

## CHEMICAL HEALTH

### TREND CORNER:

By Alicia Smith, CADCA

They are advertised as the healthy alternative to tobacco and a great way to help smokers kick their habit. But are electronic cigarettes, or e-cigarettes, as benign as they claim?



What exactly are e-cigarettes? They are battery powered devices that provide inhaled doses of nicotine, humectants to produce the vapor and flavorings to the user. While they don't contain tobacco, they do contain nicotine and other chemicals, and we know little about their safety.

Despite the lack of scientific evidence, e-cigarettes are also being marketed as smoking cessation aids. A study recently reported by the CDC Office on Smoking and Health in Nicotine & Tobacco Research, concludes that awareness and use of e-cigarettes have increased among U.S. adults between 2010 and 2011 and research shows many smokers are making the switch to their electronic counterparts –

roughly one in five smokers have tried e-cigarettes.

Many tobacco prevention advocates fear, with good reason, that this increase will continue as companies continue to market these products as benign alternatives to traditional cigarettes.

So, why should you be concerned about this trend? Well, these attractive little devices perpetuate the use of nicotine and tobacco products among smokers who may otherwise quit, and counter the effectiveness of smoke-free and tobacco-free policies. In addition, we have yet to determine whether e-cigarettes increase or decrease the use of traditional cigarettes or whether the marketing of these products could impact initiation and use of traditional cigarettes, particularly among young people.

A few years ago, the Food and Drug Administration (FDA) issued a [warning to parents and consumers](#), noting that e-cigarettes are sold without any legal age restrictions and are available in different flavors (such as chocolate, strawberry and mint) which may appeal to young people. In addition, the FDA said, the devices do not contain any health warnings comparable to FDA-approved nicotine replacement products or conventional cigarettes.

The FDA tested 19 varieties of e-cigarettes in May 2009 and found diethylene glycol, a poisonous and hygroscopic liquid, in one of the cartridges manufactured by

Smoking Everywhere, an e-cigarette vendor. Tobacco-specific nitrosamines (TSNAs), known cancer-causing agents, were also detected in all of the cartridges .... nicotine could also be traced in some claimed "nicotine-free" cartridges.

E-cigarettes were never introduced by scientific acclaimed standards as a cessation product in the first place. So what do we know for certain? We know e-cigarettes are used to deliver nicotine into the bloodstream and we all know nicotine is the addictive agent that takes thousands of lives each year. We know that nicotine is more addictive than crack cocaine and heroin.

### A 12-Pack's Worth of Brain Damage



"... even one short-duration binge-alcohol experience—which is unfortunately similar to what young adults may experience during spring break or

weekend partying—may start a cascade that leads to brain damage," says [Kimberly Nixon](#), Ph.D., associate professor of pharmaceutical sciences at the University of Kentucky.

This study on binge drinking set out to determine a threshold for brain damage using various markers of neuro-degeneration. Dr. Nixon and her associates administered to adult male Sprague Dawley® rats a nutritionally complete liquid diet that additionally contained either alcohol (25 percent weight per volume

[25% w/v]) or isocaloric dextrose. Rats given the alcohol-spiked diet registered the alcohol content equivalent of four times the legal driving level and about the same amount as an underage or adult drinker would ingest from a half a fifth of liquor, two bottles of wine, or a 12-pack of beer.

Within 1 day of the rats' alcohol exposure, researchers observed a significant two- to nine fold increases in neuronal degeneration in the limbic cortex and clear evidence of reactive gliosis, a reaction to brain injury. Dr. Nixon also observed, "... it is important to consider that each successive binge, starting with the very first one, affords some level of damage to the brain.

["Determining the Threshold for Alcohol-Induced Brain Damage: New Evidence with Gliosis Markers"](#) was published online on January 24, 2013, in the journal *Alcoholism: Clinical & Experimental Research*. The National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse supported the research

### Alcohol-Related Problems Linked With Smoking Frequency

As reported in "[Alcohol problems as a signal for sensitivity to nicotine dependence and future smoking](#)," alcohol-related problems appear to be a greater risk factor for future smoking among novice adolescent smokers than alcohol use or smoking per se.

By signaling sensitivity to nicotine dependence symptoms, alcohol related problems represent a measureable risk factor that can be used to identify and intervene with adolescents before more chronic smoking behaviors emerge.

Author Lisa Dierker et al. analyzed data from the longitudinal Social and Emotional Contexts of Adolescent Smoking Patterns Study to examine the extent to which alcohol problems were associated with early emerging nicotine dependence symptoms and whether alcohol problems directly/indirectly predict smoking frequency 48 months later.

The study appeared online in the May 2013 issue of *Drug and Alcohol Dependence*. The National Cancer Institute and the National Institute on Drug Abuse provided funding for this project.

### Alcohol and Marijuana Use Among High Schools Seniors



According to a recent study, 23 percent of high school seniors in 2011 reported using alcohol and marijuana simultaneously. Simultaneous use of alcohol and

marijuana was more prevalent among girls, heavy-drinking adolescents, and adolescents with higher truancy records. The University of Michigan researchers,

Yvonne M. Terry-McElrath et al., used nationally representative cross-sectional samples of high school seniors surveyed in the Monitoring the Future project from 1976 to 2011 to examine the prevalence of simultaneous alcohol and marijuana use and the association between use frequency of alcohol and marijuana at that grade level. [Simultaneous alcohol and marijuana use among US high school seniors from 1976 to 2011: Trends, reasons, and situations](#) was published online in the June 24, 2013, issue of *Drug and Alcohol Dependence*.

### Alcohol-Inspired Teen Friendships Are Unstable

Drinking among like-minded adolescents increases the chance that friendships will form; however, those friendships are situational and short lived, according to [The differential contributions of teen drinking homophily to new and existing friendships: An empirical assessment of assortative and proximity selection mechanisms](#).

Researchers Jacob E. Cheadle, Michael Stevens, Detric T. Williams, and Bridget J. Goosby analyzed data from the National Longitudinal Study on Adolescent Health to assess the influence of drinking on adolescent friendships. The authors focused on the creation of new friendships and the maintenance of those newly formed friendships. The project, funded by the National Institute on Alcohol Abuse and Alcoholism, appears online in the Sept. 2013 issue of *Social Science Research*.

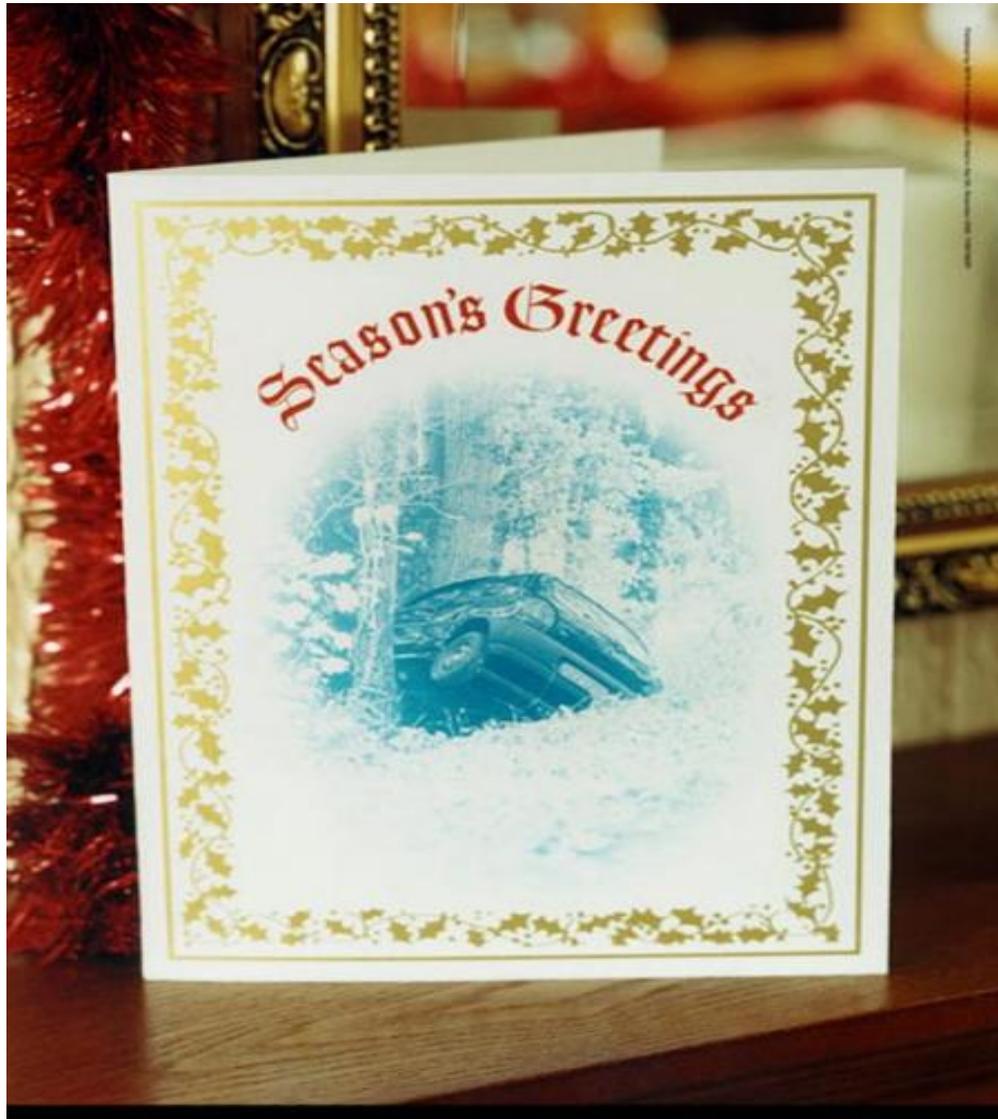
# PARENT THE POWER OF PARENTS YOUR CHILD

Parenting & Prevention Newsletter



Email us at: [mcleodmeada@yahoo.com](mailto:mcleodmeada@yahoo.com)

<http://mcleodmeada.org/>



Drinking and Driving is one Holiday tradition we can do without