Electronic Cigarettes

Electronic cigarettes, also called *e-cigarettes*, are battery-operated devices that deliver nicotine without smoke. The nicotine is delivered to the lungs but without burning tobacco like a regular cigarette. Electronic cigarettes are made to look like traditional cigarettes or cigars or everyday items such as pens.

When a user puffs an e-cigarette, that puffing activates the battery-powered heating device. The heat then turns the liquid in the cartridge to a vapor, which is then inhaled. This leads to a common term to describe this type of smoking as *vaping*.

Most e-cigarettes are made of 3 parts:

1. A cartridge that holds a liquid solution, which includes nicotine, flavorings, and other chemicals.
2. A heating device (vaporizer).
3. A rechargeable battery.

There are more than 250 different e-cigarette brands on the market.

Companies that make e-cigarettes often say that these devices are safer compared with traditional cigarettes. However, it is difficult to know whether e-cigarettes are safer because there is not enough research or information. A research study in this month's *JAMA Pediatrics* found that adolescents who had smoked e-cigarettes were also more likely to have smoked regular cigarettes. This research study suggests that e-cigarette use does not discourage, and may even encourage, regular cigarette use.

Cigarette smoking is the leading preventable cause of sickness and death in the United States. Adolescence is a high-risk time for starting smoking and becoming addicted to nicotine; more than 80% of adult smokers began to smoke before age 18 years. Nicotine is a highly addictive drug that is in both traditional tobacco cigarettes and e-cigarettes. Although e-cigarettes do not contain the same chemicals as a traditional cigarette, testing of some e-cigarette products found the vapor to contain other toxic chemicals and carcinogens (cancer-causing agents).

Concerns have been raised that e-cigarettes typically include flavored nicotine, with flavors such as bubble gum and "Atomic Fire Ball" that are attractive to youth. The solutions are also highly dangerous to younger children if ingested because of the high concentration of nicotine. E-cigarettes are sold without age restrictions so they can be purchased by teenagers.

Parents should talk to their teens early and often about the risks of substance use including alcohol, drugs, and e-cigarettes. They should also ask their pediatrician for additional information about e-cigarettes and explain the links between e-cigarettes and traditional cigarettes to their teen so that he or she understands that e-cigarettes are not a safe alternative.

FOR MORE INFORMATION

National Institute on Drug Abuse:
http://www.drugabuse.gov/publications/drugfacts/electronic-cigarettes-e-cigarettes

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