

“LIGHT” AND “LOW-TAR” CIGARETTES

Cigarette design and public perceptions

“Light” and “low-tar” cigarettes were deliberately designed by the tobacco industry to convince health-concerned smokers to *switch* cigarette brands rather than *quit*. There is no evidence that “light” and “low-tar” cigarettes are less risky than regular cigarettes.¹ However, internal tobacco industry documents spanning several decades demonstrate that the tobacco industry deliberately designed “light” and “low-tar” cigarettes to deceptively produce low yields of tar and nicotine when tested by smoking machines.² The industry heavily marketed these cigarettes as a healthier product than regular cigarettes. Internal documents also reveal that the industry knew the machine measurements drastically underestimated how much tar and nicotine smokers actually receive.²

Tar

The toxic material produced from burning a cigarette.

Nicotine

The substance in tobacco to which smokers becomes addicted.

The design and measurement of “light” and “low-tar” cigarettes²

- “Light” and “low-tar” cigarettes take their name from the fact that they deliver less tar and nicotine than regular cigarettes when measured by a standardized smoking machine test developed almost 40 years ago (known as the FTC method in the United States and the ISO elsewhere).
- The smoking machine test measures tar and nicotine yields of various cigarettes. In the test, the machine smokes every cigarette exactly the same way; it takes a 2-second, 35-milliliter puff every minute until the cigarette reaches a specified length.
- Tobacco companies made changes to cigarette design to reduce machine-measured tar and nicotine yield.
- One of the most common designs used by the tobacco industry is to increase ventilation holes in the filters to bring in air and dilute smoke. This dilution leads to artificially low measurements of tar and nicotine from machine testing.
- Other methods to decrease machine measured yields include decreasing the density of tobacco with reconstituted sheet tobacco, and producing cigarettes with a smaller circumference (e.g. slims).

The fraud: smokers get more tar and nicotine than machines²

- Cigarettes with such altered characteristics produce lower levels of tar and nicotine in machine tests than unaltered cigarettes.
- However, machine puffing is not consistent with human smoking behavior, and the smoking machine test has been shown to systematically underestimate human smoking behavior.
- Unlike machines, smokers crave a certain amount of nicotine and can change the way they smoke to get a relatively steady dose of nicotine from each cigarette.
- To get the nicotine they crave, smokers smoke cigarette brands defined as “light” and “low tar” more intensely than regular brands, taking more puffs and bigger puffs than the smoking machine. Smokers also cover “light” and “low-tar” cigarette ventilation holes with their fingers. These ventilation holes are designed so that they can be easily covered by a smoker’s lips or fingers.
- By compensating in these ways, smokers can take in nearly 2 to 3 times more tar and nicotine than smoking machines do. Even cigarettes with the lowest machine ratings can deliver high levels of tar and nicotine to smokers, a fact long known by the tobacco industry.
- The “light” and “low-tar” fraud has resulted in hundreds of billions of dollars in sales for the cigarette companies, and tragic results for smokers.

The Federal Trade Commission revoked the machine testing method³

- In 2008, the United States Federal Trade Commission (FTC) acknowledged that machine testing does not provide any meaningful measurements and revoked their machine testing method.
- The FTC found that the machine test currently used to measure tar and nicotine exposure (called the “Cambridge Filter Method” or “FTC method”) does not provide useful information to consumers and is likely to mislead consumers.
- Tobacco companies in the United States risk legal action by the FTC if they use the current tar and nicotine ratings in a way the FTC finds false or misleading.

“LIGHT” AND “LOW-TAR” CIGARETTES: Cigarette design and perceptions

Smokers are misled by “light” and “low-tar” claims

- Cigarette companies introduced “light” and “low-tar” cigarettes to reassure consumers and encourage health-concerned smokers to *switch* cigarette brands rather than *quit*.²
- Around the world, a large percentage of adult smokers are misled into believing that ‘light cigarettes are less harmful’ thereby deterring cessation.⁴
 - More than 60% of Chinese smokers believe that “light” or “low-tar” cigarettes are less harmful.⁵
 - In France, 76% of “light” or “ultra light” cigarette smokers believed they could “quit at any time.”⁶
- Available research, including a large study of U.S. smokers, shows that smokers who use “light” cigarettes to reduce health risks are actually less likely to quit smoking.²
 - A U.S. study found that smokers who switched to “light” cigarettes had 46% lower odds of quitting when compared to smokers who did not switch.⁷
 - A Canadian study showed that more than 25% of “light” and “mild” cigarette smokers reported using those brands to lower their smoking risks, and 40% considered smoking those brands a step in the direction of quitting.⁸
- Nearly three decades ago, Imperial Tobacco understood this phenomenon: “*We have evidence of virtually no quitting among smokers of these brands, and there are indications that the advent of ultra low tar cigarettes has actually retained some potential smokers in the cigarette market by offering them a viable alternative.*”⁹
- After reviewing tobacco industry advertisements and internal documents dating back to the 1950s, the U.S. National Cancer Institute concluded that advertising for these products may encourage non-smokers to start smoking and discourage smokers from quitting.²

“Lights” offer no health benefit

- In a cancer prevention study of nearly 1 million people in the U.S., the risk of lung cancer was no different among people who smoked medium-tar, low-tar or very low-tar cigarettes.¹⁰
- In a 40-year study of smokers in the United Kingdom, the risk of lung cancer *increased* by nearly 20% among older smokers, despite widespread use of “low-tar” cigarettes.¹¹
- Experts believe the use of health claims to market “lights” could *worsen* the burden of tobacco-related diseases, including lung cancer.¹¹

Key messages

- Tobacco companies have known for decades that “light” and “low-tar” cigarettes are *no safer* than regular cigarettes.
- The tobacco industry designed “light” and “low-tar” cigarettes to convince health-concerned smokers to *switch* cigarette brands rather than *quit*.
- The tobacco industry manipulated the design of cigarettes to produce lower levels of tar and nicotine when measured by machine tests than when smoked.
- The tobacco companies’ deceptive marketing practices resulted in many smokers mistakenly believing that “light” cigarettes have less tar and offer a way to reduce the risk of smoking.
- The use of false health claims to market “light” cigarettes encourage non-smokers to start smoking and discourage smokers from quitting.

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