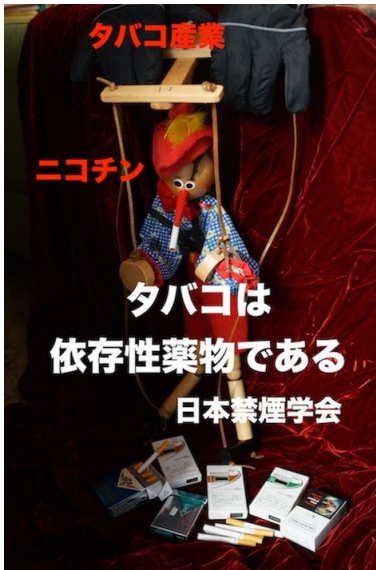




Japan Society for Tobacco Control

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Tobacco is a drug

It creates a greater dependence than cocaine, heroin, alcohol, and other stimulants

It has the largest health risk by killing of tens of thousands of people every year

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Tobacco is one of the biggest causes of shortening and sickening the lives of Japanese people. More than 120,000 deaths from active smoking were estimated in 2007; 6800 deaths from passive smoking were estimated in 2010, and 15000 deaths from passive smoking were estimated in 2016. Since past smoking behavior continues to affect current health, the total number of deaths from tobacco is estimated to have currently risen to 150,000 people.

27 February 2012 Tobacco Alcohol Personnel Seminar, Ministry of Health, Labor and Welfare, Health Department, General Affairs Division, Lifestyle Disease Countermeasure Office

The two main factors of death from noninfectious diseases and injuries for adults are smoking and hypertension

(Source) THE LANCET Japan Special Issue (September 2011).

Note: Japan has maintained national health insurance for 50 years.

Why are Japanese citizens healthy? (Welfare Science Research: comprehensive empirical research on the health care system of Japan, published by Kenji Shibuya)

	Annual deaths due to active smoking	Annual deaths due to passive smoking	Source
World	5.4 million people	600,000 people	WHO, Report on the Global Tobacco Epidemic, 2011 edition
Japan	120,000–130,000 people ※1–3 About 10% of the annual death toll of 1.9 million people (H22)	6,800 people ※4 Only lung cancer and ischemic heart disease are recorded	※ 1. Katanoda K, et al., 2008 ※ 2. Murakami Y, et al., 2011 ※ 3. Ikeda N, et al., 2011 ※ 4 Kato Noda et al., 2010

Comparison of deaths (Japan)		
Cause of death	Number of annual deaths	Survey period
Passive smoking	15000	conservative estimate, 2016
Traffic accidents	3904	2016
Asbestos pollution	1505	from mesothelioma, 2015
Work-related accidents	972	2016
Murder	314	2015
Food poisoning	6	2015
Sources: Work-related accident deaths: http://www.mhlw.go.jp/stf/houdou/0000124353.html Murder: http://www.mhlw.go.jp/toukei/saikin/hw/jinkou/kakutei15/dl/11_h7.pdf Food poisoning deaths: http://www.mhlw.go.jp/stf/seisakunitsuite/bunya/kenkou_iryuu/shokuhin/syokuchu/04.html Asbestos deaths: http://www.mhlw.go.jp/toukei/saikin/hw/jinkou/tokusyuu/chuuhisyyu15/dl/chuuhisyyu.pdf Traffic accident deaths: http://www.jtsa.or.jp/topics/T-274.html		

To substantially reduce the number of victims from tobacco, it is necessary to overcome nicotine addiction and to stop smoking.

Those who think that “narcotics” and “stimulants” create a stronger dependence than tobacco are not always correct because much research has shown that tobacco is a “drug” that creates a stronger dependence alcohol and many stimulants, although heroin and cocaine are still more addictive.

For example, in a paper published in the Medical Journal Lancet in 2007, tobacco (nicotine) was the third strongest dependent drug after heroin and cocaine, according to the calculation of 20 dependency scores of legal and illegal drugs. Alcohol was ranked the 6th most dependent drug, amphetamine (a stimulant) was ranked 8th. Thus, tobacco creates less dependence than only heroin and cocaine, and creates more dependence than alcohol, other stimulants and many other drugs.

Drug name	Dependency score	Comments
Heroin	3.00	
Cocaine	2.39	
Tobacco	2.21	

Street methadone	2.08	Synthetic narcotics
Barbiturates	2.01	Sleep medication
Alcohol	1.93	
Benzodiazepines	1.83	Sleep medication
Amphetamine	1.67	Synthetic stimulant (Hilopon and similar types)
Buprenorphine	1.64	Sedative opioid from morphine (Repetane)
Ketamine	1.54	Designated as a "drug" based on the Narcotic and Psychotropic Control Law (Japan)
Cannabis	1.51	
4-MTA	1.30	α -methyl 4-methyl oophenethylamine, designer drug
Methylphenidate	1.25	ADHD therapeutic medication (Ritalin)
LSD	1.23	Psychedelic experience
GHB	1.19	Hydroxybutyric acid, designer drug
Ecstasy	1.13	Synthetic drug MDMA
Khat	1.04	A common plant grown in the mountains of Africa. Used as a stimulant.
Solvents	1.01	Paint thinner, Organic solvent
Anabolic steroids	0.88	For muscle strengthening
Alkyl nitrites	0.87	"Rush" stimulant
[Source] Nutt D, et al. Development of a rational scale to assess the harm of drugs of potential misuse. Lancet 369:1047-53,2007. (Revised based on Table 3 in the paper with added commentary)		

Based on such scientific research, domestic and foreign administrative agencies have stated that "tobacco is a drug".

US Public Health Secretary

Addiction exists from tobacco products such as cigarettes

Nicotine is a dependence-forming drug contained in leaf tobacco

The pharmacological / behavioral process for tobacco addiction resembles addiction to heroin and cocaine

[Source] 1988 Report of the Public Health Secretary "Nicotine Addiction"

World Health Organization

Nicotine is a potent drug that meets the diagnostic criteria for an addiction-forming drug characterized by dependence and withdrawal symptoms. Nicotine has a similar addiction-forming effect to heroin and cocaine.

【Source】 2010 Gender, women, and the tobacco epidemic

http://www.who.int/tobacco/publications/gender/en_tfi_gender_women_addiction_nicotine.pdf

Diagnostic and statistical manual of mental illness, 4th edition (DSM – IV – TR)

In DSM-IV, nicotine dependence is described under the category of “substance use disorder”, together with narcotics, stimulants, alcohol et cetera.

Substance use disorder
Alcohol related disorder
Amphetamine related disorders
Caffeine related disorder
Cannabis related disorders
Cocaine related disorder
Hallucinogen related disorders
Inhalant related disorders
Nicotine related disorders
Nicotine use disorder

- Nicotine dependence

Nicotine-induced disorders

- Nicotine withdrawal

Opium related disorders
Phencyclidine related disorders
Sedatives, hypnotics, or anxiolytics-related disorders

[Source] <http://rnavi.ndl.go.jp/mokuji.html/000004326569.html>

Ministry of Health, Labor and Welfare

About dependency

Dependence refers to a condition in which strong craving exists such that even though one thinks of stopping an activity, it is not stopped. Dependence from nicotine, a component of tobacco, is described in the “Diagnostic and Statistical Manual 4th Edition of Mentally Disabled Persons” (DSM – IV), which is used in the International Classification of Diseases (ICD – 10) in the field of psychiatry. It is treated as a separate disease, and dependence on tobacco has been established by scientific tests.

【Source】 Ministry of Health, Labor and Welfare, Understanding smoking and health problems (Q & A)

<http://www.mhlw.go.jp/topics/tobacco/qa/detail4.html>

Ministry of Health, Labor and Welfare

The basis of habitual smoking is nicotine addiction

- Concerning the dependence of nicotine, we have discussed the existence of physical dependence.
- In a report published in 1988, the Commissioner of the US Public Health Service reviewed previous studies and concluded that the nicotine that is contained in tobacco creates dependence similar to narcotics and alcohol.

- Thus, the basis for habitual smoking is nicotine addiction.
- Nicotine addiction has been recognized internationally, particularly in the WHO International Disease Classification 10th edition (ICD – 10) and the American Psychiatric Association 'Guide to Classification and Diagnosis of Mental Disorders, 4th Edition' (DSM-IV), where diagnostic criteria are indicated.
- That is, tobacco smoking is classified as a disease with drug addiction as the object of treatment, and health care providers need to treat it.

【Source】 Ministry of Health, Labor and Welfare, Text support for smoking cessation

<http://www.mhlw.go.jp/topics/tobacco/kin-en-sien/manual/01-3-1.html>

Japan Medical Association
Smoking cessation medicine

Nicotine is about as addictive as illegal drugs

The ease of nicotine addiction is caused by the rapid absorption of nicotine by the lungs as soon as tobacco smoke is inhaled. Since nicotine affects neurons about 7 seconds after smoke is inhaled, the brain quickly realizes that smoking eliminates irritation and feels good, thereby creating nicotine dependence. However, as effect of nicotine soon dissipates, irritability and stress arise as withdrawal symptoms, and the brain feels that “nicotine will be cut off” as abstinence continues. It is said that getting out of nicotine addiction is about as difficult as quitting heroin and cocaine.

Nicotine creates as much dependence as drugs
like such as heroin and cocaine!

- Percentage of users that are addicted
nicotine> heroin> cocaine> alcohol> caffeine
- Strength of withdrawal symptoms for addicted people
alcohol> heroin> nicotine> cocaine> caffeine
- Degree of difficulty to quit for addicted people

【cocaine = heroin = alcohol = nicotine】 > caffeine

From Royal College of Physicians: Nicotine Addiction in Britain: A Report of the Tobacco Advisory Group of the Royal College of Physicians.

[Source] <https://www.med.or.jp/forest/kinen/medical/>

Cabinet Office

(1) The meaning of drug dependence

With repeated use, “the condition in which the drug can not be easily stopped even as one tries to stop,” is called drug dependence. Drug dependence is classified into two types, psychological

dependence and physical dependence. The basis of drug dependency commonly starts with psychological dependence and progresses to physical dependence. Upon ingesting one of various addictive drugs, the dopamine (A10) intracranial neural system is activated, thereby creating strong feelings of intoxication and euphoria, possibly leading to psychological dependence. Repeated ingestion can cause readjustments or rewiring of intracranial neural systems, leading to physical dependence. As the effect of the drug dissipates, physical neural readjustments cause an intense desire to replenish the drug in the brain, commonly called "craving", making very difficult to stop using the drug. Persistent behavior to reacquire the drug despite its costs is commonly called "drug seeking behavior", and cases where tobacco smokers can not quit tobacco despite its costs are a common examples. (underlined for emphasis)

【Source】 Youth adviser training program, Section 2, Problems that young people have (for understanding young people with complex needs), Section 3 Dependence on drugs (narcotics, stimulants, psychotropic drugs, alcohol, et cetera)

http://www8.cao.go.jp/youth/kenkyu/h19-2/html/3_2_3.html

Conclusion

1. Tobacco (nicotine) possesses a high degree of dependence after cocaine and heroin
2. The dependency of tobacco exceeds alcohol and stimulants other than cocaine
3. Active smoking and passive smoking kill tens of thousands of people every year, making tobacco smoking the largest preventable causes of death in Japan
4. Perceiving tobacco smoking as drug dependence is required to end smoking and to extend healthy lives