index.php/hirek>

DOHÁNYZÁSLESZOKÁS MENÜ

Üzenet

Címlap

Projekt információk

- ▶ Projekt célja
- ▶ Szakmai indoklás
- ▶ Gazdasági, társadalmi és környezeti háttér
- ▶ Projekt koordinátorok
- ▶ Projektgazda: Országos Korányi Tbc és Pulmonológiai Intézet
- ▶ Konzorciumi partner: Egészséges Magyarországért Központ

Hírek

Szakmai anyagok

- ▶ A leszokás folyamata
- ▶ Szakmai irányelvek

Elérhetőségeink

Letöltések

- ▶ Kapcsolattartási adatlap

Képek

02/05
2013

Programozott egyéni telefonos tanácsadás a leszokni vágyóknak

Dohányzás leszokás támogatás

2013 február elejétől ajánlható a leszokni vágyó pácienseknek az Országos Dohányzás Leszokás Támogató Módszertani Központ által működtetett leszokási telefonos szolgáltatás („call center”), mely helyileg az Országos Korányi Tbc és Pulmonológiai Intézetben található. Tapasztalt és speciálisan képzett szakemberek várják és segítik a motivált leszokni vágyókat az evidenciákon alapuló, proaktív módszerű és kidolgozott tematika mentén, program szerűen összeállított, több hívásból álló telefonos tanácsadás során.

Bárki hívhatja a call center ingyenes ZÖLD SZÁMÁT **06-80-44-20-44**

Szakemberek segítenek a leszokásban. A nemdohányzást is tanulni kell.

A telefonos tanácsadás nagy segítség a szakorvos számára a dohányos betegek eredményes szervi kezelése során minden, a dohányzással összekapcsolható, annak szövődményeként tekinthető betegségben. Mostantól tud hová fordulni a beteg, ha segítségre van szüksége és orvosa, ha módszertanilag hiteles, irányelvet követő módszer felé akarja delegálni a betegét.

A telefonszám országosan elérhető.

A leszokás támogatásban régi igény a páciensek delegálásának lehetősége, hiszen a dohányzás függőség is orvosi körkép és a kettős addikció révén sok páciens szakavatott segítséget igényel. Egyedül, segítség nélkül csak kevesen boldogulnak és magas a visszaesők aránya.

2009-től több magyar orvos-szakmai társaság közös nyilatkozatot adott ki a dohányzás visszaszorítására vonatkozó törekvésekről és ebben a mindenki által hozzáférhető, az orvosok és szakdolgozók számára is szakmai segítséget jelentő leszokás támogató módszerek biztosítása fontos pontként szerepel.

ORSZÁGOS KORÁNYI TBC ÉS PULMONOLÓGIAI INTÉZET



Főigazgatói köszöntő Közlemények Kapcsolat Állásajánlataink

Keresendő szöveg

Kórházunk

- Intézetünk helye és szerepe
- Intézeti alapadatok
- Intézetvezetés
- Alapító okirat
- Minőségpolitika
- Korányi Bulletin
- Bibliográfia
- Akadémiai Díj 2011.
- Köszönetnyilvánítások
- Igazgató főorvosok

Osztályaink

- Aktív fekvő
- Krónikus
- Ambulanciák
- Egyéb osztályok

Betegtájékoztató

- Hasznos információk
- Betegjogok
- Jogviszony ellenőrzés
- Akik nem biztosítottak
- Egyéb szolgáltatások
- Parkolási rend
- Vizsgálatok

Elérhetőségeink

- Kapcsolati adatok
- Telefonkönyv
- Betegellátó helyek (térkép)
- Megközelíthetőség (térkép)
- Üzenetírás

Fotók

- Intézetünk
- CT

Tüdőgondozók elérhetőségei

Tanácsot adhat a leszokáshoz a háziorvosa, vagy a területi tüdőgondozó tüdőgyógyász szakorvosa. A tüdőgondozót azért is érdemes felkeresnie, mert ha már évek óta dohányzik, vegyen részt az ajánlott tüdőszűrésen.

Az alábbi táblázatban találja azon tüdőgondozókat, akiket felkeresve segítséget kaphat a dohányzás leszokáshoz.

BARANYA MEGYE		
Pécs	Pf.:114	(06-72) 255833 v. 214455
Pécs	Rákóczi út 2.	(06-72) 254-926
Komló	Kossuth u.103.	(06-72) 281-545
Mohács	Szepessy tér 7.	(06-69) 511-150
Sásd	Arad u.1.	(06-72) 475-120
Siklós	Baross u.6.	06-72) 352-411
Szigetvár	Szent István tlp.7.	(06-73) 500-571
BÁCS-KISKUN MEGYE		
Kecskemét	Piaristák tere 7.	(06-76) 504-375
Baja	Rókus u.10.	(06-79) 422-233) 3310 m.
Bácsalmás	Hősök tere 14.	(06-79) 341-456
Dunavecse	Vasút u.8.	(06-78) 437-037
Kalocsa	Kossuth u.34-36.	(06-78) 564-163
Kiskőrös	Kossuth L.u.57.	(06-78) 311-484
>Kiskunhalas	Dr.Monspart L.u.1.	(06-77) 522-077
Kiskunfélegyháza	Korond u.5.	(06-76) 463-172
BÉKÉS MEGYE		
Gyula	Kossuth L.u. 12.	(06-66) 361-234
Békés	Kossuth u.16.	(06-66) 411-024
Békéscsaba	Gyulai u.18.	(06-66) 441-411
Gyomaendrőd	Hősök u.57.	(06-66) 386-345
Mezőkovácsháza	Aikotmány u.38.	(06-68) 381-222
Orosháza	Ady E.u.16.	(06-68) 411-345
Sarkad	Vasút u.16.	(06-66) 375-740
Szarvas	Rákóczi u.9/1	(06-66) 215-321
Szeghalom	Szabadság u.11.	(06-66) 371-940
BORSOD MEGYE		
Miskolc I.	Cs abai kapu 42.	(06-46) 555-871
Miskolc II.	Cs abai kapu 42.	(06-46) 555-819
Miskolc III.	Cs abai kapu 42.	(06-46) 555-873
Miskolc IV.	Cs abai kapu 42.	(06-46) 555-876
Edelény	Deák F.u.6.	(06-48) 525-233



dohányzom



leszoknék

dohányzom



maradok

már nem dohányzom



segítenék

nem dohányzom



érdeklődöm

felirat



jelzés



DOHÁNYZÁS VISSZASZORÍTÁSA MAGYARORSZÁGON



Megelőzés és
leszokás segítés



Dohányzás
fókuszpont



Dohányzás
visszaszorítása



Összefoglaló

© 2010. Országos Egészségfejlesztési Intézet. Minden jog fenntartva. DOHÁNYZÁS VISSZASZORÍTÁSA MAGYARORSZÁGON

gpx Weboldal készítés

<http://www.dohanyzasvisszaszoritasa.hu/>

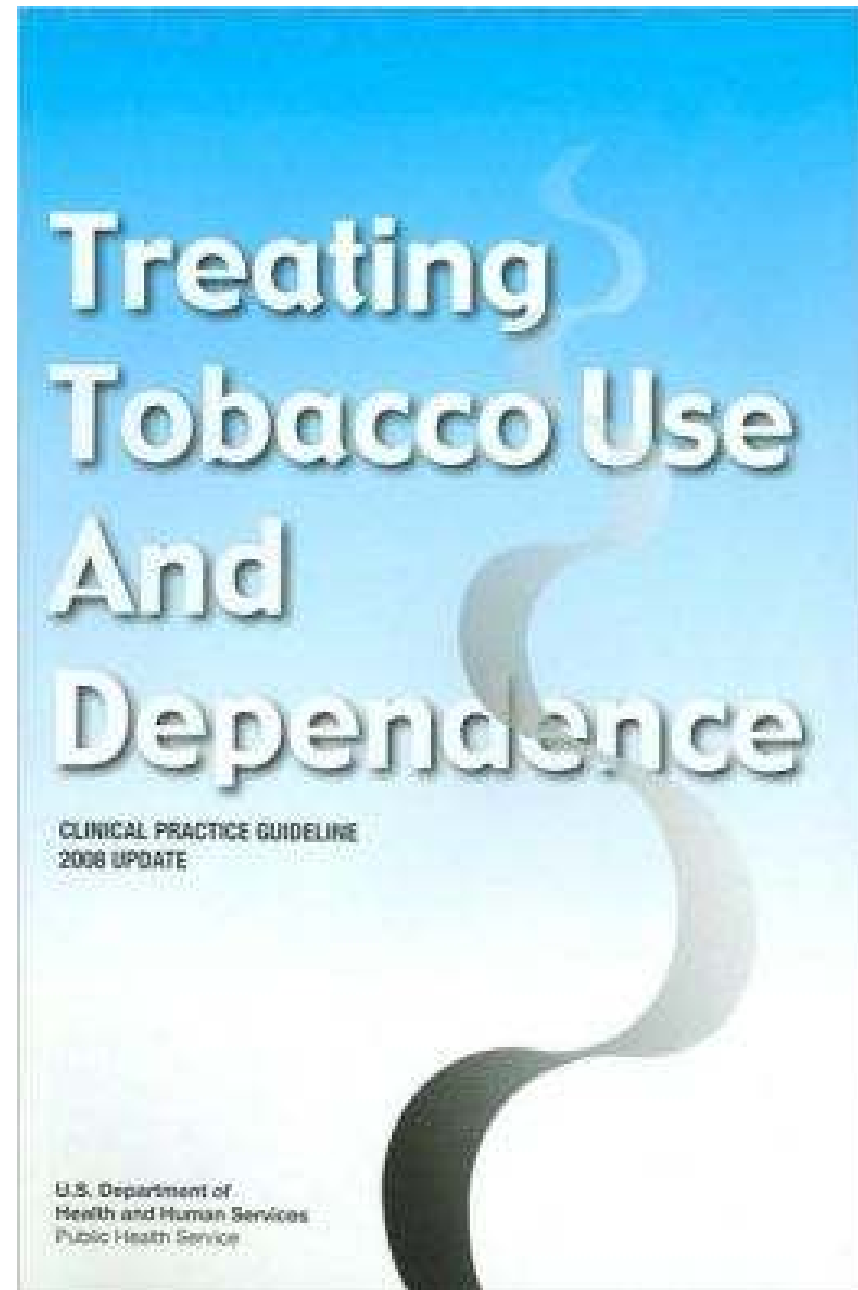
<http://www.fokuszpont.dohanyzasvisszaszoritasa.hu/>

http://www.ahrq.gov/professionals/clinicians-providers/guidelines-recommendations/tobacco/clinicians/treating_tobacco_use08.pdf

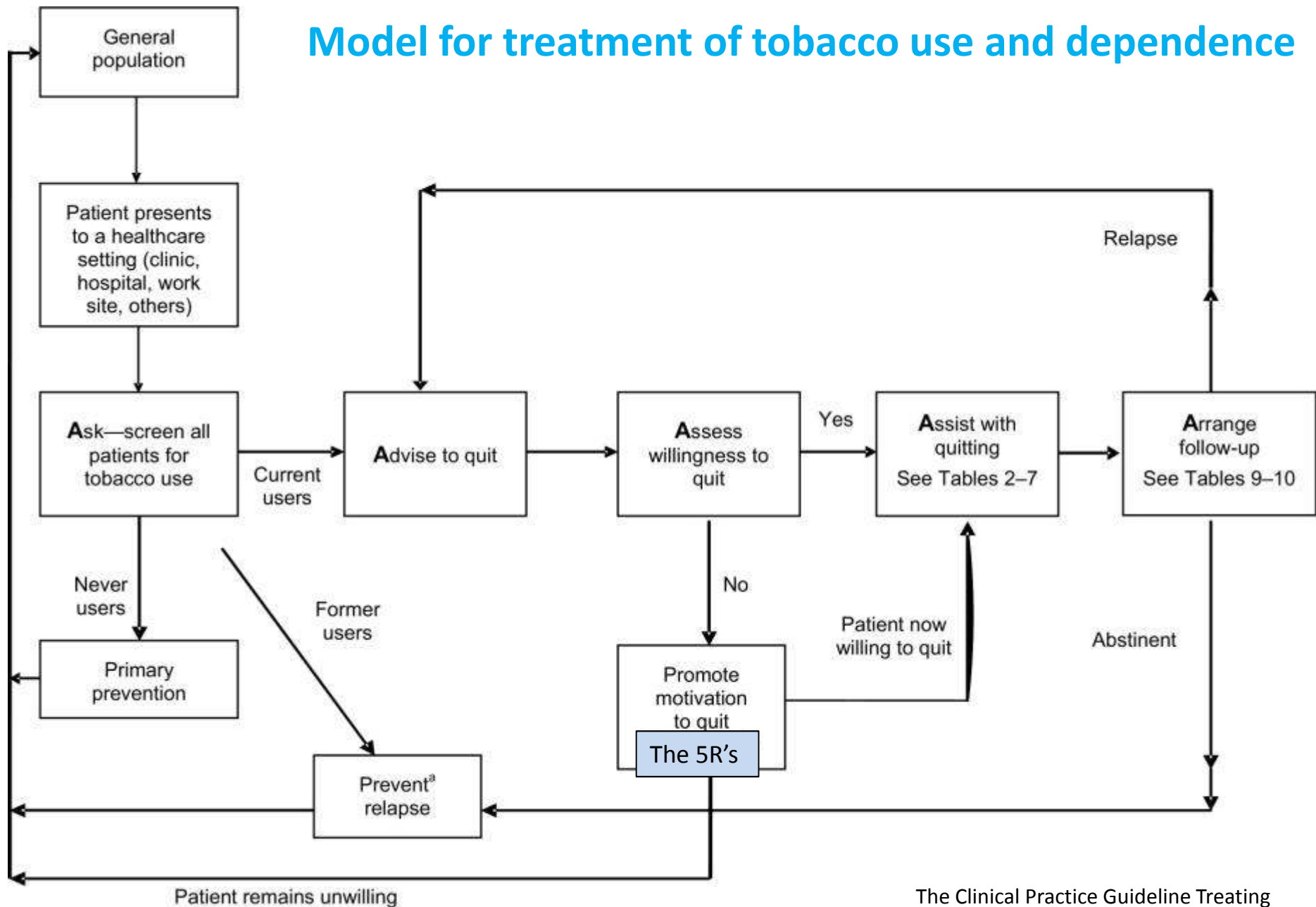
Hungarian guideline to support smoking cessation (2009)

Updated version: December 2013

http://www.koranyi.hu/index.php?option=com_content&view=article&id=85&Itemid=261



Model for treatment of tobacco use and dependence



Effectiveness and abstinence rates for various medications and medication combinations compared to placebo at 6-months post-quit ($n=86$ studies)

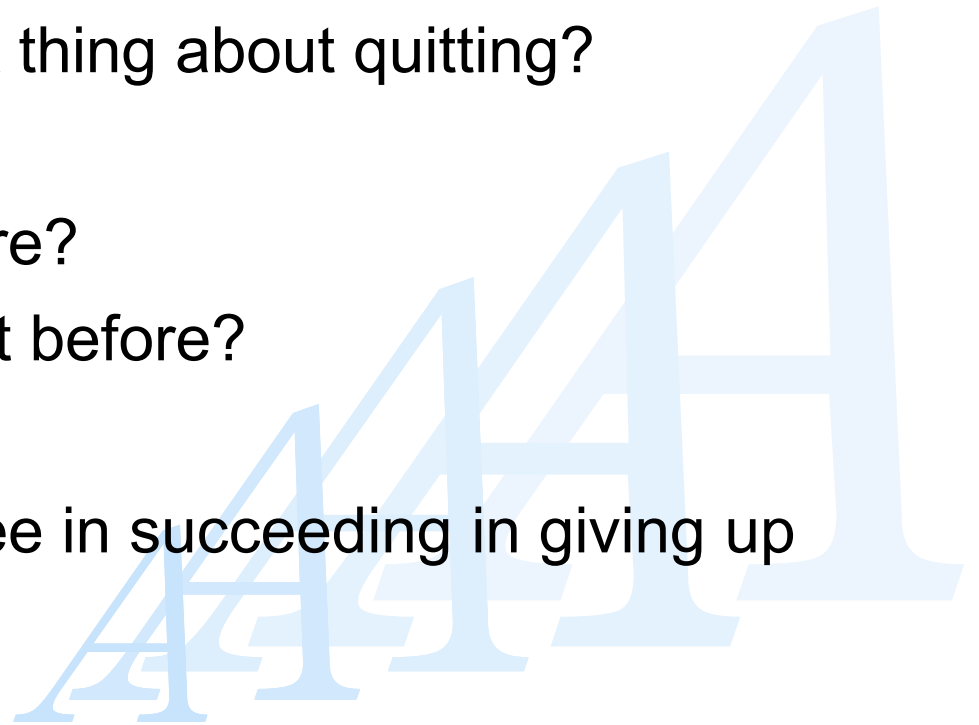
The term “arms” refers to the separate treatment or control groups comprised by the analyzed studies.

Medication	Number of arms ²	Estimated OR (95% CI)	Estimated abstinence rate (95% CI)
Placebo	80	1.0	13.8
Monotherapies			
Varenicline (2 mg/day)	5	3.1 (2.5, 3.8)	33.2 (28.9, 37.8)
Nicotine nasal spray	4	2.3 (1.7, 3.0)	26.7 (21.5, 32.7)
High dose nicotine patch (>25 mg) (these included both standard or long-term duration)	4	2.3 (1.7, 3.0)	26.5 (21.3, 32.5)
Long-term nicotine gum (>14 weeks)	6	2.2 (1.5, 3.2)	26.1 (19.7, 33.6)
Varenicline (1 mg/day)	3	2.1 (1.5, 3.0)	25.4 (19.6, 32.2)
Nicotine inhaler	6	2.1 (1.5, 2.9)	24.8 (19.1, 31.6)
Clonidine	3	2.1 (1.2, 3.7)	25.0 (15.7, 37.3)
Bupropion SR	26	2.0 (1.8, 2.2)	24.2 (22.2, 26.4)
Nicotine patch (6–14 weeks)	32	1.9 (1.7, 2.2)	23.4 (21.3, 25.8)
Long-term nicotine patch (>14 weeks)	10	1.9 (1.7, 2.3)	23.7 (21.0, 26.6)
Nortriptyline	5	1.8 (1.3, 2.6)	22.5 (16.8, 29.4)
Nicotine gum (6–14 weeks)	15	1.5 (1.2, 1.7)	19.0 (16.5, 21.9)
Combination therapies			
Patch (long-term; >14 weeks) + ad lib NRT (gum or spray)	3	3.6 (2.5, 5.2)	36.5 (28.6, 45.3)
Patch + bupropion SR	3	2.5 (1.9, 3.4)	28.9 (23.5, 35.1)
Patch + nortriptyline	2	2.3 (1.3, 4.2)	27.3 (17.2, 40.4)
Patch + inhaler	2	2.2 (1.3, 3.6)	25.8 (17.4, 36.5)
Patch + second generation antidepressants (paroxetine, venlafaxine)	3	2.0 (1.2, 3.4)	24.3 (16.1, 35.0)
Medications not shown to be effective			
Selective serotonin reuptake inhibitors (SSRIs)	3	1.0 (0.7, 1.4)	13.7 (10.2, 18.0)
Naltrexone	2	0.5 (0.2, 1.2)	7.3 (3.1, 16.2)

The 5 'A's

ASK about smoking status

- How do you feel about your smoking?
- Have you thought about quitting?
- What would be the hardest thing about quitting?
- Are you ready to quit now?
- Have you tried to quit before?
- What helped when you quit before?
- What led to any relapse?
- What challenges do you see in succeeding in giving up smoking?



The 5 'A's

ASSESS motivation and nicotine dependence

- What is the positive side of smoking?
- What are the downsides to smoking?
- What do you fear most when quitting?
- How important is quitting to you right now?
- What reasons do you have for quitting smoking?

On a scale of 1-10, how interested are you in trying to quit?

- What would need to happen to make this a score of 9 or 10?
- or What makes your motivation a 9 instead of a 2?

The 5 'A's

ASSESS motivation and nicotine dependence

- What would be the hardest thing about quitting?
- What are the barriers to quitting?
- What situations are you most likely to smoke?
- Ask about any previous quit attempts:
What happened/caused you to restart smoking?

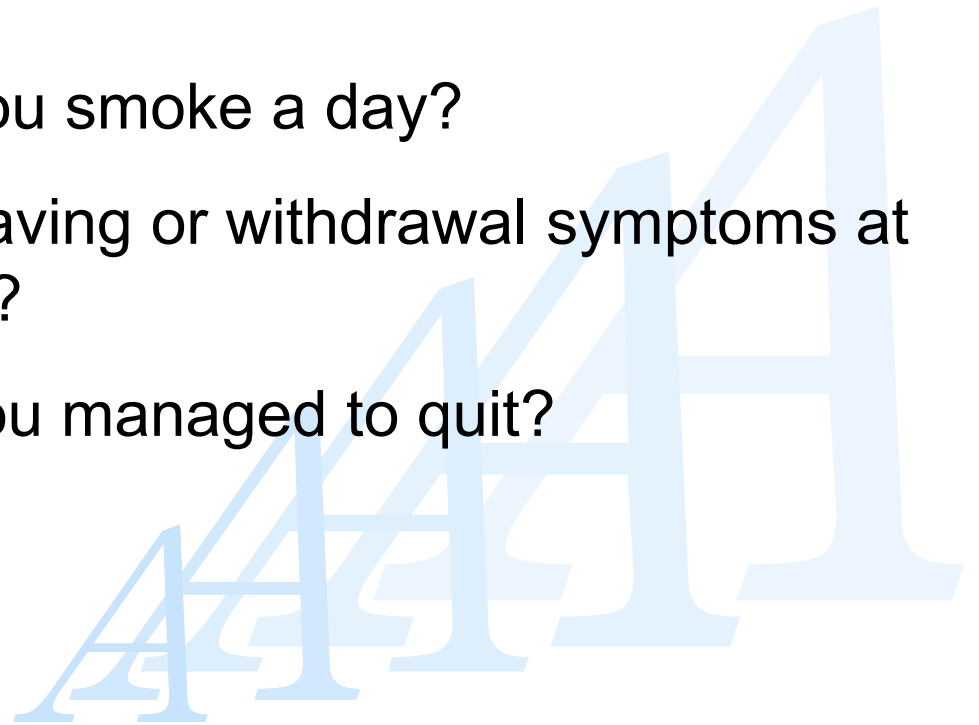
Scale of 1-10, how confident do you feel in your ability to quit?

- What would need to happen to make this a score of 9 or 10?

The 5 'A's

ASSESS motivation and nicotine dependence

- How many minutes after waking do you have your first cigarette?
- How many cigarettes do you smoke a day?
- Did you experience any craving or withdrawal symptoms at any previous quit attempts?
- What is the longest time you managed to quit?



The 5 'A's

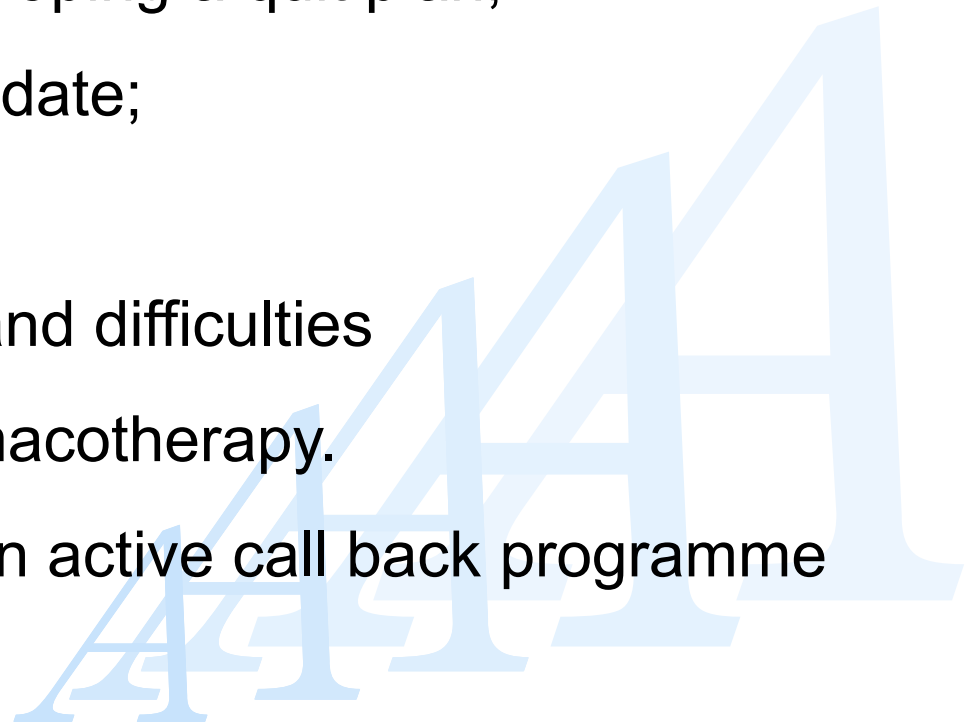
ADVISE on coping strategies

- Recommend total abstinence - not even a single puff
- Drinking alcohol is strongly associated with relapse
- Inform friends and family and ask for support
- Consider writing a 'contract' with a quit date
- Removal of cigarettes from home, car and workplace;
- Give practical advice about coping with withdrawal
Withdrawal symptoms occur mostly during the first two weeks
Relapse after this time relates to cues or distressing events.
- Remind patients of the health benefits of quitting

The 5 'A's

ASSIST the quit attempt

- Provide assistance in developing a quit plan;
- Help a patient to set a quit date;
- Offer self-help material;
- Explore potential barriers and difficulties
- Review the need for pharmacotherapy.
- Refer to a quitline and/or an active call back programme



The 5 'A's

ARRANGE follow up

- Offer a follow up appointment within 7 days
- Affirm success when you next see the patient
- Reinforce successful quitting: positive feedback helps sustain smoking cessation.
- Don't talk about 'failure', 'relapse' is very common
- Help the patient work out 'what went wrong this time' and how they prevent a relapse next time.

Promote motivation to quit (The 5R's)

Relevance	Encourage the patient to indicate why quitting is personally relevant, being as specific as possible. Motivational information has the greatest impact if it is relevant to a patient's disease status or risk, family or social situation (e.g., having children in the home), health concerns, age, gender, and other important
Risks	The clinician should ask the patient to identify potential negative consequences of tobacco use. The clinician may suggest and highlight those that seem most relevant to the patient. The clinician should emphasize that smoking low-tar/low-
Rewards	The clinician should ask the patient to identify potential benefits of stopping tobacco use. The clinician may suggest and highlight those that seem most relevant to the patient.
Roadblocks	The clinician should ask the patient to identify barriers or impediments to quitting and provide treatment (problem-solving counseling, medication) that could address barriers. Typical barriers might include: Withdrawal symptoms, Fear of failure, Weight gain, Lack of support, Depression, Enjoyment of tobacco, Being around other tobacco users, Limited knowledge of effective treatment options.
Repetition	The motivational intervention should be repeated every time an unmotivated patient visits the clinic setting. Tobacco users who have failed in previous quit attempts should be told that most people make repeated quit attempts before they are successful.

Suggested topics

1. Prevalence of tobacco use and evaluation of WHO FCTC in your home country.
2. Prevalence of tobacco use, tobacco prevention programs for youth and cessation service in your home country.