



Department of Physical and Rehabilitation Medicine with the postgraduation course

Tobacco products, their composition and emitted substances. Types of tobacco products. The myth of light cigarettes. Hookah smoking. Ways to quit smoking.

Head of Department, Doctor of Medical Sciences, Associate Professor E.Yu. Mozheiko

Year 2022

Lecture plan

- Introduction
- Definition of smoking
- History of the issue
- Composition and effect of tobacco on the body
- Methods of combating smoking
- Population strategies

Smoking is a disease



WHO definition:

- "Tobacco addiction is a chronic relapsing condition... People with tobacco addiction, as well as with other chronic diseases, should receive effective and adequate treatment."
- "Treatment of tobacco addiction includes behavioral and drug interventions, such as advice and counseling, intensive support and medication, which lead to the reduction or cessation of tobacco addiction in individuals and the general population."

ICD-10

Section F17 Mental and behavioral disorders caused by tobacco use

F17.0 - Acute intoxication. F17.1 - Harmful use. F17.2 - Addiction syndrome. F17.3 - Withdrawal state. F17.4 - Withdrawal state with delirium. F17.5 - Psychotic disorder. F17.6 - Amnesic syndrome. F17.7 - Residual and delayed psychotic disorders. F17.8 — Other mental and behavioral disorders. F17.9 - Mental and behavioral disorder, unspecified

- Tobacco smoking is one of the world's largest health problems. Millions of people live in poor health because of smoking and researchers estimate that every year around 8 million people die an early death due to smoking.
- It has been a major health problem for many decades. For the entire 20th century it is estimated that around 100 million people died prematurely because of smoking, most of them in rich countries.¹
- The share of smokers among the world population is falling and because smoking is such large health problem today this is one of the most positive developments in global health. It makes it possible that millions of people can live a longer and healthier life.

THE HISTORY OF SMOKING

The Origin

Christopher Columbus discovers tobacco in the New World and smoking is introduced to Spain.

1492

After voyaging to the Americas, Sir Francis Drake introduces pipe smoking to Britain.

1572

Seville becomes a world tobacco epicentre for cigar production. Virginia tobacco is first sold in England and enters the world market.

1614

1531

Tobacco is farmed in Santo Domingo.

1610

The first tobacco vending machine was created, providing a scoop of tobacco for a penny.

1660

Charles II returns from exile in Paris and brings snuff from the French courts. Snuff becomes popular amongst aristocrats.

UK vs USA

Virginia is the location of the first American tobacco factories.

1730

Philip Morris (Philip Morris International Inc.) opens his first tobacco shop on Bond Street, London.

1847

Crimean War veteran Robert Gloag opens the first cigarette factory in England.

1856

Duke buys the British Ogden tobacco firm, initiating a potential takeover. British companies counter by forming Imperial Tobacco.

1901

1830

The US temperance movement prompts the first organised anti-tobacco association.

1852

Safety matches were used to aid smoking.

1889

James Buchanan Duke forms the American Tobacco Company, consisting of the five leading American tobacco companies.

1902

American and British tobacco companies agree to stay in their own countries and unite to form the British American Tobacco Company to sell their products abroad.



The war



The UK Children's Act prohibited the sale of tobacco to children under the age of 16.

1908

Cigarette smoking becomes popular amongst soldiers. Tobacco is provided as army rations during World War I.

1916

Franz Hermann Muller of the University of Cologne publishes the first report that reveals strong links between smoking and lung cancer.

1939

1912

Dr I Adler was the first to advocate that lung cancer is closely connected to smoking.

1930

Britain is exposed as having the world's highest rate of lung cancer.

1939-
1945

As part of the World War II effort, US President Roosevelt declares tobacco to be a protected crop. Cigarettes are included in soldiers' rations.



The decline

Dr Ernst L Wynder finds that painting cigarette tar on the backs of mice creates tumours. This is the first biological link between smoking and cancer.

1953

The Independent Broadcasting Authority creates a Code of Advertising Standards, in order to regulate commercial television and radio broadcasting.

1978

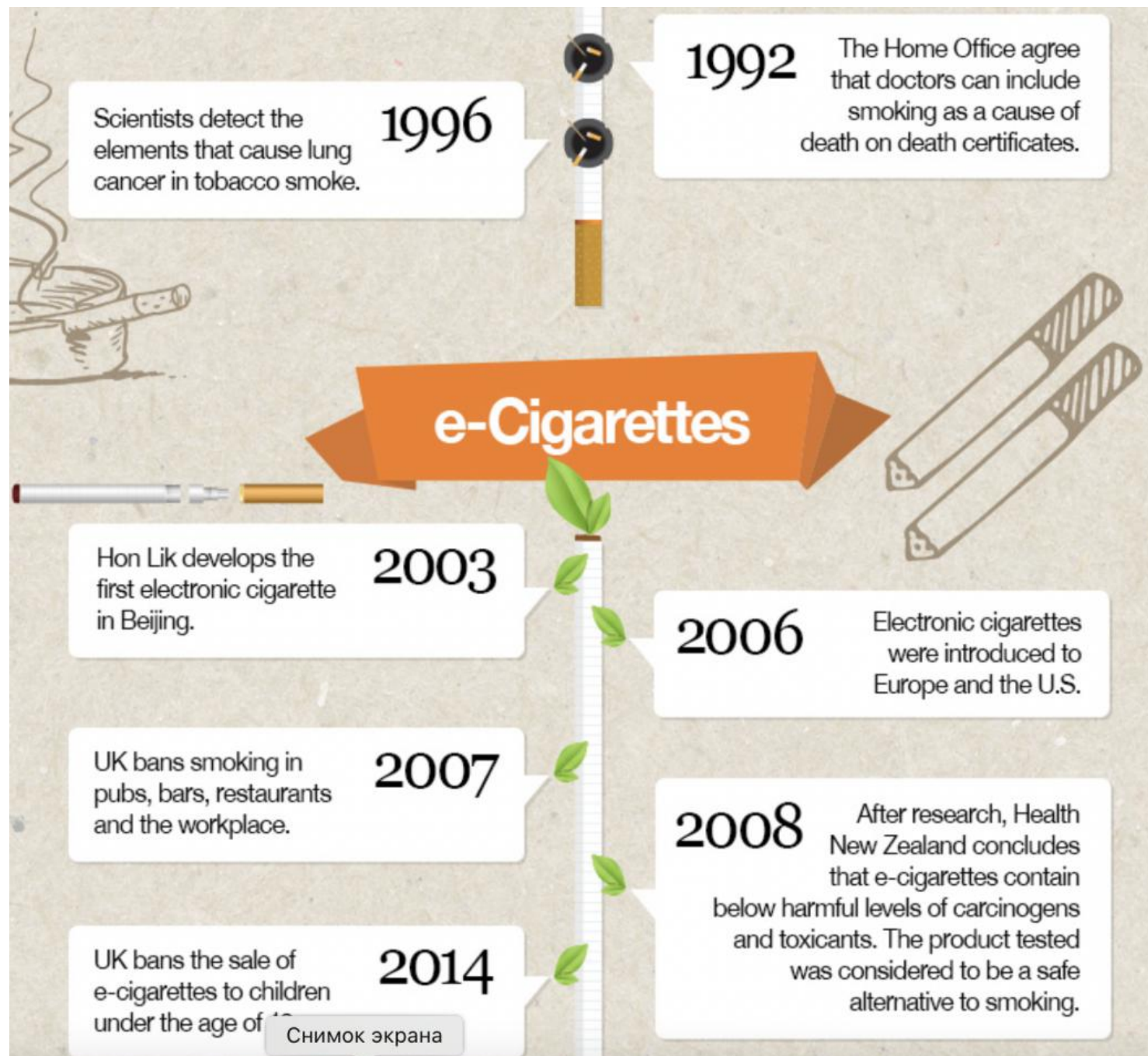
The government declares that larger health warnings are used on tobacco packaging. This is the first time that health warnings are legally required.

1991

1967 New York is home to the first Smoking and Health World Conference.

1986 The UK places a ban on tobacco advertising in cinemas, and six major health warnings are introduced.

1992 The UK sees the first nicotine patch available on prescription.



How the
government try
to solve
problem?

Adult Cigarette Consumption and Major Smoking and Health Milestones, US, 1880-2014



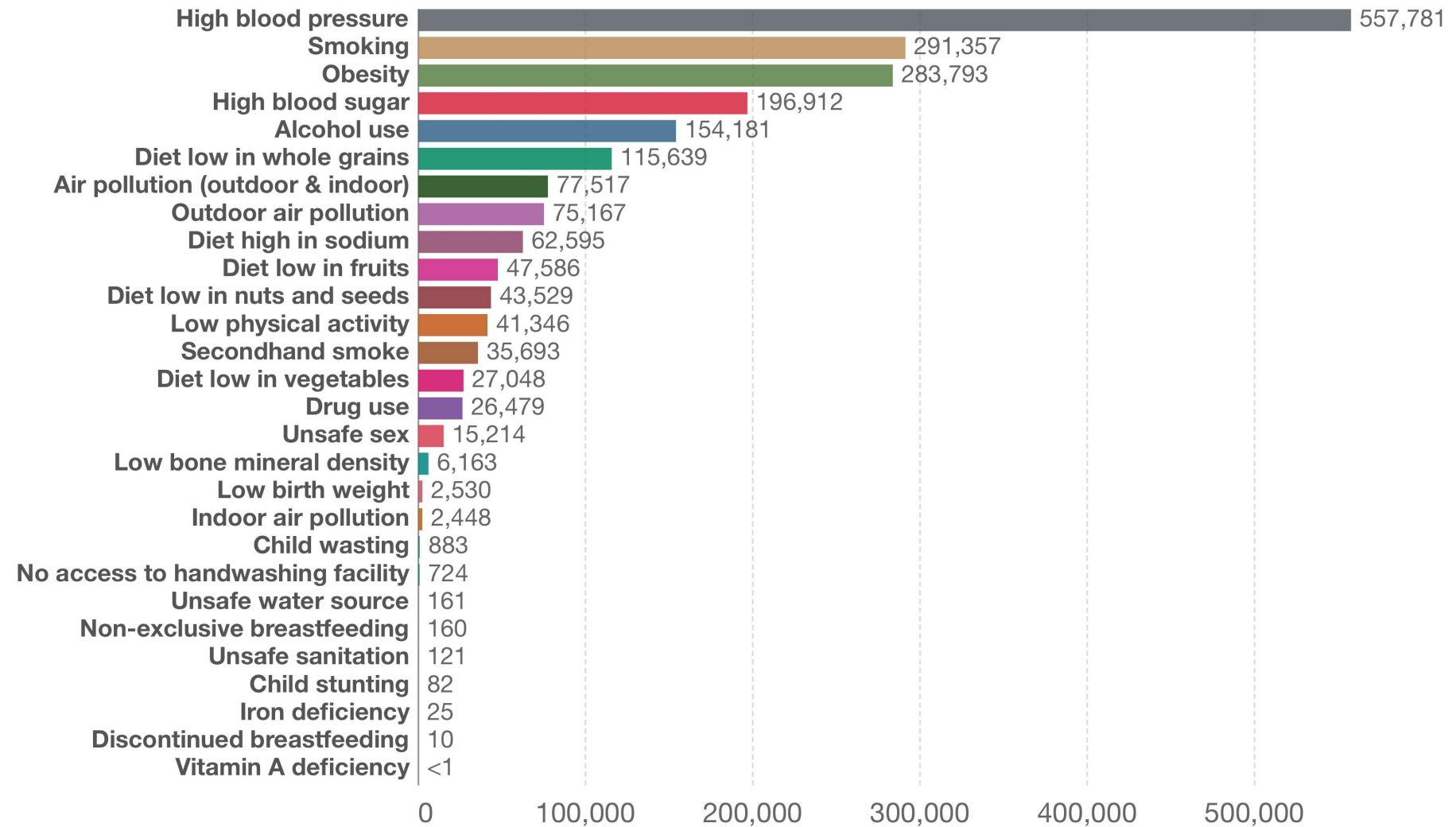
Source: U.S. Department of Health and Human Services, 2014

Statistics

Number of deaths by risk factor, Russia, 2019

Total annual number of deaths by risk factor, measured across all age groups and both sexes.

Our World
in Data

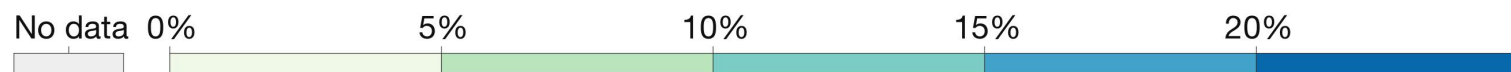
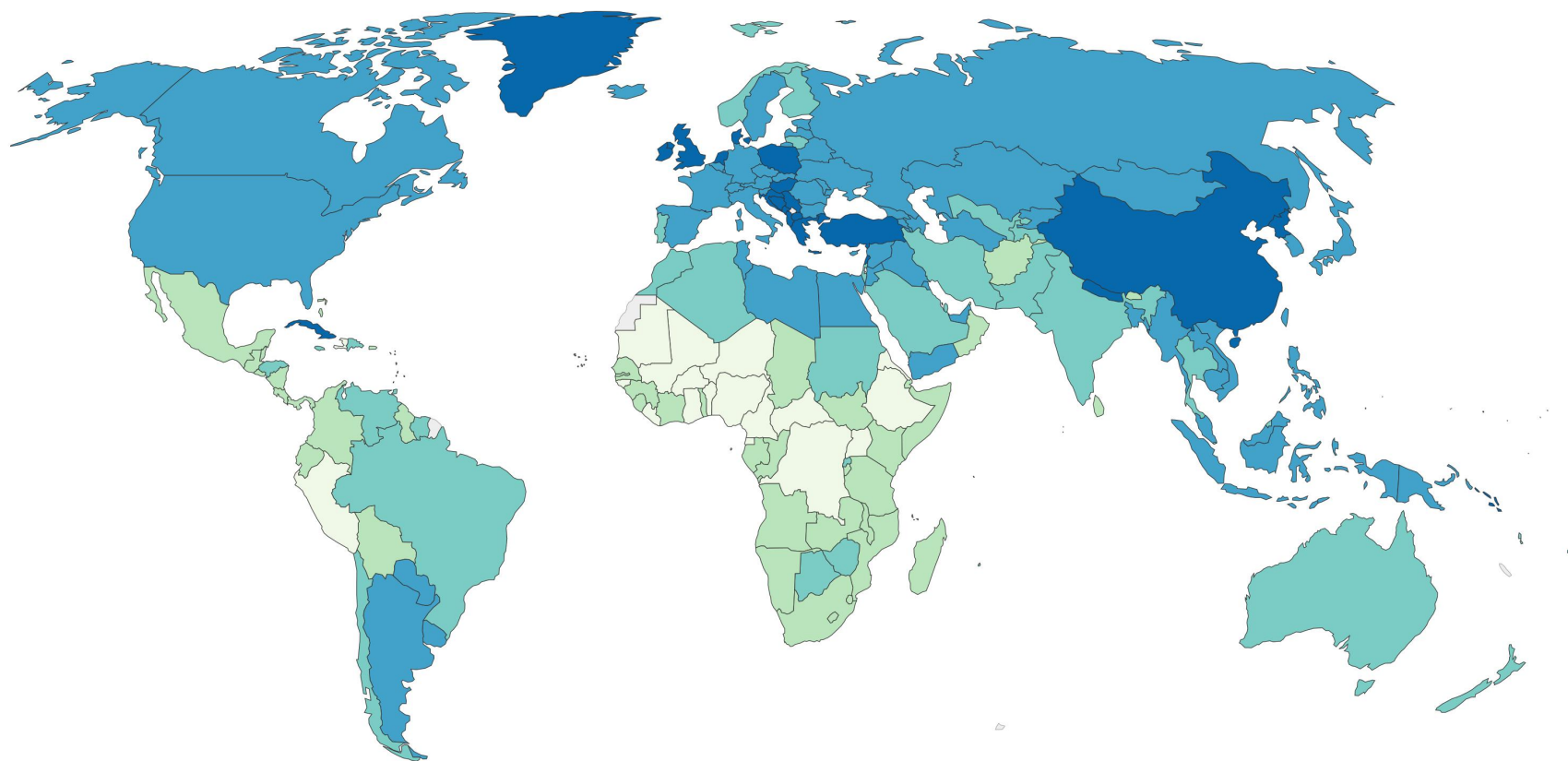


Source: IHME, Global Burden of Disease (GBD)

OurWorldInData.org/causes-of-death • CC BY

Share of deaths that are attributed to smoking, 2019

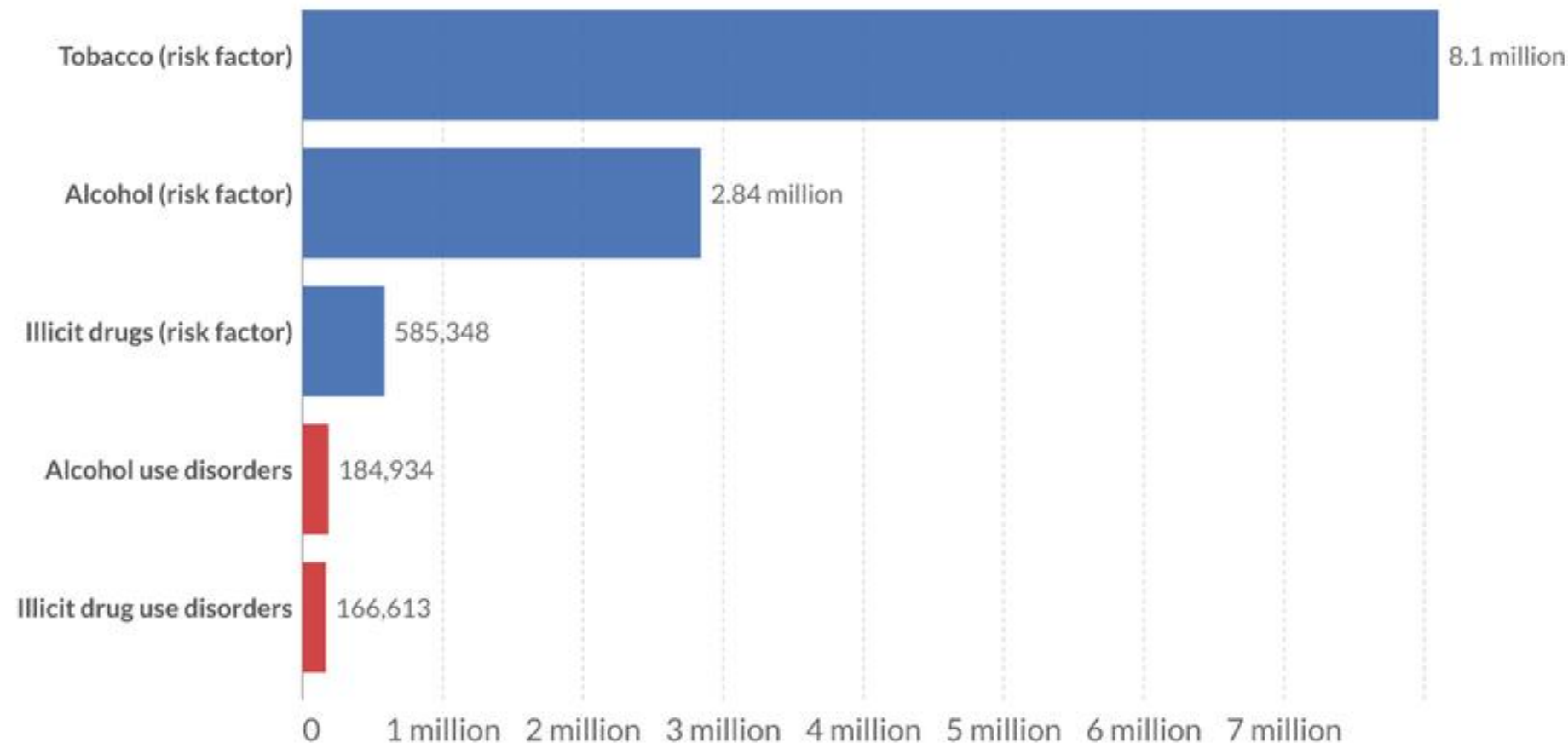
The share of total deaths, from any cause, with smoking as an attributed risk factor.



Deaths from tobacco, alcohol and drugs, World, 2017

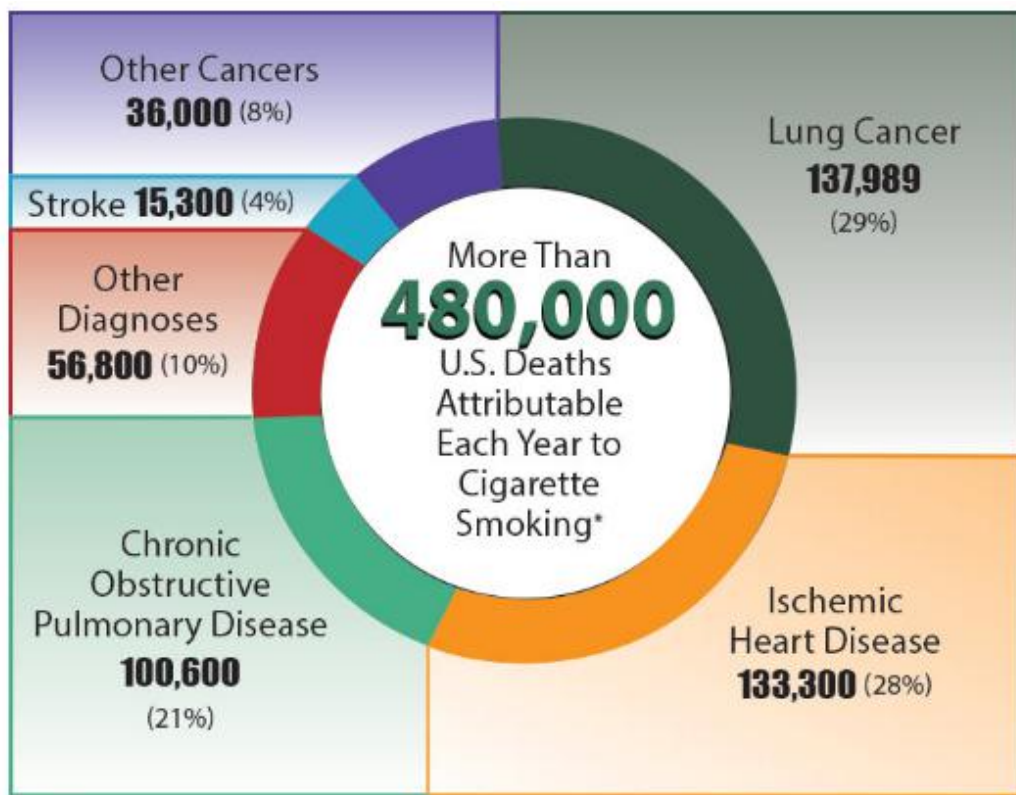
Deaths from substance use are distinguished by two measures:

- direct deaths from substance use disorders (in red). These are deaths which result from alcohol or illicit drug use overdoses.
- indirect deaths (in blue) which result from substance use acting as a risk factor for the development of various diseases and injury.

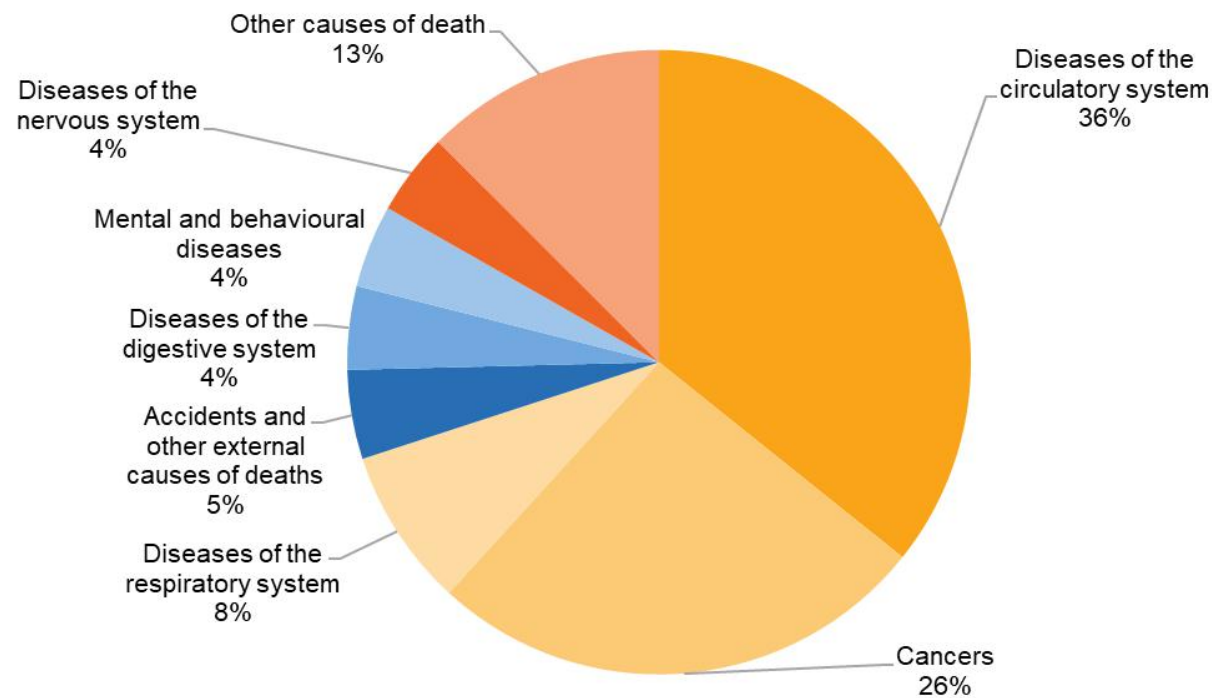


Source: IHME, Global Burden of Disease

Note: Illicit drugs are drugs that have been prohibited under international drug control treaties. They include opioids, cocaine, amphetamines and cannabis.



Causes of death in the EU by type, 2016
(as % of all deaths)



ec.europa.eu/eurostat

For more information, please use link <https://ourworldindata.org/smoking>

Composition of cigarette smoke

- When smoking a cigarette, more than 7000 chemicals are released, including nicotine, which is the main component of the development of addiction
- Many of these components are poisonous, and at least 69 chemical compounds are carcinogens.



• CHEMICAL COMPOUNDS IN CIGARETTE SMOKE •

A SUMMARY OF A SELECTION OF HAZARDOUS COMPOUNDS IN CIGARETTE SMOKE & THEIR EFFECTS

ESTIMATED NUMBER OF CHEMICAL
COMPOUNDS IN CIGARETTE SMOKE

7,357

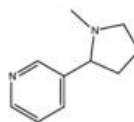
70

NUMBER OF THESE COMPOUNDS WITH
CONFIRMED CARCINOGENIC ACTIVITY



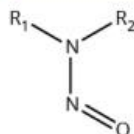
The compounds shown below are all found in cigarette smoke. The mass figures, given in μg , take into account both mainstream (inhaled) and sidestream smoke. 1 μg is equal to 1 millionth of a gram. Amounts of these compounds vary in different brands of cigarettes - these figures are approximate.

NICOTINE



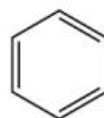
- Approx. 919 μg per cigarette
- Addictive
- Increases heart rate
- Increases blood pressure
- Increases blood glucose
- Lethal dose: around 500-1000mg

N-NITROSAMINES



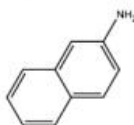
- Large class of compounds
- Several are tobacco-specific
- **Known human carcinogens**
- Most carcinogenic: NNK & NNN
- NNK: approx. 0.3 μg per cigarette
- NNN: approx. 2-50 μg per cigarette
- May cause reproductive damage

BENZENE



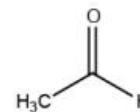
- Approx. 46-272 μg per cigarette
- **Known human carcinogen**
- Damages bone marrow
- Lowers red blood cell count
- May harm reproductive organs

AROMATIC AMINES



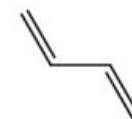
- Large class of compounds
- Includes 2-aminonaphthalene:
- **Known human carcinogen**
- Linked with bladder cancer
- Approx. 0.04 μg per cigarette

ACETALDEHYDE



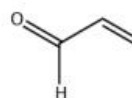
- Approx. 680-1571 μg per cigarette
- **Known animal carcinogen**
- **Probable human carcinogen**
- Irritant to skin & eyes
- Irritant to respiratory tract

1,3-BUTADIENE



- Approx. 36-191 μg per cigarette
- **Known human carcinogen**
- **Suspected human teratogen**
- Irritant to eyes & skin
- Irritant to upper respiratory tract

ACROLEIN

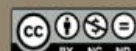


- Approx. 69-306 μg per cigarette
- **Possible human carcinogen**
- **Known DNA mutagen**
- Irritant to skin & nasal passages
- May contribute to heart disease

POLYAROMATICS



- Large class of compounds
- Includes benzo[a]pyrene:
- **Known human carcinogen**
- **Known DNA mutagen**
- Affects reproductive capacity
- Up to 0.14 μg per cigarette



E-LIQUID VS CIGARETTE



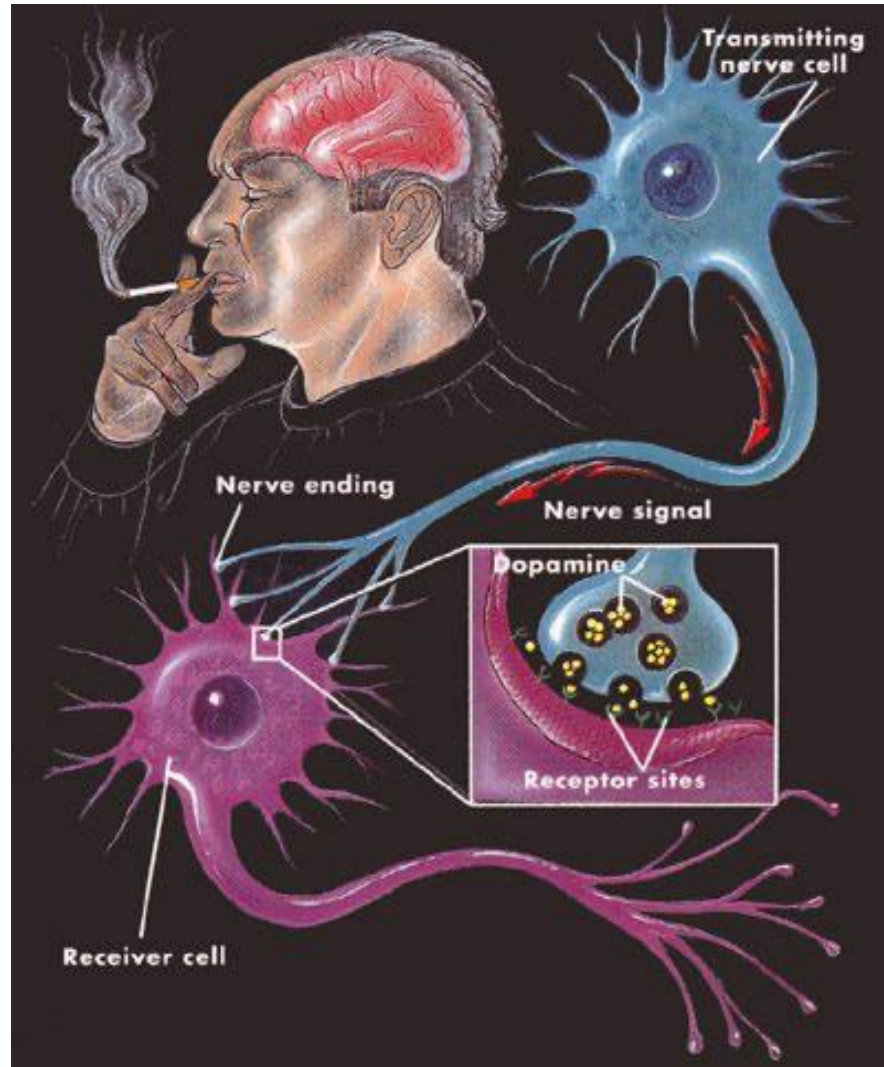
Nicotine is a substance that can cause addiction



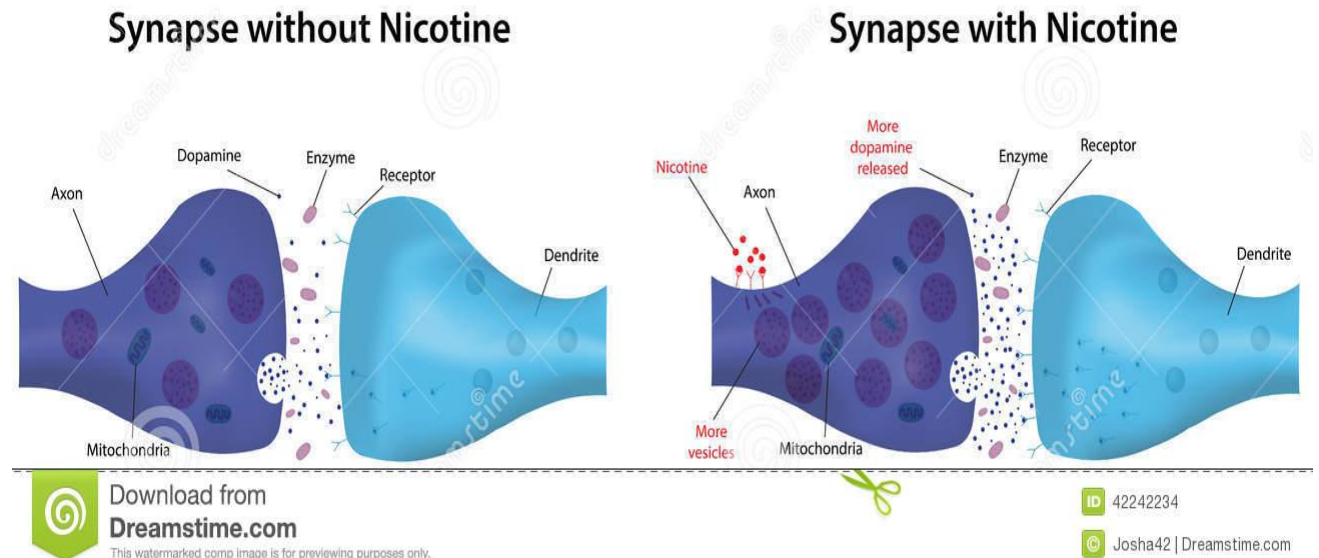
Nicotine

- Nicotine is a natural component present in plants of the Solanaceae family, mostly in stems and leaves of tobacco.
- Nicotine is a potent neurotoxin and cardiotoxin, especially poisonous to insects; as a result, nicotine was previously widely used as an insecticide
- It is a hygroscopic oily liquid with a bitter taste, easily mixed with water in the basic form.
- It is well absorbed through the skin and penetrates into the brain tissue through the hemato-encephalic barrier.
- On average, 7 seconds after inhaling tobacco smoke is enough for nicotine to reach the brain. The half-clearance of nicotine from the body is about two hours

Mechanism of nicotine addiction development

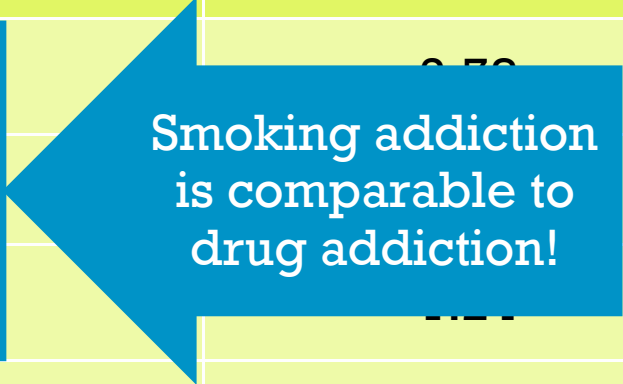


The Action of Nicotine



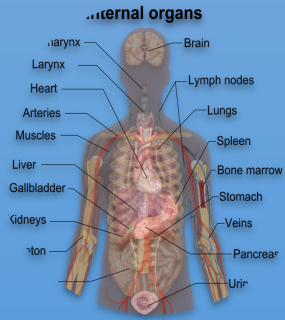
The potential of various substances causes addiction

Substance	Addictive potential*	Physical harm	Social danger
Heroin	3.00	2.50	2.54
Cocaine	2.39	2.17	2.17
Nicotine	2.21	1.42	1.42
Alcohol consumption	1.93	1.40	2.21
Cannabis	1.51	2.99	1.50

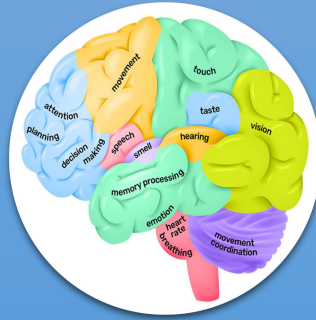


* Addictive potential of pharmacological agents and substances is the ability to cause pathological addiction

Types of tobacco addiction



Physical



Psychological



Social



Physical Addiction

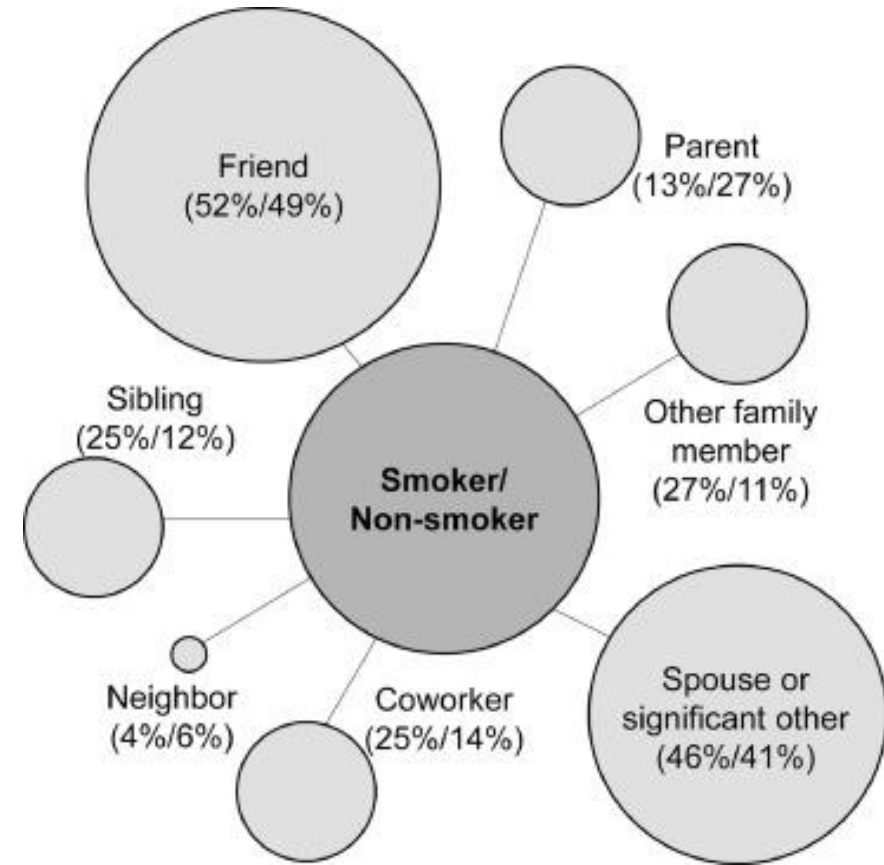
Addicted smokers get strong urges to smoke in order to keep unpleasant nicotine withdrawal symptoms at bay. Nicotine withdrawal feels similar to stress: inability to focus, short temper and restlessness.

Psychological Dependence

Smoking may be perceived as a tool to cope with emotions, moods, stress or boredom. Some may believe smoking to be a way of controlling weight. It may be used to take 'time out' or to manage social situations.

Habit

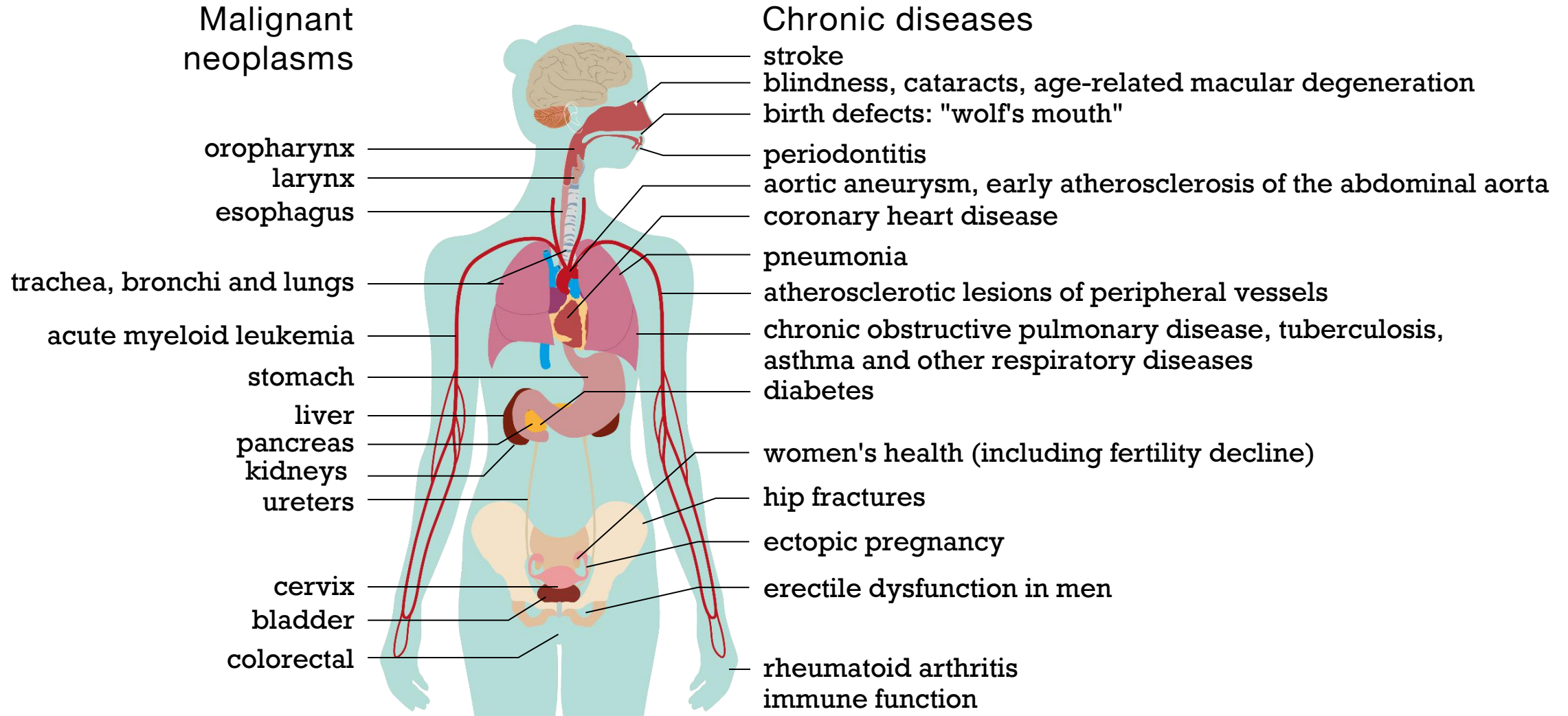
Smoking may become a routine activity with a strong association with particular events or situations, such as mealtimes, coffee breaks or driving. Regular smoking means that the brain receives regular doses of nicotine.



Conclusion

- Nicotine is a toxic substance found in tobacco plants
- The supposed natural role is to protect plants from pests
- Reaches the brain within 10-16 seconds after inhaling tobacco smoke
- Nicotine binds to $\alpha 4\beta 2$ nicotine acetylcholine (NAC) receptors, stimulating the release of dopamine.
- This leads to the activation of the brain's reward system, providing the satisfaction associated with smoking

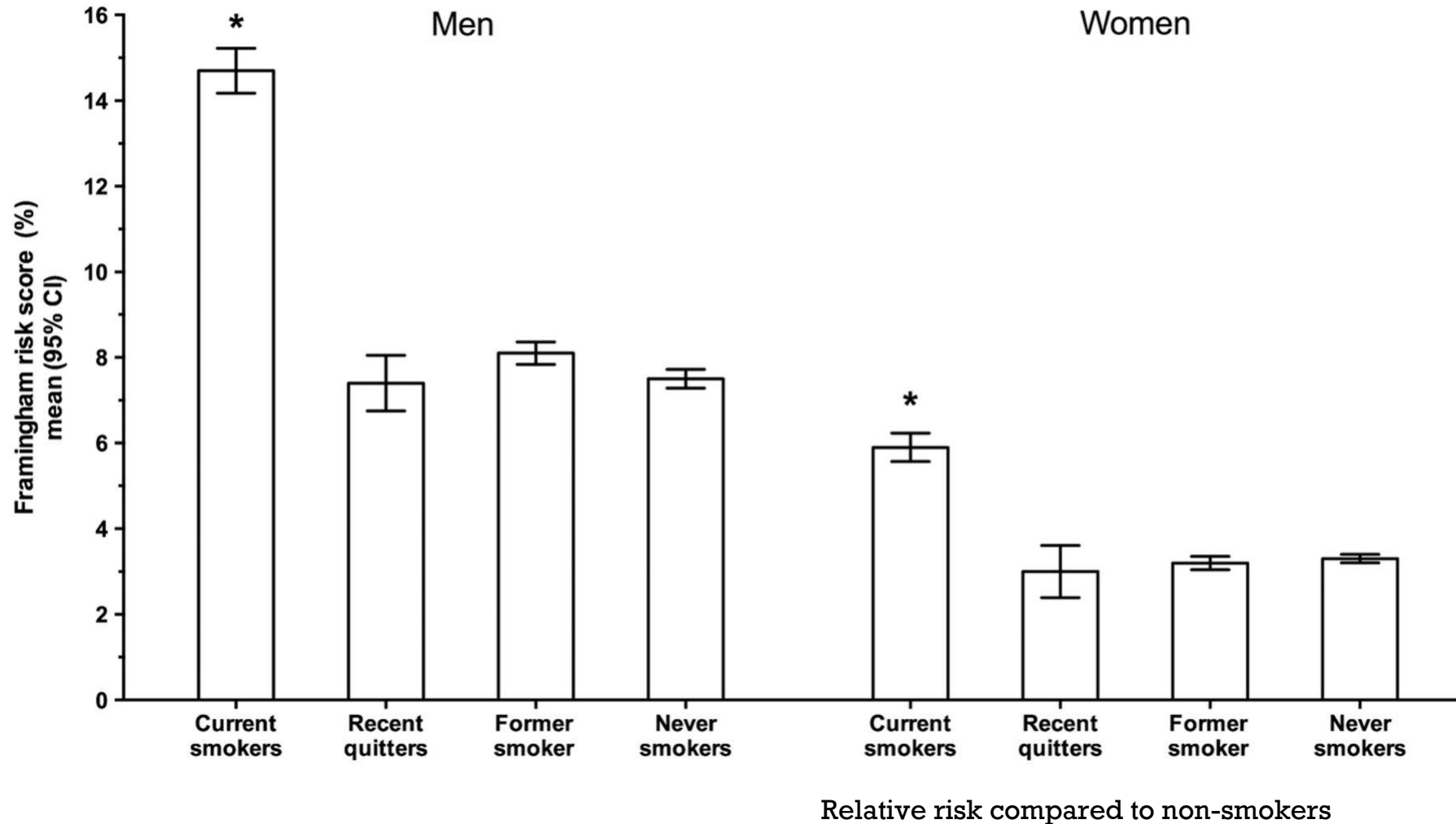
The effect of cigarette smoke on the body



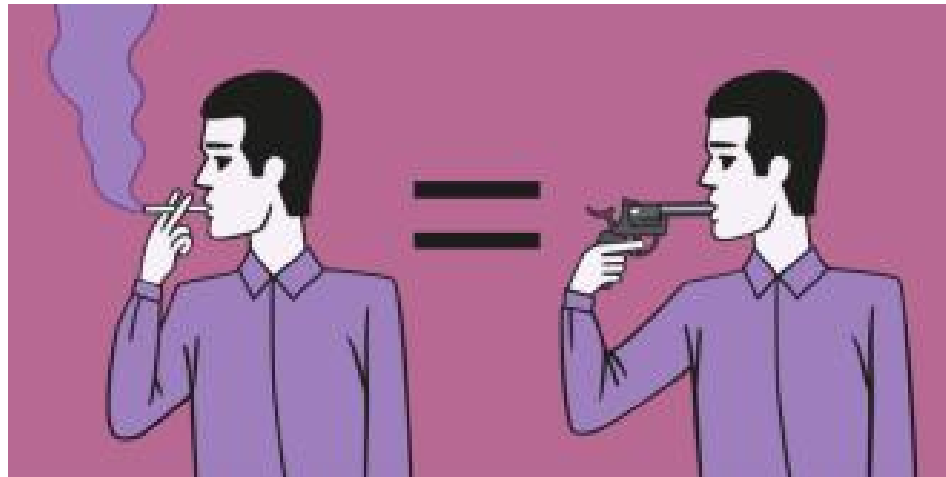
SMOKING

<ul style="list-style-type: none"> • General risk of CVD • Endothelial dysfunction • Activation of platelet aggregation and thrombogenesis peripheral vascular resistance • Development of atherosclerosis • Oxidative stress • Activation of inflammation • Heart rate variability • Metabolic disorders, including lipids 	CHD <ul style="list-style-type: none"> • The risk of developing coronary heart disease increases by 2.6 times, death from coronary heart disease by 5.4 times, sudden SS death by 2.3 times • Hypertension and cholesterol levels are less controlled • Results after revascularization are worse 	Peripheral arterial obliterating disease <ul style="list-style-type: none"> • In smokers , the incidence of remittent limp is 4 times higher than in non - smokers • The risk of developing remittent limp depends proportionally on the intensity of smoking • Mortality in smokers with remittent limp is 40% - 50% 	Erectile dysfunction <ul style="list-style-type: none"> • 23% of ED is caused only by smoking ↑ the risk of developing ED is 2 times higher ↑ the risk of moderate or severe ED is 2 times higher compared to non-smokers; quitting smoking reduces this risk • Passive smoking is a risk of developing ED as well as active smoking 	Stroke <ul style="list-style-type: none"> • Smoking is the cause of 12-14% of all stroke deaths • Accelerated development of atherosclerosis in the carotid arteries • Risk of death from stroke • Risk of hemorrhagic stroke 	Aortic aneurysm (AA) <ul style="list-style-type: none"> • 5.5 times the risk of developing AA • The risk of progression and a larger lesion area
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Risk of developing CVD in smokers compared to non-smokers



Smoking: risk of sudden cardiovascular death



Do not take a cigarette away from a smoker – perhaps this is the last pleasure in his life



Tobacco smoking and the risk of sudden cardiac death: a systematic review and meta-analysis of prospective studies

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Abstract

Smoking is an established risk factor for cardiovascular disease including coronary heart disease and stroke, however, data regarding smoking and sudden cardiac death have not been summarized in a meta-analysis previously. We therefore conducted a systematic review and meta-analysis to clarify this association. We searched the PubMed and Embase databases for studies of smoking and sudden cardiac death up to July 20th 2017. Prospective studies were included if they reported adjusted relative risk (RR) estimates and 95% confidence intervals (CIs) for smoking and sudden cardiac death. Summary RRs were estimated by use of a random effects model. Twelve prospective studies were included. The summary RR was 3.06 (95% CI 2.46–3.82, $I^2 = 41\%$, $\text{Pheterogeneity} = 0.12$, $n = 7$) for current smokers and 1.38 (95% CI 1.20–1.60, $I^2 = 0\%$, $\text{Pheterogeneity} = 0.55$, $n = 7$) for former smokers compared to never smokers. For four studies using non-current (never + former) smokers as the reference category the summary RR among current smokers was 2.08 (95% CI 1.70–2.53, $I^2 = 18\%$, $\text{Pheterogeneity} = 0.30$). The results persisted in most of the subgroup analyses. There was no evidence of publication bias. These results confirm that smoking increases the risk of sudden cardiac death. Any further studies should investigate in more detail the effects of duration of smoking, number of cigarettes per day, pack-years, and time since quitting smoking and sudden cardiac death.

Keywords Smoking · Sudden cardiac death · Systematic review · Meta-analysis

Introduction

Cardiovascular disease is the leading cause of death globally, accounting for 17.9 million deaths worldwide in 2015 [1]. It has been estimated that approximately 40–50% of all

cardiovascular deaths are sudden cardiac deaths and about 80% of these are ventricular tachyarrhythmias [2]. In the US approximately 250 000–310 000 sudden cardiac deaths occur annually [3, 4]. Sudden cardiac death is defined as an unexpected, pulseless condition attributable to a cardiac arrhythmia [5], and most cardiac arrests present without warning symptoms and are usually fatal [6, 7]. Preventive efforts have focused on using cardioverter-defibrillators in the highest risk groups such as patients with advanced cardiomyopathy and reduced left ventricular ejection fraction [8], however, these high risk groups only account for 25–30% of all sudden cardiac deaths and the majority occur in the general population and in persons without established coronary heart disease [9, 10]. Population-wide strategies for primary prevention may therefore be a more promising approach to reduce the incidence of sudden cardiac deaths.

Established or suspected risk factors for sudden cardiac death include age, obesity, diabetes, physical inactivity, dietary factors, hypertension, high serum cholesterol, high resting heart rate and family history of sudden cardiac death [11–13]. A number of cohort studies have also reported a

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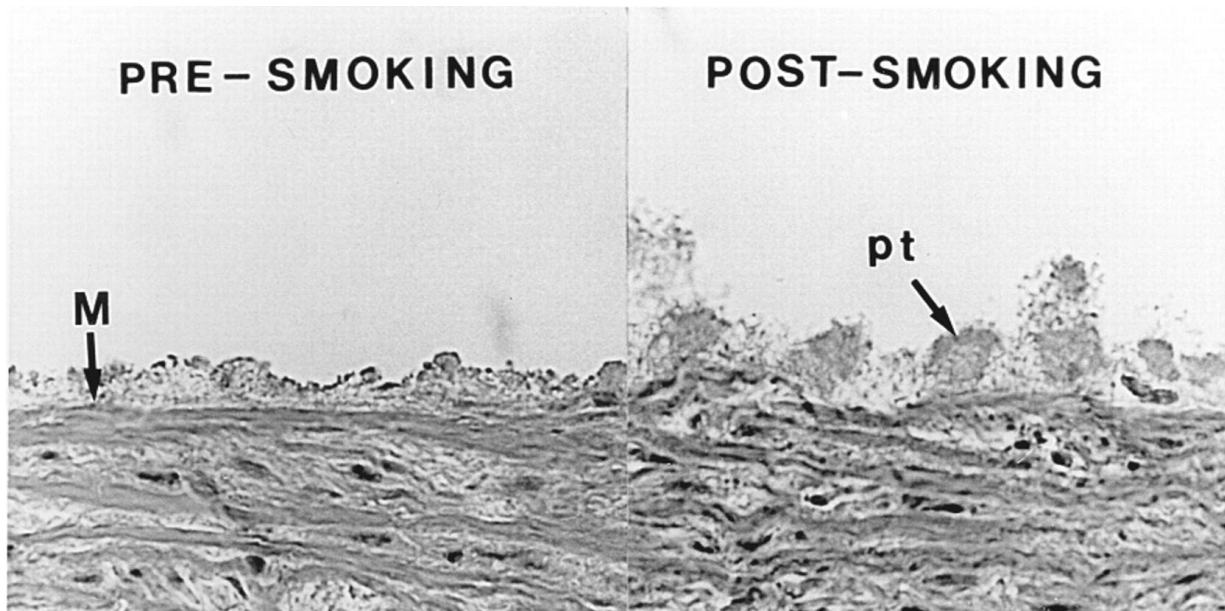
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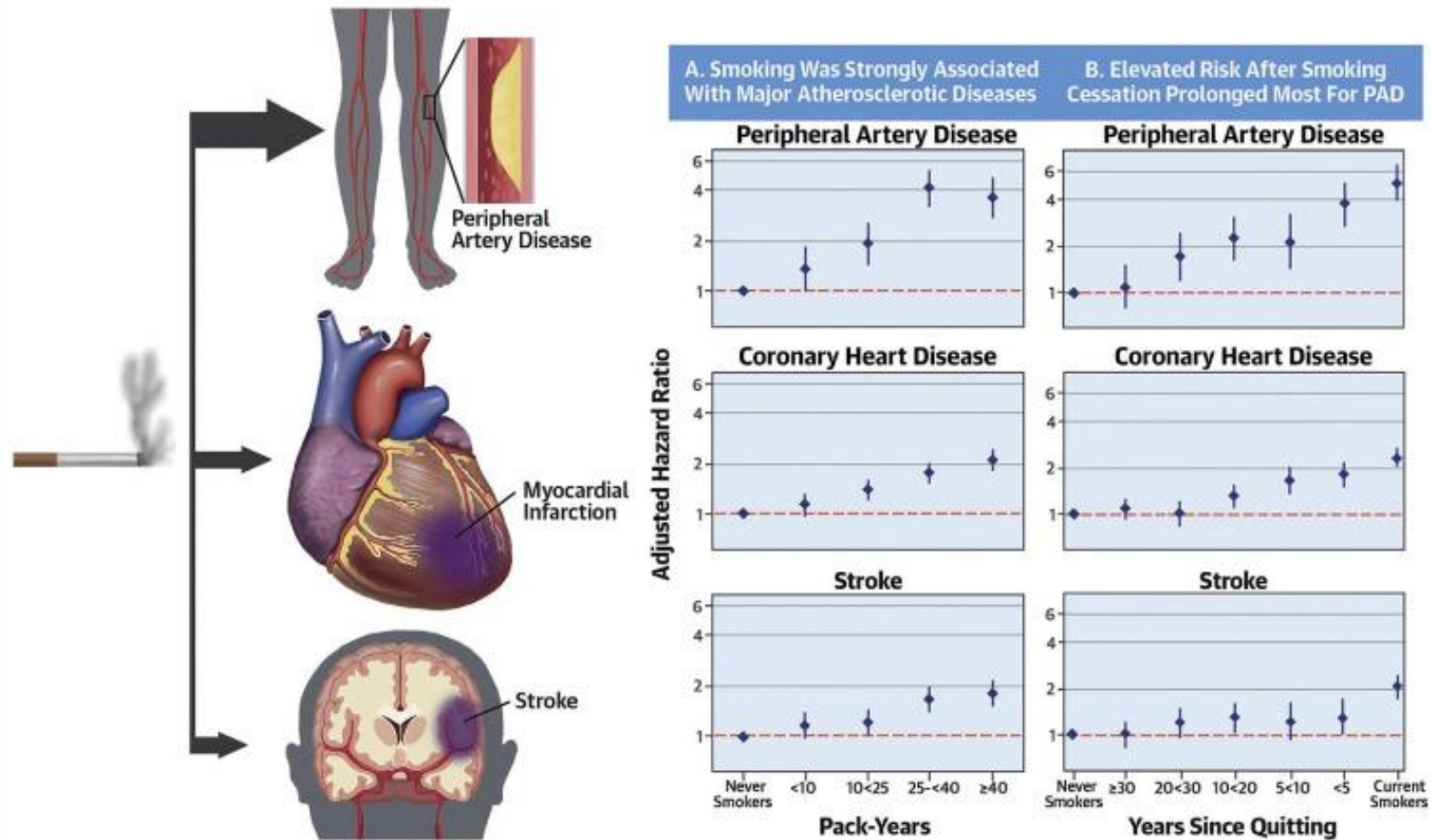
Increased thrombosis in an acute test



Changes in coagulation parameters in smokers

Coagulation marker	
Fibrinogen	Raising
Platelet aggregation	Activation
D-Dimer	Raising
Blood viscosity	Raising

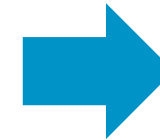
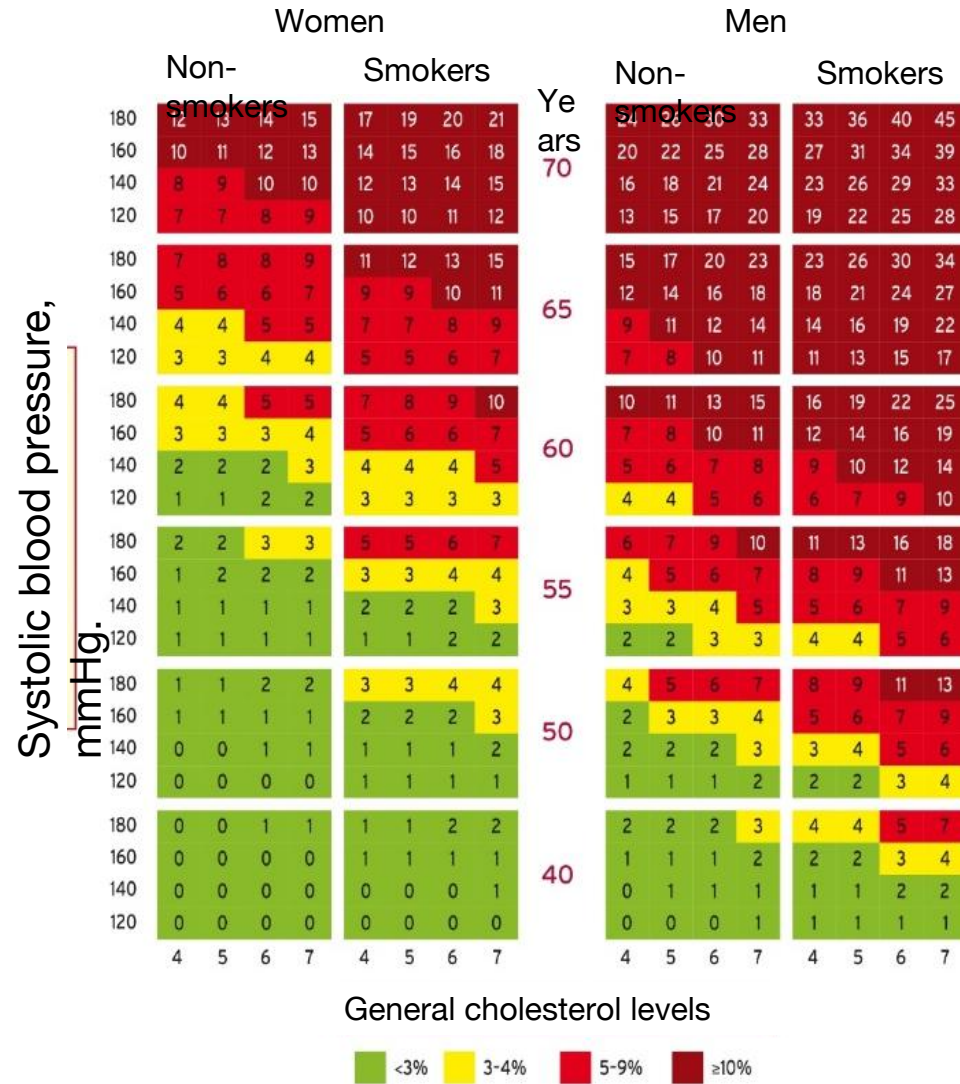
CENTRAL ILLUSTRATION: Smoking Is Associated With Higher Risk of Peripheral Artery Disease Compared With Coronary Heart Disease and Stroke and Longer Residual Risk of Peripheral Artery Disease After Cessation



According WHO, person who quit smoking YEAR ago has the same risk of cardiovascular disease as non-smoker.

Ding, N. et al. J Am Coll Cardiol. 2019;74(4):498-507.

Scale SCORE



Quitting smoking reduces the risk of cardiovascular death by almost 2 times!

Cardiovascular Benefits of Quitting Smoking

Short-term

- Biochemical and physiological
- ↓ fibrinogen concentration, fibrinogen formation
- HDL/LDL ratio improves
- ↓ platelet count and aggregation
- Vascular elasticity improves
- ↓ Blood pressure and heart rate



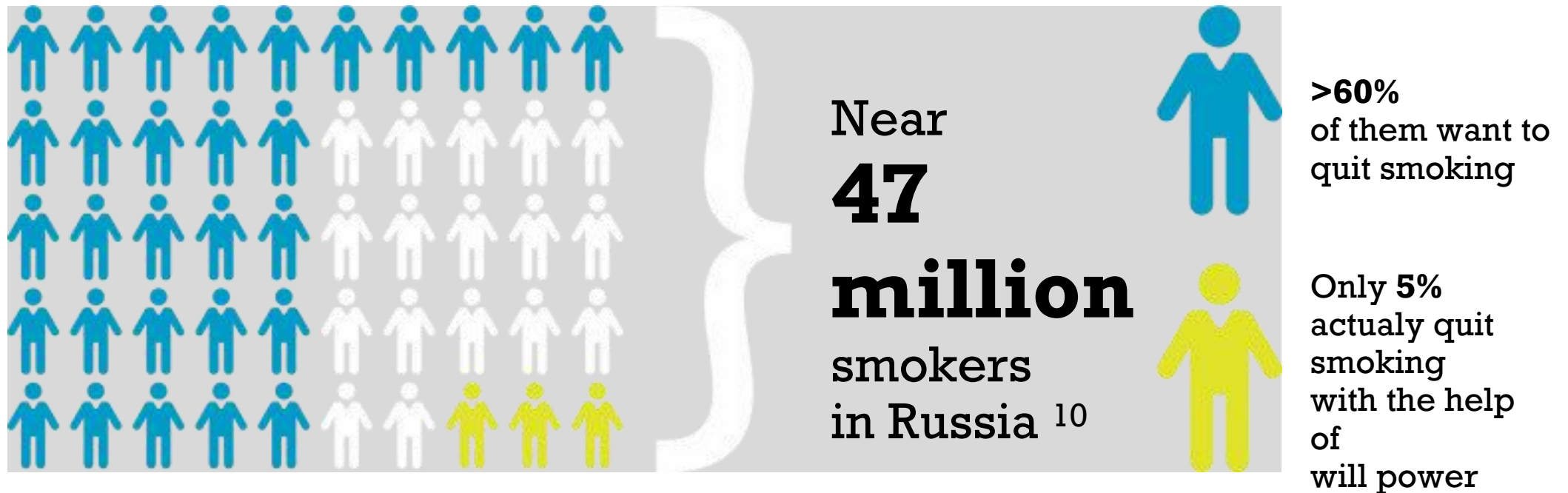
Long-term

- The following risks are reduced:
 - stroke
 - repeated cabg (coronary artery bypass grafting)
 - repeated stable angina after acute myocardial infarction
 - arrhythmogenic death after AMI
 - repeated cardiovascular events
 - repeated revascularization after CABG
- Declining:
 - Mortality after CABG and PCI (Percutaneous Coronary Intervention)
 - The level of inflammatory markers associated with the progression of CVD (C-react. Protein, leukocytes, fibrinogen)

Twardella D et al. Eur Heart J 2004;25:2101-2108; Morita H et al. J Am Coll Cardiol 2005;45:589-594; Oren S et al. Angiology 2006;57:564-568; Terres W et al. Am J Med 1994; 97:242-249; Nilsson P et al. J Int Med 1996; 240:189-194; Peters RW et al. J Am Coll Cardiol 1995;26:1287-1292; Rea TD et al. Ann Intern Med 2002;137: 494-500; Hasdai D et al. N Engl J Med 1997;336:755-761; van Domburg RT et al. J Am Coll Cardiol 2000; 36:878-883; Bakhru A et al. PLoS Med 2005;2:e160; Eliasson B et al. Nicotine Tob Res 2001;3 :249-255; Hunter KA et al. Clin Sci 2001;100 :459-465; Wannamethee SG et al. JAMA 1995;274:155-160.

Methods of combating smoking

Do smokers want to quit smoking?



On average, every smoker makes **5-7 attempts** to quit smoking.

Electronic cigarettes as a way to quit smoking

- Electronic cigarettes mimic the motor automatism of smoking and deliver nicotine without burning tobacco ¹
- Their use is controversial ¹
- The evidence confirming their effectiveness for smoking cessation is insufficient ¹
- Not recommended according to the current recommendations of the Ministry of Health of the Russian Federation ²



1. McRobbie H, et al. Cochrane Database Syst Rev 2014;5:CD010216.

2. Tobacco addiction syndrome, tobacco withdrawal syndrome in adults. Clinical recommendations KR601 - 2018. 3. Caponnetto P, et al. PLoS One 2013;8:e66317

E-cigarettes

- The Ministry of Health considers it necessary to adopt a law equating electronic means of nicotine delivery and hookahs to ordinary cigarettes, that is, to extend to vapes and electronic tobacco heating systems a ban on the use in public places, advertising and sale of devices to minors.
- According to research by Australian scientists, the smoke of conventional cigarettes and the steam of tobacco heating systems are toxic to the cells of the bronchi and lungs.
- The Ministry of Health of Russia emphasizes that at the moment there is no reliable data that electronic cigarettes or heating systems are less harmful to health. In addition, their use may be associated with additional risks.

In particular, this year a group of English researchers from Harvard University found traces of bacteria and fungi in vaping liquids that can lead to respiratory diseases.

Chuchalin A.G., Brut E.A., Sakharova G.M., Kutushev A.T., Antonov N.S., Salagai O.O., Lykov V.I.

Tobacco addiction syndrome, tobacco withdrawal syndrome in adults.

Clinical recommendations.



HHS Public Access
Author manuscript
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Tobacco use disorder among patients with smoking-related chronic medical disease: Association with co-morbid substance use disorders

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Abstract

INTRODUCTION—Very little is known of the behavioral vulnerabilities of patients diagnosed with smoking-related chronic medical illness who continue to smoke, potentially worsening morbidity and mortality risks. This study explores the association of tobacco use disorder (TUD) among those with smoking-related chronic medical illnesses with other substance use disorders (SUD) and risk factors.

METHODS—Among veterans with smoking-related chronic medical illnesses identified from the National Veterans Health Administration (VHA) administrative records from Fiscal Year 2012, we compared the characteristics of those with a diagnosis of TUD (ICD 9 code 305.xx; n=519,918), and those without such a diagnosis (n=2,691,840). Using multiple logistic regression, we further explored the independent association of factors associated with TUD.

RESULTS—SUD prevalence was markedly higher among those with TUD (24.9% Vs 5.44%), including alcohol use disorder (AUD: 20.4% Vs. 4.3%) and drug use disorder (DUD: 13.5% Vs. 2.6%) compared to non-smokers. On multiple logistic regression analyses, AUD (OR = 2.94, 95% CI 2.90–2.97) and DUD (OR=1.97, 95% CI 1.94–1.99) were independently associated with current TUD diagnosis. Having any single SUD was associated with considerably high odds of having TUD (OR 3.32; 95% CI 3.29–2.36), and having multiple SUDs with even further increased risk (OR 4.09, 95% CI 4.02–4.16).

CONCLUSIONS—A substantial proportion of people with tobacco use disorder diagnosis despite concurrent smoking-related medical illnesses are also likely to have other comorbid

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CONFLICT OF INTEREST

The authors have no financial or other conflicts of interests to report.

Contributors: Ajay Manhapra and Robert Rosenheck developed the research idea, supervised the data analysis and interpreted the results. Ajay Manhapra prepared the manuscript and revisions. Robert Rosenheck provided critical revisions to the manuscript and gave final approval.



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Cigarette Smoking and Depression Comorbidity: Systematic Review & Proposed Theoretical Model

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Abstract

Background and Aims—Despite decades of research on co-occurring smoking and depression, cessation rates remain consistently lower for depressed smokers than for smokers in the general population, highlighting the need for theory-driven models of smoking and depression. This paper provides a systematic review with a particular focus on psychological states that disproportionately motivate smoking in depression, and frame an incentive learning theory account of smoking-depression co-occurrence.

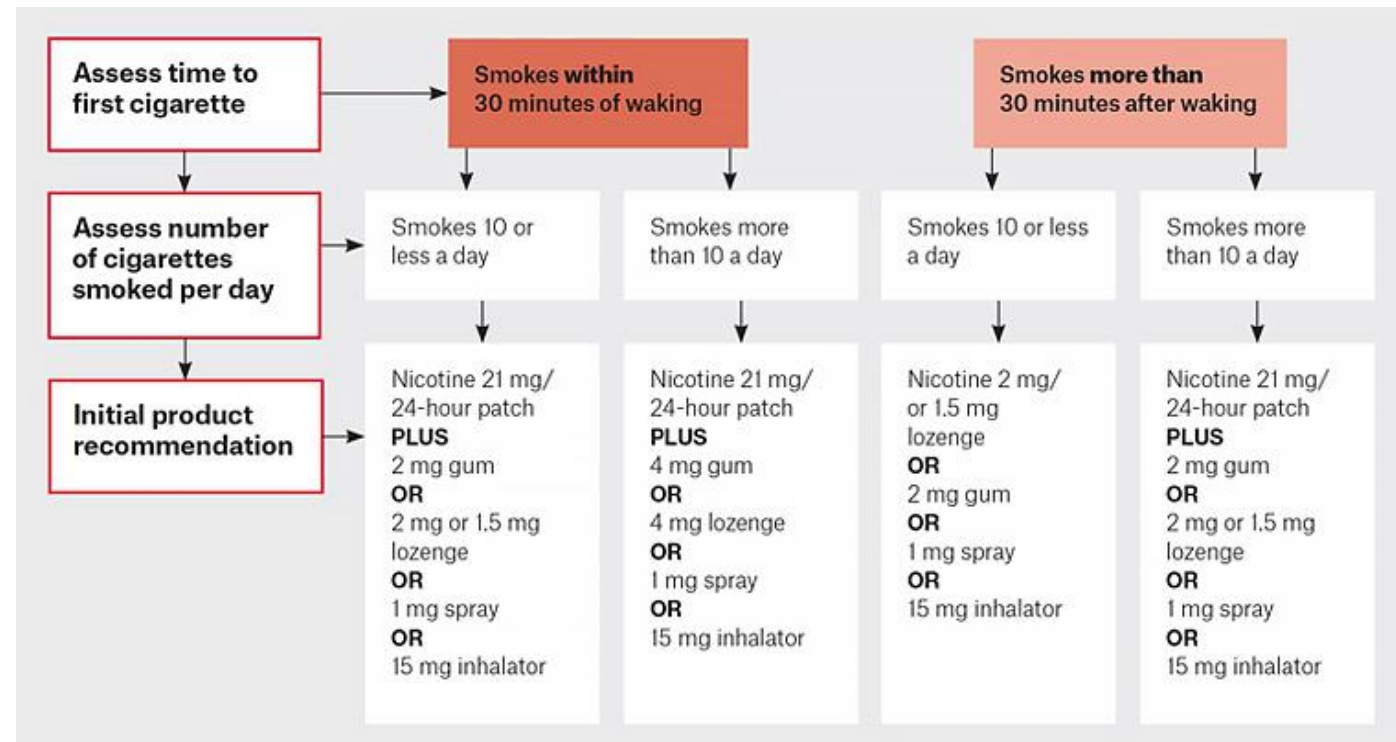
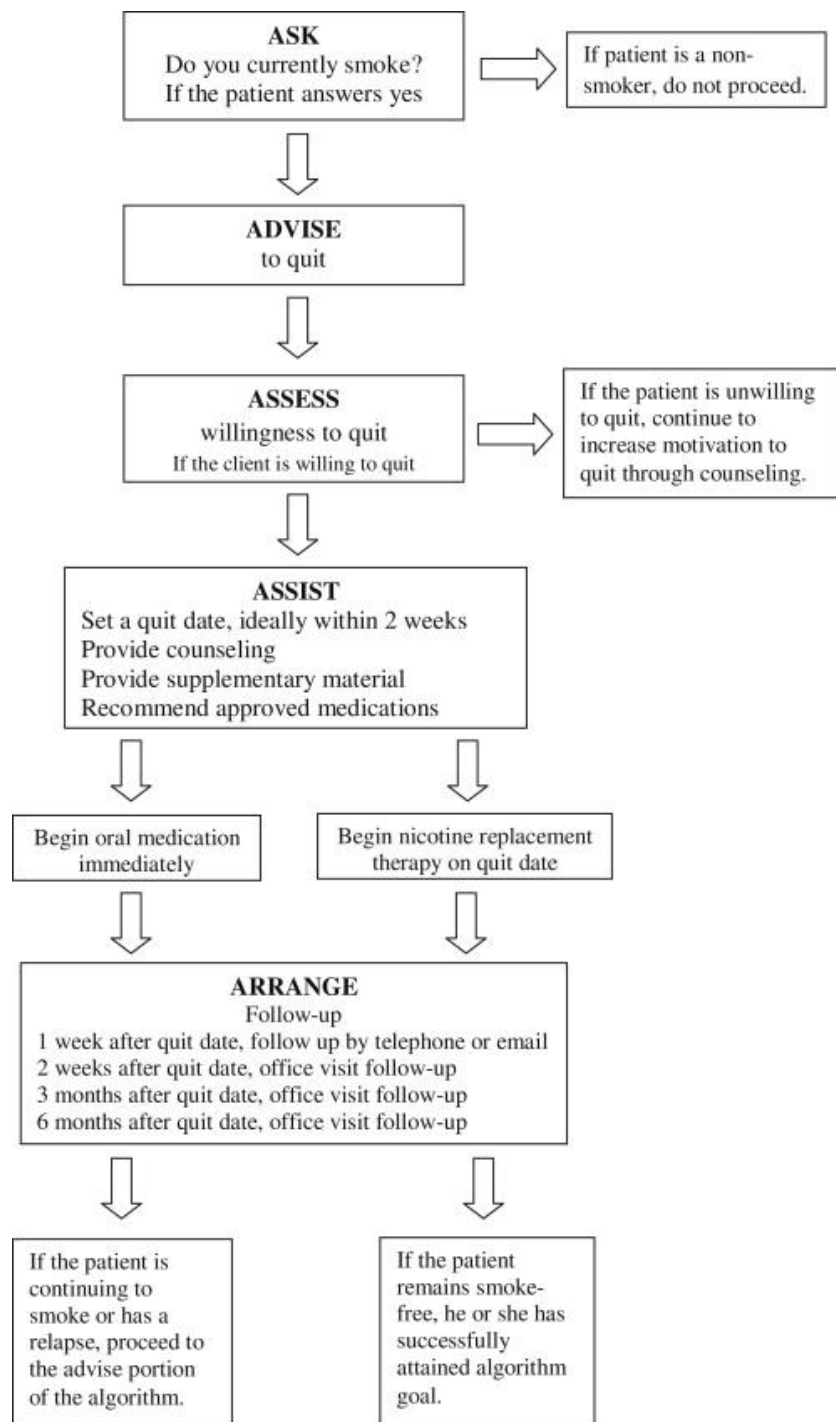
Methods—We searched PubMed, Scopus, PsychINFO, and CINAHL through December 2014, which yielded 852 articles. Using pre-established eligibility criteria, we identified papers focused on clinical issues and motivational mechanisms underlying smoking in established, adult smokers (i.e., maintenance, quit attempts, and cessation/relapse) with elevated symptoms of depression. Two reviewers independently determined whether articles met review criteria. We included 297 articles in qualitative synthesis.

Results—Our review identified three primary mechanisms that underlie persistent smoking among depressed smokers: low positive affect, high negative affect, and cognitive impairment. We propose a novel application of incentive learning theory which posits that depressed smokers experience greater increases in the expected value of smoking in the face of these three motivational states, which promotes goal-directed choice of smoking behavior over alternative actions.

Conclusions—The incentive learning theory accounts for current evidence on how depression primes smoking behavior and provides a unique framework for conceptualizing psychological

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Declaration of Interests: Dr. Hitsman receives medication and placebo free of charge from Pfizer and has served on a scientific advisory board for Pfizer.



Motivation

Smoking Cessation Flash Card for a Motivational-Based Intervention			
Ask: "Do you smoke?" "Yes"			
Ask: "Do you want to quit?"			
"Yes" (Motivated)		"No" (Not motivated)	
Ask: "What do you think of quitting smoking in the next month?"		Ask: "What do you know about the benefits of quitting smoking?"	
"I am ready to quit."	"I am not ready to quit." (i.e., "not right now.")	Provide: "Because of the benefits you mentioned [and/or others], I strongly urge you to stop smoking as soon as possible. What do you think of this?" Act: Answer patient's questions and give information brochure if he/she accepts	
Act: 1.Offer appropriate pharmacotherapy 2.Refer to community smoking cessation program	Act: 1.Offer "Reduce-to-Quit" strategy 2.Refer to community smoking cessation program for further motivational counseling		

Smoking Cessation: the 5 A's & 5 R's

5 A's to Help Patients Quit

Ask

About use, history & smoking habits

Advice

Discuss health risks & encourage to quit

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Assess

Willingness to quit

Assist

With quit attempt & help create an action plan

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Arrange

Follow-up care

5 R's to Increase Motivation to Quit

Relevance

Why quitting is personally relevant

Risks RxKeySlides

Negative consequences of smoking

Rewards

Benefits of smoking cessation

Roadblocks

Identify barriers to quitting

Repetition

Repeat every time during patient visit

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HOW TO QUIT TOBACCO



1 EDUCATE YOURSELF

The first step to quitting smoking, vaping and using tobacco is to understand the risks and health effects for you and your family.

- ➔ Smoking is the most preventable cause of death in the U.S. It's linked to about one third of all deaths from heart disease and 90% of lung cancers.
- ➔ Cigarettes, e-cigarettes and tobacco products contain many toxic chemicals, as do their smoke, vapor and liquids.
- ➔ About half of U.S. children ages 3-11 are exposed to secondhand smoke and vapor.
- ➔ Tobacco use and nicotine addiction is a growing crisis for teens and young adults.
- ➔ You can be one of the millions of people who successfully quit every year.
- ➔ Within 1 year after quitting, your risk of heart disease goes down by half.



2 MAKE A PLAN TO QUIT

You're more likely to quit tobacco for good if you prepare by creating a plan that fits your lifestyle.

- SET** a quit date within the next 7 days.
- CHOOSE** a method: cold turkey or gradually.
- DECIDE** if you need help from a health care provider, nicotine replacement or medicine.
- PREPARE** for your quit day by planning how to deal with cravings and urges.
- QUIT** on your quit day.

LEARN MORE AT HEART.ORG/MYLIFECHECK AND HEART.ORG/TOBACCO

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3 TIPS FOR SUCCESS



DEAL WITH URGES

Whether physical or mental, learn your triggers and make a plan to address them. Avoid situations that make you want to smoke or use tobacco until you're confident that you can handle them.



GET ACTIVE

Physical activity can help you manage the stress and cravings when quitting. You'll feel better, too. heart.org/MoveMore



HANDLE STRESS

Learn other healthy ways to manage the stress of quitting. heart.org/BeWell



GET SUPPORT

A buddy system or support program can help you with some of the common struggles of quitting. 1-800-QuitNow



STICK WITH IT

Quitting tobacco takes a lot of willpower. Reward yourself when you reach milestones and forgive yourself if you take a step backward. Get back on course as soon as possible to stay on track and kick the habit for good.

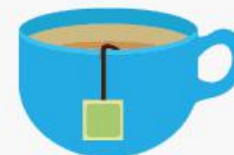
10 WAYS TO QUIT SMOKING FOR GOOD

A new study, reported on by the American Heart Association, found that the popular drug Chantix helps smokers quit in the short term, but not necessarily in the long term. Since its 2006 debut, Chantix hasn't significantly changed the rate of Americans who successfully quit smoking. Drugs or not, you should still keep trying.

Here are 10 activities you can do instead of reaching for a cigarette.



LOOK AT PICTURES
AND VIDEOS OF CUTE ANIMALS



MAKE A CUP
OF HOT TEA



WRITE A THANK YOU NOTE



TAKE A WALK
AROUND THE BLOCK



GRAB SOME FRUITS
AND VEGGIES



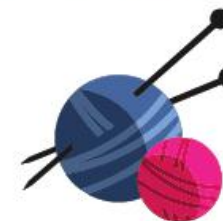
CALL A FRIEND OR LOVED ONE
FOR SUPPORT



STAND UP
AND HAVE A NICE STRETCH



ORGANIZE YOUR PHONE
BY DELETING UNNECESSARY ITEMS

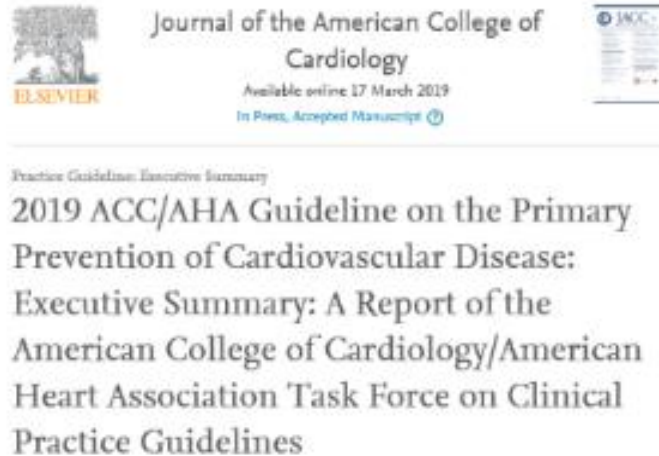


KEEP YOUR HANDS BUSY
WITH A HOBBY LIKE KNITTING



CHEW A PIECE
OF GUM

American College of Cardiology/American Heart Association Guidelines for primary prevention of cardiovascular diseases 2019



Smokers are much more likely to quit smoking after 6 months when clinicians give strict recommendations than when clinicians do not give such advice or do not carry out standard actions.

- The benefits of approved pharmacotherapy* and behavioral interventions (even just three minutes of practical advice), individually or in combination, are significant
- Electronic nicotine delivery systems (ENDS) are not recommended as a method of tobacco smoking treatment.

The approaches of pharmacotherapy of tobacco addiction

- It is recommended to prescribe a combination of behavioral and pharmacological therapy for the treatment of nicotine addiction
Level of credibility of recommendations A
(level of reliability of evidence - 1a)
- It is recommended to use pharmacological therapy for patients with a degree of nicotine dependence of more than 6 points on the Fagerstrom test
Level of credibility of recommendations A
(level of reliability of evidence - 1a)
- It is recommended to use a complete nicotine receptor agonist for NCT
Level of credibility of recommendations A
(level of reliability of evidence - 1a)
- It is recommended to use partial nicotine receptor agonists, which are drugs that do not contain nicotine
Level of credibility of recommendations A
(level of reliability of evidence - 1a)

Thank you for attention



NICOTINE ADDICTION

COMPARING WHAT THE TOBACCO INDUSTRY SAYS TO WHAT SCIENTISTS SAY

The Tobacco Industry compares Nicotine Addiction to:

Nicotine is actually **MORE** addictive than:

	
Chocolate	Heroin
Love	Cocaine
Coffee	Morphine
Tea	Barbiturates
Soda	Alcohol
Internet	Caffeine
Shopping	Marijuana

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