



Respiratory diseases

Genital diseases

Cancers

Cerebrovascular diseases

Cardiac diseases

SMOKING HAZARDS



Learn more about the harmful effects of smoking



香港吸煙與健康委員會
HONG KONG COUNCIL ON SMOKING AND HEALTH

Hong Kong Council on Smoking and Health was first established in 1987. It is a statutory body vested with functions, as set out in the "Hong Kong Council on Smoking and Health Ordinance" (Cap. 389), to protect and improve the health of the community by:

- informing and educating the public on the harm of smoking and its adverse effects on health;
- conducting and coordinating research into the cause, prevention and cure of tobacco dependence;
- advising the Government, community health organizations or any public body on matters relating to smoking and health.

Since its establishment, COSH has been concerning about the tobacco control progress in Hong Kong and sparing no effort in Education and Publicity, Information and Research and Policy Advocacy to build a smoke-free Hong Kong.

Hong Kong & global smoking prevalence

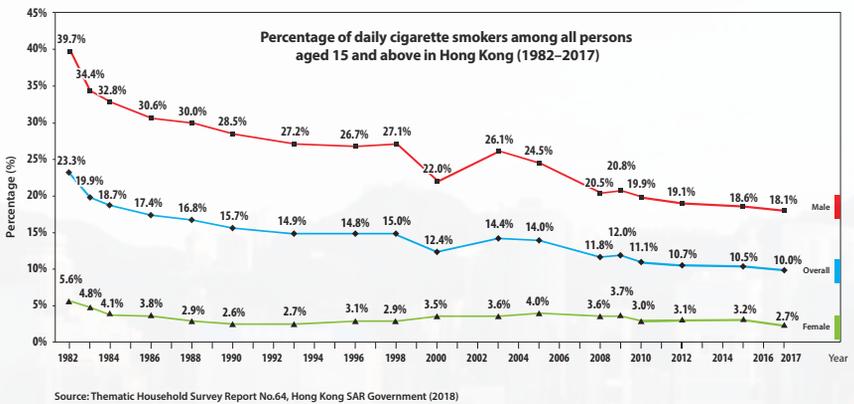


Smoking rate in
Hong Kong

10.0%

According to the figures from HKSAR Census and Statistics Department, the percentage of daily cigarette smokers aged 15 and above in Hong Kong in 2017 was 10.0% and averagely consumed 12.4 cigarettes each day¹, which was lower than the global figure of 20.7% announced by World Health Organization². However, there are around 6,800 people died of tobacco annually in Hong Kong and 672 of them are non-smokers. In addition, a number of medical researches show that one in every two smokers will die early from smoking³. Number of deaths caused by smoking and secondhand smoking are more than that caused by Malachite Green, Sudan dyes, Melamine, atypical pneumonia and radioactive contamination⁴.

WHO studies also pointed out that nearly 7 million people in the world died from tobacco-related diseases annually. If the situation persists, by 2030, the number of deaths will increase to more than 8 million a year. To the 22nd century, the number will even soar to 1 billion².



¹ HKSAR Census and Statistics Department. (2018). *Thematic Household Survey Report No. 59. Hong Kong: Hong Kong SAR Government.*

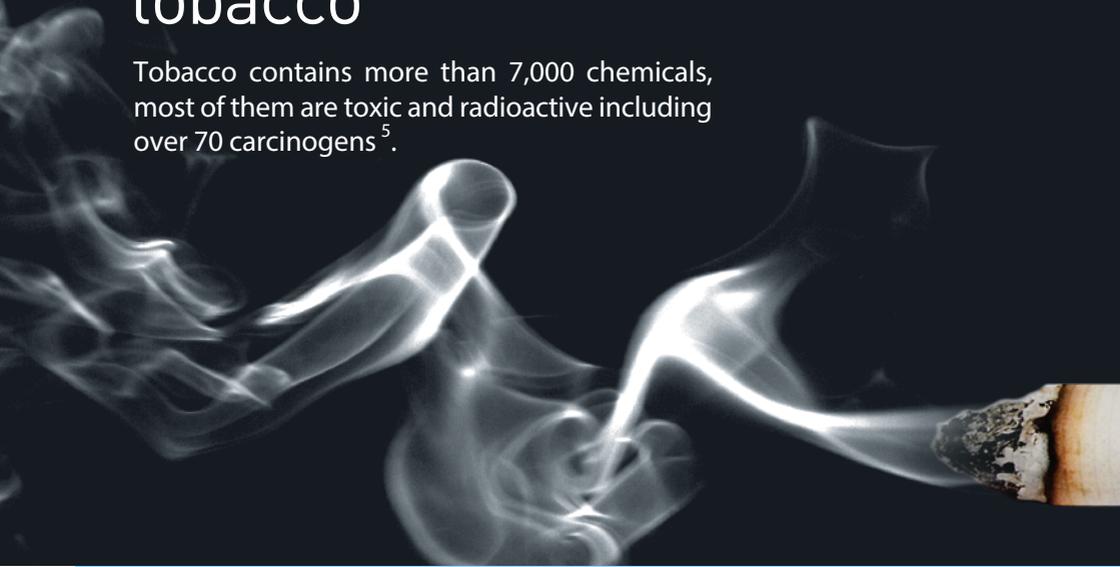
² WHO website: www.who.int/gho/tobacco/en/

³ Peto, R., Lopez, A. D. & Boreham, J. (1994). *Mortality from Smoking in Developed Countries, 1950–2000.* Oxford: Oxford University Press.

⁴ Jing Chen. PhD, Sarah McGhee. PhD, TH Lam. MD, PhD (2018). *Economic Costs Attributable to Smoking in Hong Kong in 2011: A Possible Increase From 1998.*

Composition of tobacco

Tobacco contains more than 7,000 chemicals, most of them are toxic and radioactive including over 70 carcinogens⁵.



Three Major Killers in Tobacco:

Tar

Brownish and sticky substance causes stains on teeth and nails. Tar will block and irritate airways and lungs and stick to lung bullae which reduces lung's elasticity. It causes cough, sputum and shortness of breath, damages the functions of lungs and leads to cancers of mouth, throat and lung.

Nicotine

Colourless and odorless liquid which enters the blood vessels and reaches the brain within 7 seconds. It is a strong stimulant which can be absorbed quickly via mouth, nose, mucous membrane of trachea and even skin. It stimulates the central nervous system and causes addiction. Persistent inhaling of nicotine will lead to increase in blood pressure and heart rate, weakening of intelligence and concentration, myocardial infarction and cerebral stroke.

Carbon Monoxide

An odorless gas which binds to hemoglobin in red blood cells, preventing affected cells from carrying a full load of oxygen. Carbon monoxide is commonly found in emission of vehicles. Inhaling this toxic gas will reduce the oxygen content in blood which hinders blood circulation and affects intelligence and memory.

⁵ U.S. Department of Health and Human Services. *A Report of the Surgeon General : How Tobacco Smoke Causes Disease : What It Means to You.* U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.

7,000

chemicals and over 70 of them
are carcinogens

Other harmful substances
in tobacco:

Cyanide	(poisonous gas)
Naphthalene	(moth balls)
Arsenic	(ant poison)
Ammonia	(floor cleaner)
Butane	(lighter fuel)
Methanol	(rocket fuel)
Cadmium	(car batteries)
Toluene	(industrial solvents)
Acetone	(paint stripper)
Vinyl Chloride	(plastics)



Radioactive element in tobacco:

Polonium-210

Polonium-210 (PO-210) is a radioactive chemical element which emits radioactive alpha particles. The presence of polonium in tobacco smoke has been known and the tobacco firms researched ways to remove the substance for years but failed. Research revealed that smoking a pack and a half of cigarettes per day exposed a person to the same radiation as 300 chest X-rays per year⁶.

Polonium-210 in tobacco is a result of the use of phosphate fertilizers for tobacco plants. It becomes completely volatile at the temperature of burning a cigarette. The alpha particles emitted will attach to the particles of tobacco smoke.

The PO-210 accumulated in lungs will destroy the cells of respiratory system causing lung cancers. Tobacco smoke contains other carcinogens. The hazards of smoking cannot be underestimated.

⁶ Monique E. Muggli, Jon O. Ebbert, Channing Robertson, and Richard D. Hurt. *Waking a Sleeping Giant: The Tobacco Industry's Response to the Polonium-210 Issue*. *American Journal of Public Health*: September 2008, Vol. 98, No. 9, pp. 1643–1650.

Diseases caused by smoking

Smoking is hazardous to health. Six of the world's eight leading causes of death are caused by tobacco use, which include heart diseases, cerebrovascular diseases, lower respiratory infections, chronic obstructive pulmonary diseases, tuberculosis and cancers of trachea, bronchus and lung.

Cancers

The principal carcinogenic substance in tobacco is tar. Smoking is responsible for many types of deadly cancers, including cancers of mouth and throat, lung cancer, oesophageal cancer, bladder and kidney cancer, pancreatic cancer, stomach cancer, liver cancer, cervical cancer and leukaemia.

Cardiac diseases

Nicotine in tobacco affects the nervous system, increases the heart rate and narrows the blood vessels which can elevate blood pressure. The carbon monoxide in cigarettes depletes the oxygen carrying capacity of a smoker's blood. The heart has to pump harder to get enough oxygen to the rest of the body. Smoking also raises the cholesterol and fibrinogen levels in blood and increases the risk of myocardial infarction and heart attack caused by blood clotting. Other cardiac diseases related to smoking include coronary heart disease, aneurysm, peripheral vascular disease, stroke and etc.

Respiratory diseases

Smoking causes the accumulation of harmful substances inside the bronchial tubes. The obstruction of small airways in the lung will lead to rupture of the air sacs, causing emphysema. Another common smoking related disease is chronic bronchitis, which has similar symptoms as emphysema.

Genital diseases

Cigarette smoking can affect fertility, sexual function and the health of pregnant women, fetuses and young children.

- Reduce fertility. Difficult for a woman to become pregnant.
- Reduce the amount of sperms and increase the rate of abnormal sperms.
- Lower hormone secretion, retard the response of genital organs and increase the risk of impotence.
- Lower the oxygen contents in the mother's blood which in turn reduce the blood oxygen contents of placenta, affecting the growth of fetus.





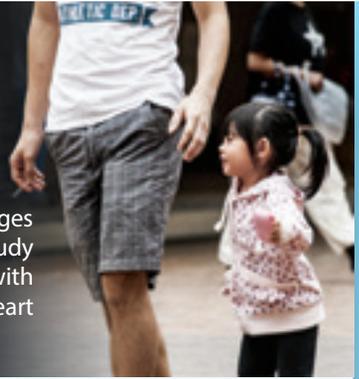
- Have more complications of pregnancy and labour which include bleeding during pregnancy, premature detachments of the placenta, premature rupture of the membranes and inadequate milk production.
- Babies born to women who smoke are on average lighter than babies born to comparable non-smoking mothers. Low birth weight is associated with higher risks of death and diseases in infancy and early childhood. Infants of mothers who smoke are more likely to suffer from asthma, infantile colic and cleft palate, as well as retard in physical growth and intellectual development.
- The rate of spontaneous abortion (miscarriage) is substantially higher in women who smoke by tenfold.
- Infants of parents who smoke are twice as likely to suffer from serious respiratory infection than the children of non-smokers.
- The natural menopause occurs up to two to three years earlier in smokers.

Other health problems

- Cause damage to the macula of the retina. Tiny blood vessels can burst through the macula, leading to irreversible damage.
- Decrease oxygen supply to body and skin. Accelerate aging.
- Rob the skin of collagen which keeps the skin elastic.
- Get more and deeper wrinkles all over their faces as nicotine constricts the tiny capillaries that nourish the skin.
- Lead to premature thinning and graying of hair. Men who smoke are twice as likely to become bald as men who do not smoke, and premature graying is 3 to 6 times more common in smokers.
- Smoking delays the healing of fractures, and in some smokers bone healing is indefinitely delayed.
- Women with a smoking history have significantly lower bone density and are much more likely to suffer from fractures. Furthermore, their earlier menopause increases the risk of osteoporosis.

Secondhand & Third-hand smoke

Tobacco is not only harmful to smokers, but also damages the health of others who expose to the smoke. A study indicates that people who live in the environment with secondhand smoke will have higher risk of having heart disease by 25%⁷.



Secondhand Smoke (SHS) or Environmental Tobacco Smoke (ETS) refers to the emission from a lit cigarette, pipe or cigar (sidestream smoke) and the exhaled smoke (mainstream smoke). The composition of SHS is basically equal to that of first-hand smoke. SHS has already been classified as Group A carcinogen by the Environmental Protection Agency (EPA) of America, which contains more than 4,000 types of poisonous gases and particles⁸. People who live in the environment filled with secondhand smoke will have higher risk of lung cancer, coronary heart diseases, respiratory diseases, asthma and etc.

Third-hand Smoke is the chemical residual of tobacco smoke contamination that clings to walls, clothing, hair, skin and other materials after the cigarette is extinguished. The toxins can persist for weeks and even for months. Ventilating a room by using fans or opening windows is not sufficient to rid the third-hand smoke.

Infants and children are at the highest risk to expose to the third-hand smoke. As they crawl and play around, they tend to touch and sometimes swallow those dangerous particles, leading to respiratory problems, cognitive deficits and reading deficits.

Social costs of tobacco

- A study about the consequences of smoking and passive smoking conducted by The University of Hong Kong revealed that about 6,800 deaths are attributable to smoking and passive smoking, which cost Hong Kong HK\$5.58 billion each year, including the loss of productivity of premature death (HK\$2 billion), health care costs (HK\$2.64 billion) and nursing costs (HK\$940 million)⁹.
- Tobacco is also responsible for many cases of fire and explosion in the world which cause casualties. The tobacco smoke and butts damage the environment, worsen air and water pollution.

⁷ Law MR., Morris, J.K., & Wald, N.J. (1997). *Environmental tobacco smoke exposure and ischaemic heart disease: an evaluation of the evidence*. *BMJ* 315 (7114) : 976–980.

⁸ Crofton, J., & Simpson, D. (2002). *Tobacco: A Global Threat*. Oxford, Macmillan.

⁹ Jing Chen. PhD, Sarah McGhee. PhD, TH Lam. MD, PhD (2018). *Economic Costs Attributable to Smoking in Hong Kong in 2011: A Possible Increase From 1998*.

Myths of smoking

? Secondhand smoke is more hazardous than first-hand smoke. Is it safer to smoke actively than passively?

A: Smoking causes lung cancer, respiratory diseases, heart diseases and other deadly diseases. Smokers inhale 70% of the tobacco smoke, as well as the secondhand smoke, which is hazardous. Tobacco is addictive. Active smoking is not safer than passive smoking.

? Are the cigarettes with mint/fruit flavour or thin packaging less harmful?

A: It is self-deceived. In fact, as the taste of flavoured cigarettes is more acceptable, people smoke more deeply and the harmful substances will linger in the lungs longer. It is just a promotional strategy of the tobacco industry to create different flavours and packages of cigarette to lure people to smoke and conceal the harmful effects of cigarettes. There are no “safe” cigarettes in the world.

? Can the harmful effects of smoking be eliminated if we clean our home frequently?

A: The tobacco smoke cannot be completely vanished by any ventilation system or filter. The toxic substances of third-hand smoke clung to walls and furniture cannot be totally removed by frequent cleaning. To create a clean and fresh living environment, quit smoking is an effective way out.

? Will people gain weight after quitting smoking?

A: The taste buds of smokers are damaged. After they quit smoking, the body functions start resuming normal and the senses of taste and smell will also be improved. It is not surprising that people will gain weight if they do not have a balanced diet after quitting smoking. You can be fit with a healthy diet and sufficient exercises.





Does smoking help relax? Will smokers feel uncomfortable when quit smoking?

A: Nicotine in tobacco creates illusion in smokers. In fact, it will raise the adrenaline level, increase heart rate, narrow blood vessels and elevate blood pressure, which will not make people at ease at all. When quitting smoking, people may experience some temporary “withdrawal symptoms” due to the sudden drop of nicotine level. The common symptoms include dizziness, headache, hot temper, distraction, insomnia, unstable emotion and good appetite. The symptoms varies among different people and are normally most obvious in the first 7 days of quitting and will fade gradually in a month.



Will people die immediately after quitting smoking?

A: Smoking has long-term harmful effects. Some long-term smokers are diagnosed with fatal diseases after quitting as the damages on their health are already irreversible. The myth of “people die immediately after quitting” is totally wrong. All studies prove that quitting smoking is good to health. The chances of getting severe diseases can be diminished if you quit earlier.



Is it necessary to use cessation aids to quit smoking?

A: Quitters may experience withdrawal symptoms during smoking cessation. Studies show that medications for quitting smoking can relieve the symptoms and raise the quit rate effectively. Cessation aids like Nicotine Gum and Nicotine Patch can facilitate smoking cessation but are not essential. Many smokers can quit successfully by their own will and other methods. Consultation of professional medical practitioners or smoking cessation counselors is necessary before using any cessation aids. After all, strong will and persistence is crucial for smoking cessation.



Smoking cessation information

Quitting smoking not only helps the quitters save money and develop a healthy image, it also improves the health of themselves and their family members. They will no longer be controlled by tobacco.

There are many ways to quit smoking. Having a strong will for smoking cessation, together with a healthy lifestyle, succeed is not far away.

Smoking Cessation Hotline
Department of Health

1833 183





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