

What one cigarette does.

Diseases such as lung cancer and heart disease tend to occur in people who have smoked for a number of years. However, there are immediate and obvious effects from smoking just one cigarette.

What one cigarette does

If a person has not smoked for twelve hours and then has a cigarette, the following things happen:

1. Carbon monoxide levels in the lungs increase.¹

This gas is quickly absorbed into the blood, reducing its capacity to carry oxygen.² The inhalation of carbon monoxide via passive smoking also has the same effect.³

The changes brought about by carbon monoxide mean that more effort must be made to achieve the same physical results as a non-smoker. In particular, the heart must work harder for the same effect, especially when doing rigorous exercise.¹

Studies have shown that the levels of carbon monoxide in the blood of a 20-cigarette-a-day smoker can impair vision, perception of time and coordination.¹

2. Nicotine from tobacco smoke reaches the brain and muscle tissue soon after being inhaled.⁴

When nicotine is present a number of changes occur:

The heart rate increases. This can be measured as an increase in pulse rate.

Nicotine also causes an increase in blood pressure and a slowing in circulation in the smaller blood vessels.⁴ This slowing in circulation, together with constriction of blood vessels, has the effect of lowering the skin temperature.

Nicotine can act both as a relaxant, relaxing skeletal muscles, and as a stimulant, increasing tension in other muscles. This can be illustrated by measuring hand tremors before and after a cigarette. Nicotine also increases stomach secretions and changes brain activity.⁴

3. Tobacco smoke also increases resistance in the airways leading to the lungs and reduces lung capacity.⁵



Call the Quitline 13 QUIT (13 7848)

The Quitline 13 QUIT (13 7848) is a confidential telephone based service primarily designed to help smokers quit smoking. The Quitline can also provide assistance to the family and friends of smokers and others requesting information about smoking. If you are not fluent in English an interpreter service is available.

By calling the Quitline (for the cost of a local call) you can:

- Be sent a free Quit Pack
- Get help to plan your quit attempt
- Take advantage of talking to specially trained Quitline advisers
- Take part in the free call-back and follow-up service

References

1. Hill D, Larcombe I, Refshauge J. Smoking and Impairment of Performance. *Med J Aust* 1978;2:60–63.
2. US Department of Health and Human Services. The Health Consequences of Smoking: Cardiovascular Disease. A report of the Surgeon General. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1983.
3. Glantz SA, Parmley WW. Passive smoking and heart disease epidemiology, physiology and biochemistry. *Circulation* 1991;83:1–12.
4. US Department of Health and Human Services. The Health Consequences of Smoking: Nicotine Addiction. A report of the Surgeon General. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1988.
5. US Department of Health and Human Services. The Health Consequences of Smoking: Chronic Obstructive Lung Disease. A report of the Surgeon General. Rockville, Maryland: US Department of Health and Human Services, Public Health Service, Office on Smoking and Health, 1985.