

Electronic Cigarettes | Reduced Risk Alternative or New Health Concern?

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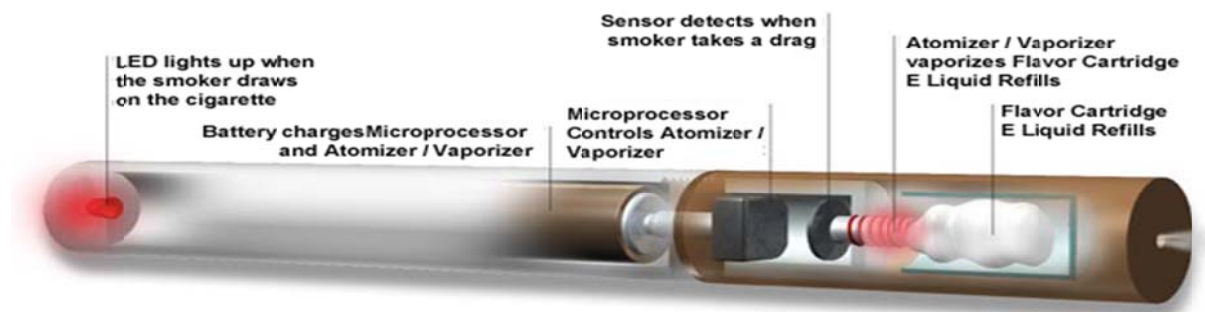
Where there's Smoke, There Doesn't Have to be Fire

Since 2007, the phenomenon of Electronic Cigarettes (e-cigarettes) has been steadily growing in popularity. These battery-operated, refillable devices are designed to deliver nicotine (or other substances) to users in the form of a vapor. Today, e-cigarettes are available in a variety of shapes (some even come disguised as pens), and they come in different flavors like chocolate and bubblegum. While some believe e-cigarettes to be a safer alternative to smoking, or a new method to quit smoking, others are questioning the safety of these devices and whether or not e-cigarettes should be exempt from worksite rules and other public policies regulating smoking.

How it works

Most e-cigarettes contain a rechargeable, battery-operated heating element, and a replaceable nicotine or chemical cartridge. When in use, the heating element inside the e-cigarette converts the contents of the cartridge into a vapor, which can then be inhaled by the user.

E Cigarette Structure



Source: America's Choice Electronic Cigarettes: How it Works, 2012, <http://www.mycigstore.net/howitworks.htm>

Federal Regulation

Currently, the U.S. Food and Drug Administration (FDA) has no regulations in place around e-cigarettes. This does not mean that e-cigarettes cannot be manufactured and sold in the U.S., but it does mean that consumers currently have no way of knowing whether e-cigarettes are safe for their intended use, what types or concentrations of potentially harmful chemicals exist or what dose of nicotine is being inhaled each use.

There are also concerns that e-cigarettes could increase nicotine addiction and tobacco use in young people, and even turn non-smokers into nicotine addicts.

While e-cigarettes have some proponents who maintain they are less harmful than cigarettes, there is currently no strong evidence regarding the safety of e-cigarettes due to the lack of testing at this time.

Clinical studies about the safety and efficacy of these products have not been submitted. However, a preliminary analysis of some e-cigarette cartridges by the FDA detected diethylene glycol (a poisonous liquid found in antifreeze), as well as tobacco-specific nitrosamines (TSNAs), which are known cancer-



causing agents. Additionally, the FDA found that quality control processes used in manufacturing these products are substandard or non-existent. For example, the FDA found that cartridges labeled as nicotine-free actually contained nicotine and that three different e-cigarette cartridges with the same label emitted a different amount of nicotine with each puff. Despite these preliminary findings, e-cigarettes do not currently have any health warnings like other FDA approved nicotine replacement products (nicotine gums, trans-dermal patches) until further research can be conducted.

However, a 2010 US Court of Appeals ruling determined that e-cigarettes are to be considered a “tobacco product,” defined as any product “made or derived from tobacco.” In other terms, even though e-cigarettes may not use tobacco, it contains an addictive substance from tobacco, called nicotine.

The FDA is expected to come out with a proposed set of regulations on e-cigarettes in 4th quarter of 2013 or early 2014.

Reactions

Smoking is a sensitive issue for employers; they fear disproportionately high health care costs and lower productivity for a small subset of the overall employee population. A recent Ohio State University study published in *Tobacco Control* confirmed these fears, reporting that each smoker costs employers \$5,800 per year. The greatest portion of this cost (\$3,077) comes from lost productivity related to an average of five smoke breaks during the work day. Other major costs for smokers are associated with increased absenteeism —smokers miss about two-and-a-half extra workdays each year — and lost productivity at work, perhaps because of nicotine’s withdrawal effects.

Additionally, health insurers are associating e-cigarettes with the same health concerns and costs as smoking. Smokers typically have more health problems than nonsmokers, including heart and lung disease various cancers and other illnesses. The previous Ohio State study reported extra health care expenses of \$2,056 per smoker.

A growing number of employers have decided that e-cigarettes are an unhealthy habit and are imposing tobacco-use penalties on employees who use them. Amtrak has banned the use of electronic smoking devices on trains and in any area where smoking is prohibited. The Department of Transportation (DOT) prohibits smoking cigarettes or similar products, such as e-cigarettes on airline flights. UPS and Wal-Mart Stores consider e-cigarettes a form of tobacco use, and as such, apply the tobacco surcharge. The National Business Group on Health also agrees that the use of e-cigarettes should be treated the same as tobacco use.

These examples open the door for health insurers under the Patient Protection and Affordable Care Act and other plan sponsors to apply the same policies and surcharges used for other tobacco product use. This means that e-cigarette users could be subject to premiums as much as 50% higher than non-smokers.



Final Thoughts

It could be argued that e-cigarette concerns may not be able to be used in the same context as traditional cigarettes; however, a similar underlying issue exists between the two, in that both contain nicotine – a tobacco-based substance.

Nicotine, in addition to other known and unknown contaminants are being introduced into each individual's system and the systems of individuals exposed to others using these instruments. Decades of research now recognizes the health risks associated with smoking and the use of smokeless tobacco. We have been rewarded by a reduction in the incidence of lung cancer and heart disease as a cause of death. It seems reasonable to argue that based on our experience with nicotine addiction and the other conditions that were attributable to and associated with it, we should require significant proof that this new method for supporting nicotine addiction is not reintroducing the same or additional health related risks and outcomes.

When the FDA releases its recommendations around e-cigarettes, it is likely that this will lead to tighter regulations including quality-control standards and a ban on sales to minors. However, until further testing and research is produced, the approach to quit smoking recommended by the National Cancer Institute (NCI) is to use one of the FDA approved nicotine replacement products (nicotine gums, trans-dermal patches) or the “cold turkey” method. The best and most obvious way to be tobacco free is not to start.

Recommendation

In closing, plan sponsors should consider use of e-cigarettes the same as tobacco use. That includes imposing surcharges, prohibiting e-cigarette use as part of tobacco-free policies, and encouraging quitting through communication and cessation resources.



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