e-Cigarettes

Electronic cigarettes, also known as e-cigarettes, are designed as a substitute for cigarette smoking.

Some believe e-cigarettes help smokers quit. Operated by a battery, they work by turning nicotine into a vapor that is inhaled. Most e-cigarettes look like ordinary cigarettes, cigars, or pipes. Others are designed to look like pens or computer memory sticks. Their use has been increasing as new products have entered the market. The US Food and Drug Administration, which currently regulates nicotine products, has announced that it will expand its regulations to include e-cigarettes.

Parts of an e-cigarette structure and substances that may be found in the vapor

Potential Benefits of e-Cigarettes

Tobacco is what makes regular cigarettes so harmful to health. e-Cigarettes do not contain tobacco.

- Tobacco products are addictive because of the nicotine they contain. Nicotine is not healthy. However, it probably does not contribute nearly as much to smoking-related diseases as tobacco does.
- Other types of "clean nicotine" have been used as a safe way to help people quit smoking for nearly 3 decades. Products include patches, lozenges, gum, oral inhaled products, and nasal spray.
- Although e-cigarettes may contribute nicotine vapor to the air, the vapor is much less toxic than secondhand tobacco smoke.

Concerns About e-Cigarettes

Much of the concern about e-cigarettes comes from a lack of information about the product. There is also a lack of standardization and quality control among the more than 250 brands.

- Manufacturers advertise e-cigarettes as a way to help people stop smoking. Some evidence suggests that using e-cigarettes can help people reduce their use of or quit smoking cigarettes. However, this evidence is not very solid. It comes from surveys or reports, not from scientific studies.
- With so many brands on the market, it is difficult to draw conclusions. There are a variety of nicotine solutions, cartridge sizes, heating elements and batteries, additives and flavorings, and potential toxic substances in the vapor. Health effects may vary according to all of these factors.
- Although e-cigarette vapor is likely to be much less toxic than cigarette smoke, the concentration of toxins and the quality control of e-cigarettes varies. It is not known if there is a "safe" level of toxins in the vapor.
- People may start using e-cigarettes simply because they are less harmful than tobacco cigarettes. This may be especially true for young people, who are the targets for e-cigarette marketing. They might start using e-cigarettes and then add or switch to tobacco cigarettes or other tobacco products, which have severe known health risks.
- e-Cigarettes look like real cigarettes. Therefore, their use might increase the social acceptability of smoking in general.

FOR MORE INFORMATION

- US Food and Drug Administration
  www.fda.gov/ForConsumers/ConsumerUpdates/ucm225210.htm

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Benowitz NL, Goniewicz ML. The regulatory challenge of electronic cigarettes. *JAMA*. 2013;310(7):685-686.

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