

Questions and answers on electronic cigarettes or electronic nicotine delivery systems (ENDS)

Statement
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What are electronic cigarettes?

Electronic cigarettes or ENDS (electronic nicotine delivery systems) are devices whose function is to vaporize and deliver to the lungs of the user a chemical mixture typically composed of nicotine, propylene glycol and other chemicals, although some products claim to contain no nicotine. A number of ENDS are offered in flavours that can be particularly attractive to adolescents. Electronic cigarettes (e-cigs) are the most common prototype of ENDS.

Each device contains an electronic vaporization system, rechargeable batteries, electronic controls and cartridges of the liquid that is vaporized. The manufacturers report that the cartridges typically contain between 6 and 24 mg of nicotine, but sometimes can contain more than 100 mg. In the form of tobacco products, nicotine is an addictive chemical that in excessive amounts can be lethal (0.5-1.0 mg per kg of weight of the person).

Most ENDS are shaped to look like their conventional (tobacco) counterparts (e.g. cigarettes, cigars, cigarillos, pipes, hookahs or shishas). They are also sometimes made to look like everyday items such as pens and USB memory sticks, for people who wish to use the product without other people noticing.

Are electronic cigarettes (ENDS) safe?

The safety of ENDS has *not* been scientifically demonstrated.

The potential risks they pose for the health of users remain undetermined. Furthermore, scientific testing indicates that the products vary widely in the amount of nicotine and other chemicals they deliver and there is no way for consumers to find out what is actually delivered by the product they have purchased.

Most ENDS contain large concentrations of propylene glycol, which is a known irritant when inhaled. The testing of some of these products also suggests the presence of other toxic chemicals, aside from nicotine. In addition, use of these products -when they contain nicotine- can pose a risk for nicotine poisoning (i.e. if a child of 30 Kilos of weight swallows the contents of a nicotine cartridge of 24 mg this could cause acute nicotine poisoning that most likely would cause its death) and a risk for addiction to nonsmokers of tobacco products. Nicotine, either inhaled, ingested or in direct contact with the skin, can be particularly hazardous to the health and safety of certain

segments of the population, such as children, young people, pregnant women, nursing mothers, people with heart conditions and the elderly. ENDS and their nicotine cartridges and refill accessories must be kept out of the reach of young children at all times in view of the risk of choking or nicotine poisoning.

As ENDS do not generate the smoke that is associated with the combustion of tobacco, their use is commonly believed by consumers to be safer than smoking tobacco. This illusive 'safety' of ENDS can be enticing to consumers; however, the chemicals used in electronic cigarettes have not been fully disclosed, and there are no adequate data on their emissions.

Is use of electronic cigarettes (ENDS) an effective method for quitting tobacco smoking?

The efficacy of ENDS for helping people to quit smoking has not been scientifically demonstrated.

ENDS are often touted as tobacco replacements, smoking alternatives or smoking cessation aids. But we know that for smoking cessation products to be most effectively and safely used, they need to be used according to instructions developed for each product through scientific testing. There are no scientifically proven instructions for using ENDS as replacements or to quit smoking. The implied health benefits associated with these claims are unsubstantiated or may be based on inaccurate or misleading information. When ENDS are used as cessation aids, they are intended to deliver nicotine directly to the lungs. None of the approved, regulated cessation aids, such as nicotine patches and chewing-gum, delivers nicotine to the lungs. Therefore, the biological mechanism by which smoking cessation might be achieved by delivery of nicotine to the lungs and its effects are unknown. Delivery to the lung might be dangerous. Therefore, independently of the effects of nicotine, it is of global importance to study lung delivery scientifically.

The dose of delivered nicotine is also unknown. It is suspected that the delivered dose varies notably by product, which contain nicotine in various quantities and concentrations.

Conclusion:

Until such time as a given ENDS is deemed safe and effective and of acceptable quality by a competent national regulatory body, consumers should be strongly advised not to use any of these products, including electronic cigarettes.