



7 Cedar St., Suite A  
Summit, NJ 07901  
Phone: 908-273-9368  
Fax: 908-273-9222  
Email: [info@njgasp.org](mailto:info@njgasp.org)  
[www.njgasp.org](http://www.njgasp.org)

Karen Blumenfeld, Director  
Tobacco Control Policy and Legal Resource Center  
[Karen.Blumenfeld@verizon.net](mailto:Karen.Blumenfeld@verizon.net)

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## **ELECTRONIC CIGARETTES (E-CIGARETTES)**

### **Introduction**

GASP has many health concerns regarding e-cigarette use and exposure, which are documented in this paper. The U.S. Food & Drug Administration (FDA), U.S. Senator Frank Lautenberg, the World Health Organization, and national advocacy organizations, such as Action on Smoking and Health (<http://ash.org/ashprecigs>) also voice their concerns about e-cigarettes.

### **Jurisdictions Restricting E-cigarette Use and/or Sales**

Local, county, state and international jurisdictions are restricting or banning the sale or use of e-cigarette products.

**New Jersey** is the first state in the nation to ban the use of e-cigarettes in public places and workplaces, effective March 13, 2010. On January 11, 2010, Governor Corzine signed into law A4227/A4228/S3053/S3054, banning e-cigarette use in public places and workplaces (amended 2006 NJ Smokefree Air Act), and banning e-cigarette sales to people 18 years and younger. The New Jersey Senate and Assembly both voted unanimously in favor of the law. See [www.njgasp.org/sfaa\\_2010\\_w-ecigs.pdf](http://www.njgasp.org/sfaa_2010_w-ecigs.pdf) and [www.njleg.state.nj.us/2008/Bills/A4500/4227\\_U1.PDF](http://www.njleg.state.nj.us/2008/Bills/A4500/4227_U1.PDF)

The impetus for the New Jersey state law came from a local Board of Health and County Board of Chosen Freeholders. In October 2009, New Jersey's Bergen County Board of County Freeholders passed a resolution banning e-cigarette use in county buildings, at county parks and recreational areas. On November 23, Paramus' Board of Health passed an ordinance restricting e-cigarette use in public places and workplaces, taking effect on December 1, 2009.

### **Other jurisdictions in U.S. and overseas restrict e-cigarette sales and use, require license/permit:**

#### **Restrict use in workplaces/public places, and ban sale to minors:**

- Cattaraugus County, New York bans e-cigarette sales to minors and the use of herbal and e-cigarettes in public places and workplaces, effective February 14, 2012.
- Suffolk County, New York bans e-cigarette sales to minors and the use of e-cigarettes in public places and workplaces, effective November 1, 2009.
- San Francisco ban on using e-cigarettes in public places and workplaces covered by their smokefree air law, signed into law on June 21, 2011.
- In Kentucky, Madison County amended their smoking ban ordinance to include banning the use of e-cigarettes in public places and workplaces, effective June 6, 2011. On

March 22, 2011 Bullitt County Board of Health in Kentucky voted to ban smoking in public places and workplaces, including the use of e-cigarettes, effective September 19, 2011; on September 15, the Circuit County Court found the entire law unconstitutional, and the board of health is appealing the decision. In March 2010, the Kentucky cities of Bardstown ("The Bourbon Capital of the World") and Glasgow (the county seat of the largest tobacco-producing area in the world) banned the smoking of e-cigarettes in public places and workplaces, effective June 2010.

- Savannah, Georgia banned the use of e-cigarettes in public places and workplaces as of January 2011.
- King County in Washington State banned the use of e-cigarettes in public places and workplaces and banned the sale to minors, December 2010.
- Tacoma-Pierce County Health Department in Washington State (1) banned the use of electronic smoking devices in public places where minors are permitted, exempt places of employment that are not public places and in retail outlets that exclusively sell or promote electronic smoking devices; (2) banned free sampling or at nominal cost unless at an e-cigarette retail outlet; and banned e-cigarette sales to minors. Effective June 2, 2011. <http://www.tpchd.org/news.php?nid=647> and <http://www.tpchd.org/files/library/22094f84d3b140cb.pdf>

**Also requires license to sell nicotine delivery products (e-cigarettes)**

- Concord City, California: Enacted an ordinance on September 27, 2011, requiring a 17-block downtown business district be 100% smokefree, including banning the use of e-cigarettes. Can apply for exemptions, e.g. inside residences and private vehicles. Ordinance at <http://www.ci.concord.ca.us/pdf/citygov/agendas/council/2011/0927/4A.pdf>
- Somerset, Massachusetts: Board of Health (1) bans the use of nicotine delivery products in workplaces and public places covered by the state law, requires signage; (2) requires nicotine delivery products (e.g. e-cigarettes) be sold face-to-face (not using self-service displays or vending machines), and only at a non-mobile retail establishment issued an annual permit by the local Board of Health; (3) bans the sale to minors, requires signage; and (4) bans free distribution and sampling. Up to \$300 fine, and suspension of nicotine delivery products permit issued by the local Board of Health. Fines range from \$100 \$300 and 30-day suspension of any and all Board of Health-issued permits. Effective September 1, 2010. \$100 annual permit fee. Ordinance at [http://www.njgasp.org/Somerset\\_BdHealth\\_ecig\\_reg\\_9-2010.pdf](http://www.njgasp.org/Somerset_BdHealth_ecig_reg_9-2010.pdf). Newsclip at <http://www.wickedlocal.com/swansea/archive/x1869746351/Somerset-wants-to-ban-e-cigarettes#ixzz1XUp1eXO3.pdf>
- North Attleborough, Massachusetts: Board of Health (1) bans the use of nicotine delivery products in workplaces and public places covered by the state law, requires signage; (2) requires nicotine delivery products (e.g. e-cigarettes) be sold face-to-face, and only at a non-mobile retail establishment issued an annual permit by the local Board of Health; (3) bans the sale to minors, requires signage; and (4) bans free distribution and sampling. Fines range from \$100 to \$300, and suspension of nicotine delivery products permit issued by the local Board of Health. Effective July 13, 2010. \$25 annual permit fee. Ordinance at <http://north-attleboro.ma.us/boh/PDF/Regulations/Nicotine%20Delivery%20Product%20and%20E-Cigarette%20Regulation.pdf>

- South Hadley, Massachusetts: Board of Health (1) bans the use of nicotine delivery products in workplaces and public places covered by the state law, requires signage; (2) requires nicotine delivery products (e.g. e-cigarettes) be sold face-to-face, and only at a non-mobile retail establishment issued an annual permit by the local Board of Health; (3) bans the sale to minors, requires signage; and (4) bans free distribution and sampling. Fines range from \$100 to \$400, and seven-day to one-year suspension of any and all licenses and permits issued by the local Board of Health. Effective October 29, 2009. \$75 annual permit fee. Ordinance at [http://www.southhadley.org/Pages/SouthHadleyMA\\_Health/forms/enicappregs](http://www.southhadley.org/Pages/SouthHadleyMA_Health/forms/enicappregs)

### **Ban sale to minors**

- Effective July 1, 2012 Idaho bill [HB405](#) passed in March, 2012 banning the sales of e-cigarettes to minors.
- Effective October 1, 2012 Maryland bill [HB1272](#) passed in April, 2012 banning the sale of e-cigarettes to minors.
- As of June 23, 2011 Clark County, West Virginia banned the sale of e-cigarettes to minors. [http://www.oregonlive.com/clark-county/index.ssf/2011/06/clark\\_county\\_bans\\_sale\\_of\\_e-cigarettes\\_to\\_minors.html](http://www.oregonlive.com/clark-county/index.ssf/2011/06/clark_county_bans_sale_of_e-cigarettes_to_minors.html)
- Both Minnesota and New Hampshire's laws banning the sale of e-cigarettes to minors took effect on August 1, 2010.
- In Washington State, Spokane County and the cities of Spokane and Spokane Valley banned the sale of e-cigarettes to minors, effective March 31, 2011.
- Oregon's Attorney General John Kroger, reached a settlement in August 2010, preventing two national travel store chains from selling e-cigarettes.
- See Section 12 for international laws restricting e-cigarette use, sales and importation.

### **More U.S. and International jurisdictions are considering bans on the use and/or sale of e-cigarettes.**

- As of February 10, 2012 Utah House passed a bill banning e-cigarette smoking in public places with a 5 year exemption for existing e-cigarette shops. The bill also includes a ban of hookah use with the same exemption. <http://www.sltrib.com/sltrib/politics/53483835-90/ban-banning-bar-cigarettes.html.csp>
- As of February 7, 2012 the Saugas, MA Board of Health is considering a ban on the sale of e-cigarettes to minors and their use in a public place. <http://www.itemlive.com/articles/2012/02/07/news/news13.txt>
- As of February 2012, Hawaii's Senate Ways and Means Committee passed SB223 to restrict sales of e-cigarettes to minors. <http://www.csdecisions.com/2012/02/13/hawaii-e-cigarette-bill-passes-senate-committee/>
- As of December 2011, Greece is considering a ban on the sale and use of e-cigarettes. [http://www.njgasp.org/Greece\\_E-cig-ban-possible-12-13-2011.pdf](http://www.njgasp.org/Greece_E-cig-ban-possible-12-13-2011.pdf)
- As of September 2011, Boston Public Health Commission has proposed amendments to its smokefree air regulations that will prohibit the use of e-cigarettes in workplaces, and

prohibit the sale or distribution of unregulated nicotine delivery products to minors.  
<http://www.bphc.org/boardofhealth/regulations/Pages/Home.aspx>

- As of September 2011, Macon, Georgia is considering the expansion of the state's smoking ban, which would also include banning the use of e-cigarettes in places where smoking is banned. Draft ordinance at <http://www.breathetheasymacon.org/files/Ordinance.pdf> and newsclip at <http://www.macon.com/2011/09/23/1714992/macon-at-odds-over-smoking.html>
- As of June 21, 2011, San Francisco Health Commission adopted a resolution to ban the sale and usage of e-cigarettes. The San Francisco Board of Supervisors needs to adopt the resolution before it can take effect.  
<http://www.sfdph.org/dph/files/hc/HCRes/Resolutions/2011Res/ecig%20reso.pdf>
- As of May 5, 2011, Adams Board of Health in Massachusetts is considering restricting the sale and usage of electronic cigarettes.  
[http://www.njgasp.org/iBerkshires\\_AdamsMA\\_considers\\_ecig\\_ban\\_5-5-2011.pdf](http://www.njgasp.org/iBerkshires_AdamsMA_considers_ecig_ban_5-5-2011.pdf)
- As of March 2011, Arizona is considering bans on the sale and purchase of e-cigarettes to minors.
- New York, Kentucky, Montana and Tennessee are considering banning sales of e-cigarettes to minors.
- Former Connecticut Attorney General Richard Blumenthal (current Governor) stated in 2009 he is "actively investigating these companies and their products."  
[http://www.njgasp.org/USAToday\\_ecigs\\_2009-10-25.pdf](http://www.njgasp.org/USAToday_ecigs_2009-10-25.pdf)

#### **Poll supports restrictions on e-cigarettes.**

A University of Michigan poll released September 13, 2010 shows that adults support restrictions on e-cigarettes, based on potential risks and not just immediate health effect, as well as the possibility that e-cigarettes may lead youth to smoke cigarettes, according to Matthew M. Davis, M.D., director of the poll. The poll found:

- 91 percent of adults in the U.S. think manufacturers should be required to test e-cigarettes for safety.
- 85 percent favor prohibiting the sale of e-cigarettes to minors.
- 82 percent think the FDA should regulate e-cigarettes like other nicotine-containing products.
- 68 percent of adults think e-cigarettes should have health warnings like tobacco cigarettes and other nicotine products.

Read study at <http://www.med.umich.edu/mott/npch/pdf/091310report.pdf>.

Read news clip at <http://www.njgasp.org/e-Cigs-newswire-UMich-study-9-2010.pdf>.

The following sections provide detailed, documented support and information regarding public health concerns with e-cigarette use and exposure.

#### **1. Product is 'smoked', therefore not permissible under the 2006 New Jersey Smoke-Free Air Act (NJSFAA).**

The NJSFAA definitions section, NJS 26:3D-57, defines smoking as "... or any other matter can be smoked":

"Smoking" means the burning of, inhaling from, exhaling the smoke from, or the possession of a lighted cigar, cigarette, pipe or any other matter or substance which contains tobacco or any other matter that can be smoked."

The heating element in the e-cigarette heats and vaporizes the nicotine/propylene glycol solution, creating the 'smoke' which is inhaled and exhaled. Since the product is 'smoked' and creates a 'smoke', e-cigarette use is **not** permissible for use in public places and workplaces that are covered under the NJSFAA.

In addition, some e-cigarette companies admit in their marketing materials that their products are 'smoked'. GASP surveyed some e-cigarette websites, and, for example, Smokeless Revolution's website admits many times, that the product creates a 'smoke':

"The EVO is an electronic, smokeless alternative that delivers true tobacco flavor through a **vapor mist smoke**, with your preferred level of nicotine."  
<http://www.smokelessrevolution.com/home.html>

Their website's "Frequently Asked Questions" section also states that a battery is used to create the smoke vapor:

...a small rechargeable battery and a unique, safe replaceable cartridge containing water, propylene glycol, nicotine, a scent that emulates a tobacco flavor and a membrane to suspend the ingredients. When using EVO, the act of inhaling or smoking it produces the tactile and craving satisfactions traditional smokers seek, and triggers a vaporizing process that releases a simulated smoke that is actually a vapor mist that harmlessly evaporates into the air within a few seconds.  
<http://www.smokelessrevolution.com/faq.html>

Other e-cigarette websites have similar language.

## **2. Public health nuisance created when product used as intended.**

The New Jersey general public nuisance code NJS 26:3-46 et seq. may also apply, separate and apart from the NJSFAA. It is unclear what byproducts are in the smoke that is emitted from the e-cigarette, and therefore, the safety of the smoke is called into question. NJS 26:3-46 specifically refers to "gases or vapors... that are injurious to the health of the inhabitants."

Persons with breathing disabilities may especially have their lung functioning compromised, due to exposure to e-cigarette byproducts like propylene glycol (helps to create the smoke effect), and other additives to the nicotine solution when heated, then dispersed into the air. A public place or workplace that permits the usage of e-cigarettes may be subject to a violation of the NJ Law Against Discrimination, or the Americans with Disabilities Act Amendment Act of 2009.

Pertinent sections of the NJ public health nuisance code are in section 14 of this paper.

On January 24, 2011 an Allegiant Airlines flight was diverted when a passenger refused to stop using their e-cigarette in-flight. The passenger argued with the flight attendant, and the pilots diverted the plane. <http://www.wvec.com/home/Electronic-cigarette-leads-to-unexpected-landing-in-Norfolk-114504289.html>

## **3. July 2009 FDA study finds carcinogens in e-cigarettes, and other health concerns regarding the use of e-cigarettes.**

The FDA's Center for Drug Evaluation, Division of Pharmaceutical Analysis (DPA) conducted a laboratory analysis of e-cigarette cartridges from two leading brands. The analysis indicated that e-cigarettes expose users to harmful chemical ingredients:

- Diethylene glycol, an antifreeze ingredient toxic to humans was found.
- Tobacco specific nitrosamines that are human carcinogens were detected in ½ of the samples.
- Tobacco-specific impurities suspected of being harmful to humans – anabasine, myosmine, and B-nicotyrine – were detected in a majority of the samples.
- The e-cigarette cartridges labeled as containing no nicotine had low levels of nicotine present in all cartridges sampled, except one.
- 3 different e-cigarette cartridges with the same label emitted markedly different amounts of nicotine with each puff, ranging from 26.8 to 43.2 mcg nicotine/100 ml puff.
- One high-nicotine cartridge delivered twice as much nicotine to users when inhaled, than was delivered by a sample of an FDA approved smoking cessation nicotine inhalation product.

FDA Summary <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm173146.htm>

FDA study <http://www.fda.gov/downloads/Drugs/ScienceResearch/UCM173250.pdf>

The FDA concluded in its July 2009 findings:

- Clinical studies about the safety and efficacy of these products for their intended use have NOT been submitted to the FDA. Consumers have now way of knowing:
  - Whether e-cigarettes are safe for their intended use.
  - About what types or concentrations of potentially harmful chemicals, or what dose of nicotine they are inhaling when they use these products.<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm173401.htm>
- Read highlights from the FDA July 2009 media call in section 13 of this paper.

U.S. Senator Frank Lautenberg issued a July 22, 2009 press release in response to the FDA report:

**This report proves what we feared – that e-cigarettes may be unsafe and need to be taken off the market immediately.** Not only can these products fuel a life-long addiction to nicotine, but now the FDA has found that they contain cancer-causing chemicals.  
[http://www.njgasp.org/Ecigs\\_sen\\_lautenberg\\_press\\_release\\_03-23-09.pdf](http://www.njgasp.org/Ecigs_sen_lautenberg_press_release_03-23-09.pdf)

National Public Radio quoted Walt Linscott, an attorney for Smoking Everywhere, a major e-cigarette importer, in their August 5, 2009 story about e-cigarette:

"It is a cigarette, and cigarettes inherent by their design and nature are not safe."  
[http://www.njgasp.org/NPR\\_ecigs\\_08-05-09.pdf](http://www.njgasp.org/NPR_ecigs_08-05-09.pdf)

#### **4. World Health Organization issued 2008 warning about e-cigarettes.**

In September 2008, the World Health Organization issued a written warning that there is no research/testing that e-cigarettes are safe products for human consumption, and no evidence that e-cigarettes are a safe substitute for smoking, or help smokers to quit. See WHO statement at <http://www.who.int/mediacentre/news/releases/2008/pr34/en/index.html>

#### **5. Researchers, health organizations voice concerns about e-cigarettes.**

In July 2011, The *New England Journal of Medicine* published a perspective from the Schroeder National Institute for Tobacco Research and Policy Studies which discusses safety concerns with

e-cigarettes. According to the Legacy Foundation's press release <http://www.legacyforhealth.org/4550.aspx> :

- "Smokers attempting to use e-cigarettes as quitting aids will most likely find them ineffective due to the fluctuating nicotine content and unpredictable delivery."
- "The safety of inhaling propylene glycol over an extended period of time has not been studied in humans."
- "E-cigarettes may serve as a 'bridge product' that smokers use in places where traditional tobacco smoking is prohibited, thus perpetuating their addiction and use of real cigarettes."
- E-cigarettes "may be used as a 'starter' product for young people considering smoking, especially since the cartridges can be purchased over the Internet with tempting flavoring like grape and chocolate."

In December 2010, a study funded by a grant from the University of California Tobacco-Related Disease Research Center studied 5 brands of e-cigarettes and observed many safety issues:

- "Batteries, atomizers, cartridges, cartridge wrappers, packs and instruction manuals lack important information regarding e-cigarette content, use and essential warnings;
- "E-cigarette cartridges leak, which could expose nicotine, an addictive and dangerous chemical, to children, adults, pets and the environment;
- "Currently, there are no methods for proper disposal of e-cigarettes products and accessories, including cartridges, which could result in nicotine contamination from discarded cartridges entering water sources and soil, and adversely impacting the environment; and
- "The manufacture, quality control, sales, and advertisement of e-cigarettes are unregulated."

These researchers expressed their concern about the safety of the e-cigarette vapors. The University of California press release states: "Contrary to the claims of the manufacturers and marketers of e-cigarettes being 'safe,' in fact, virtually nothing is known about the toxicity of the vapors generated by these e-cigarettes. Until we know any thing about the potential health risks of the toxins generated upon heating the nicotine-containing content of the e-cigarette cartridges, the 'safety' claims of the manufacturers are dubious at best."

[http://www.njgasp.org/e-cig\\_study\\_UC\\_Riverside\\_12-3-2010.pdf](http://www.njgasp.org/e-cig_study_UC_Riverside_12-3-2010.pdf)

The e-cigarette device can be dangerous. A Florida user lost teeth and part of his tongue when an e-cigarette battery malfunctioned, blowing up in his mouth and causing a fire in his home.

[http://www.njgasp.org/ABCNews\\_ECig\\_Explodes\\_2-17-2012.pdf](http://www.njgasp.org/ABCNews_ECig_Explodes_2-17-2012.pdf)

The December 2010 issue of the American Public Health Association Journal published an editorial expressing health concerns about e-cigarettes.

[http://www.njgasp.org/APJA\\_ecig\\_editorial\\_12-2010.pdf](http://www.njgasp.org/APJA_ecig_editorial_12-2010.pdf)

Harvard School of Public Health's industry watch entitled, "Electronic Cigarettes: A new 'tobacco' industry?" published October 7, 2010 concludes: "Research on product design, toxicant exposure, abuse liability including dual use with tobacco products, youth initiation, and influence on cessation efforts is needed to counteract e-cigarette industry marketing and inform regulatory strategies." [http://www.njgasp.org/TC\\_ecig\\_industry\\_10-25-2010.pdf](http://www.njgasp.org/TC_ecig_industry_10-25-2010.pdf)

On August 27, 2010, The American Cancer Society Cancer Action Network presented to the New Mexico Tobacco Settlement Revenue Oversight Committee asking for a ban of all sales of e-cigarettes until approved by the FDA.

<http://www.njgasp.org/ACSCAN-Aug-27-2010-ecig-ppt.pdf>

On June 14, 2010, The American Medical Association (AMA) House of Delegates adopted a new policy that recommends electronic cigarettes (e-cigarettes) be classified as drug delivery devices, subject to the same FDA regulations as all other drug delivery devices. Additional policy adopted supports prohibiting the sale of e-cigarettes that are not FDA approved. AMA Board Member Edward L. Langston, MD, stated:

- "Very little data exists on the safety of e-cigarettes, and the FDA has warned that they are potentially addicting and contain harmful toxins."
- "Because e-cigarettes have not been thoroughly tested, one cannot conclude that they are less harmful or less dangerous than conventional cigarettes."
- "The fact that they come in fruit and candy flavors gives them the potential to entice new nicotine users, especially teens."

[http://www.njgasp.org/AMA\\_ecigs\\_drug\\_delivery\\_06-14-10.pdf](http://www.njgasp.org/AMA_ecigs_drug_delivery_06-14-10.pdf)

In May 2010, support of an Illinois bill that would ban the sale of electronic cigarettes (SB 3174), national public health organizations issued a public statement with 3 key messages about this product that is not regulated by the FDA: "There is no scientific evidence that e-cigarettes are safer for consumers than regular tobacco products"; "Many e-cigarettes are being enhanced with bubble gum and fruit flavors, which are attractive to teens."; "There is no scientific evidence that e-cigarettes can help smokers quit." <http://www.iafp.com/legislative/SB3174e-cigarettes.pdf>

In May 2009, the American Lung Association, American Cancer Society Cancer Action Network, the American Heart Association, and the Campaign for Tobacco-Free Kids have called for e-cigarettes to be removed from the market. See FDA website.

<http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm173175.htm>

## **6. E-cigarettes appeal to youth.**

Youth are attracted to electronic gadgets. Coupled with e-cigarette flavorings that are enticing to teens and children, there is concern that e-cigarettes smoking may appeal to teens, and also lead teens to smoking cigarettes, little cigars that look like cigarettes, or other tobacco products, which are less expensive than e-cigarettes. See health organizations concerns at

<http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm173175.htm>

The FDA and health advocates are concerned about the appeal of e-cigarettes to young people. The FDA July 2009 report stated:

- E-cigarettes can increase nicotine addiction among young people and may lead kids to try other tobacco products, including conventional cigarettes, which are known to cause disease and lead to premature death.

<http://www.fda.gov/ForConsumers/ConsumerUpdates/ucm173401.htm>

In addition, the liquid nicotine solution packaged in a separate bottle could be consumed by a child, and lead to nicotine poisoning.

## **7. Unsubstantiated claims about e-cigarettes' reduced health risk.**

Federal, state, county and local policymakers are concerned about claims of reduced health risk when using e-cigarettes. The e-cigarette companies have NOT provided any scientific clinical studies and toxicity analyses to the FDA that demonstrate reduced health risk, or that the product is safe to use. See public health advocacy organizations concerns at

<http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm173175.htm>

For example, an October 24, 2009 press release from Denver-based E-CigaretteDirect.com states:

"E-CigaretteDirect.com recommends that smokers switch to electronic cigarettes to protect themselves and their loved ones from secondhand smoke and heart disease... The electronic cigarette takes all the smell, and detrimental health risks out of the picture. The e-cigarette is considered a harm reduction alternative to regular cigarettes."  
[http://www.njgasp.org/Ecigdirect\\_press\\_release\\_10-24-09.pdf](http://www.njgasp.org/Ecigdirect_press_release_10-24-09.pdf)

The e-cigarette industry opposes smokefree air laws that are proposed in states without comprehensive smokefree air laws, and encourages e-cigarette usage on airplanes, which are confined spaces with recirculated air. An e-cigarette buyer's guide blog details how an airplane passenger should convince a flight attendant to let them smoke e-cigarettes on a plane. See <http://www.electroniccigarettereview.com/best-electronic-cigarette>.

U.S. Senator Frank Lautenberg (New Jersey), who spearheaded requiring 100% smokefree airlines, voices his concerns with e-cigarettes. Read the Senator's letter to the FDA at [http://www.njgasp.org/Ecigs\\_sen\\_lautenberg\\_press\\_release\\_03-23-09.pdf](http://www.njgasp.org/Ecigs_sen_lautenberg_press_release_03-23-09.pdf)

## 8. Health risks of nicotine

Powerful side effects of nicotine on the cardiovascular system:

- Releases epinephrine (adrenaline), which raises blood pressure, heart rate and respiration and glucose levels.
- Vasoconstrictor – harder for the heart to pump through constricted arteries.
- May cause body to release stored fat and cholesterol into bloodstream.  
<http://en.wikipedia.org/wiki/Nicotine>
- Nicotine itself promotes blood vessel damage by promoting cellular damage in vascular smooth muscle cells, promoting plaque formation thereby causing blood vessel damage. [http://www.njgasp.org/Biophysics\\_presents\\_nicotine\\_findings\\_2-26-2012.pdf](http://www.njgasp.org/Biophysics_presents_nicotine_findings_2-26-2012.pdf)
- Nicotine plays multiple roles in carcinogenesis through inhibition of apoptosis and cell proliferation ([Catassi et al. 2008](#); [Wright et al. 1993](#); [Zhou et al. 2010](#)). It is known to affect oxidative stress and to have adverse effects on brain and lung development in children ([Zhou et al. 2010](#)). Nicotine may have adverse effects on vascular function and might promote inflammation ([Wittebole et al. 2007](#)). Because nicotine and other THS constituents may be transformed into new toxicants ([Sleiman et al. 2010a](#), [2010b](#)), concerns about potential health risks of THS must include compounds created through secondary reactions. Thirdhand Tobacco Smoke: Emerging Evidence and Arguments for a Multidisciplinary Research Agenda, *Environmental Health Perspectives* (journal), published May 31, 2011.  
<http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.1103500>
- Nicotine and the increased cholinergic activity it causes have been shown to impede apoptosis, which is one of the methods by which the body destroys unwanted cells (programmed cell death). Since apoptosis helps to remove mutated or damaged cells that may eventually become cancerous, the inhibitory actions of nicotine may create a more favorable environment for cancer to develop.  
<http://en.wikipedia.org/wiki/Nicotine>
- Nicotine raises blood sugar levels and the more nicotine that was present, the higher the blood sugar levels were. Higher blood sugar levels are linked to an increased risk

of complications from diabetes, such as eye and kidney disease. The study's findings were presented by researchers from California State Polytechnic University in Pomona, at the American Chemical Society meeting in Anaheim, California, March 27, 2010. Author Xiao-Chuan Liu concluded, "This study should encourage diabetics to quit smoking completely, and to realize that it's the nicotine that's raising [blood sugar levels]." <http://njgasp.org/Yahoo-News-Nicotine-Raises-Blood-Sugar-Levels-3-27-11.pdf> See also 1989 study, which similarly concluded that Nicotine increases glucose levels, making blood sugar levels even harder to manage in diabetics. [http://findarticles.com/p/articles/mi\\_m0689/is\\_n5\\_v28/ai\\_7923099/](http://findarticles.com/p/articles/mi_m0689/is_n5_v28/ai_7923099/)

- Women who use nicotine gum and patches during the early stages of pregnancy face an increased risk of having babies with birth defects, says a study that looked at about 77,000 pregnant women in Denmark. The study found that women who use nicotine-replacement therapy in the first 12 weeks of pregnancy have a 60 percent greater risk of having babies with birth defects, compared to women who are non-smokers, the Daily Mail reported. The findings were published in the Journal Obstetrics and Gynecology. <http://en.wikipedia.org/wiki/Nicotine>
- There are documented cases of tobacco workers suffering from nicotine overdose as a result of handling raw tobacco leaves, a condition known as Green Tobacco Sickness. <http://www.enotes.com/how-products-encyclopedia/nicotine-patch>  
[http://en.wikipedia.org/wiki/Green\\_Tobacco\\_Sickness](http://en.wikipedia.org/wiki/Green_Tobacco_Sickness)
- Spilling an extremely high concentration of nicotine onto the skin can result in intoxication or even death since nicotine readily passes into the bloodstream from dermal contact. Lockhart LP (1933). "Nicotine poisoning". *Br Med J* 1: 246–7
- In some cases children have become poisoned by topical medicinal creams which contain nicotine. [http://en.wikipedia.org/wiki/Nicotine\\_poisoning](http://en.wikipedia.org/wiki/Nicotine_poisoning)

**Nicotine is FDA-regulated in NRTs, but not for e-cigarettes.** Nicotine replacement therapy treatments (NRTs), such as the patch, gum, nasal spray, lozenges, are made with pharmaceutical grade nicotine. Manufacturers of FDA-approved nicotine replacement products are required to submit a detailed Manufacturing and Controls Section as part of the New Drug Application (NDA). This documentation assures that the product is manufactured in compliance with Good Manufacturing Practices regulations.

The NDA includes sourcing, processing and meticulous documentation at each step of production and use of a pharmaceutical grade active drug. These rigorous conditions are required to assure that the product contains the type and quantity of the drug as labeled. Failure of a manufacturer of an NDA product to comply with these regulations can result in prosecution / enforcement action by the FDA for marketing an adulterated, mislabeled and/or illegal drug product under U. S. law.

The FDA does not regulate nicotine products used with e-cigarettes for quality or quantity. The FDA's preliminary analysis showed that levels of nicotine can vary per tested cartridge, regardless of labeling, and that nicotine was found in nicotine-free labeled product.

## **9. E-cigarettes are drug delivery devices; therapeutic claims may require FDA approval.**

The FDA classifies nicotine as a drug. E-cigarettes deliver nicotine to the user, like other nicotine delivery devices that are FDA approved as smoking cessation products (e.g. nicotine patch, lozenge, nasal inhaler, etc.) On September 8, 2010, the FDA issued letters stating that electronic cigarettes and similar products meet the definition of drug delivery devices and need to be

regulated as such. See Section 11 on page 7 of this white paper, for more details on the FDA's September 8, 2010 letters.

The July 2009 FDA study found different e-cigarettes yielded different levels of nicotine dosages, with one delivering approximately twice the amount allowable from an FDA approved nicotine nasal inhaler that is used for smoking cessation purposes. Nicotine poisoning is a concern.

The FDA is required to approve and regulate tobacco cessation products under Federal Food, Drug, and Cosmetic Act (FFDCA) section 505(a) or 21 U.S.C. 355. Tobacco cessation products are considered drugs that have to undergo the new drug application/FDA approval process. <http://www.fda.gov/TobaccoProducts/ResourcesforYou/ucm168231.htm>

Websites that sell e-cigarettes, and share testimonials from users about how the e-cigarettes helped them reduce smoking cigarettes, may be promoting the product for smoking cessation purposes. Only FDA approved smoking cessation products are allowed to market and sell their product for a smoking cessation purpose. If a product is marketed and sold as a smoking cessation product, without FDA approval, that product should not be sold.

## **10. Amazon.com prohibits sale of electronic tobacco products on their website; Paypal cancels e-cigarette accounts**

Onlineprnews.com reported on October 14, 2009, that internet retailer Amazon.com noticed its resellers that e-cigarettes and other e-tobacco products are "inappropriate for Amazon.com" and that Amazon.com is prohibiting the sale of such products. Onlineprnews.com also reported that Paypal cancelled its electronic cigarette accounts.

[http://www.njgasp.org/OLPRMedia\\_amazon\\_ecigs\\_removed\\_10-19-09.pdf](http://www.njgasp.org/OLPRMedia_amazon_ecigs_removed_10-19-09.pdf)

## **11. FDA decides not to appeal court decision allowing e-cigarette imports to USA.**

**April 25, 2011:** the FDA announced that it will not appeal the recent decision by the U.S. Court of Appeals for the D.C. Circuit in *Sottera, Inc. v. Food & Drug Administration*, 627 F.3d 891 (D.C. Cir. 2010), stating that e-cigarettes and other products are not drugs/devices unless they are marketed for therapeutic purposes, but that products "made or derived from tobacco" can be regulated as "tobacco products" under the FD&C Act. The FDA webpage stated that the FDA is aware that certain products made or derived from tobacco, such as electronic cigarettes, are not currently subject to pre-market review requirements of the Family Smoking Prevention and Tobacco Control Act. FDA is developing a strategy to regulate this emerging class of products as tobacco products under the Family Smoking Prevention and Tobacco Control Act. Products that are marketed for therapeutic purposes will continue to be regulated as drugs and/or devices. The FDA "is considering whether to issue guidance and/or a regulation on 'therapeutic' claims." Sourced directly from FDA website at <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm172906.htm> Stakeholder letter: <http://www.fda.gov/NewsEvents/PublicHealthFocus/ucm252360.htm>

**December 20, 2010:** The FDA filed a new appeal, asking the full U.S. Court of Appeals to reinstate a stay of the preliminary injunction, pending the FDA's request for a rehearing of the case. The FDA argues that the three-judge panel's December 7, 2010 decision "rests on a clear error of law and will undermine" objectives that were laid out by Congress when it passed legislation in 2009 that empowered the FDA to regulate tobacco products for the first time. In early December, the Court of Appeals three-judge panel ruled that e-cigarettes and other products made or derived from tobacco can be regulated as "tobacco products" by the FDA, unless marketers make specific claims that the devices help smokers quit or provide other therapeutic remedies. *Wall Street Journal* at

<http://online.wsj.com/article/SB10001424052748703581204576033640017829896.html>

The three-judge panel decision on December 7, 2010 affirmed the District Court's preliminary injunction that allows NJOY to import their e-cigarettes while the lawsuit is pending. The Court of Appeals noted that the factual record on NJOY is "meager", and intimated that the FDA should consider trying to establish that NJOY does in fact make therapeutic claims regarding its electronic cigarettes.

[www.njgasp.org/SotteravFDADCCourtofAppealsDecision.pdf](http://www.njgasp.org/SotteravFDADCCourtofAppealsDecision.pdf), pg. 13. If the FDA is successful in its claim that NJOY makes therapeutic claims, then the FDA may have jurisdiction over NJOY's e-cigarette products under the FDCA's drug/device provisions. Some e-cigarette companies market their products as smoking cessation devices, as evidenced on their website testimonials, at live demos, etc.

**September 8, 2010:** The FDA issued warning letters to five electronic cigarette distributors for various violations of the Federal Food, Drug, and Cosmetic Act (FDCA) including unsubstantiated claims and poor manufacturing practices. In letters to the Electronic Cigarette Association and the five distributors, the FDA said the agency intends to regulate electronic cigarette and related products in a manner consistent with its mission of protecting the public health. The FDA determined that the electronic cigarette products addressed in the warning letters, and similar products, meet the definitions of both a drug and device under the Federal Food, Drug and Cosmetic Act, and the definition of a combination product in 21 C.F.R. Part 3, with a drug primary mode of action. Firms which introduce these electronic cigarette products into the marketplace will have to comply with the FDCA, including the drug approval process.

<http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm225224.htm>  
<http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/UCM225263.pdf>

The 5 e-cigarette companies have 15 days from Sept 8, 2010 (date of FDA notices of violations) to describe steps each will take to rectify the violations. If the FDA does not receive sufficient responses from each company, the FDA may seek seizure of the e-cigarette products, and injunctive relief.

**May 24, 2010:** The FDA filed its appellate brief for the pending lawsuit being heard by the District of Columbia Court of Appeals, in its e-cigarettes lawsuit, and national tobacco control organizations filed an amicus brief on behalf of the FDA's case which can be read at [http://www.casaa.org/files/FDA Appeals Brief.pdf](http://www.casaa.org/files/FDA%20Appeals%20Brief.pdf). All court papers on this appeal are due by July 22, 2010.

**April 2, 2010:** The U.S. Court of Appeals (District of Columbia) ruled that the FDA can ban the importation of e-cigarettes into the USA, during the pending of a lawsuit filed by the e-cigarette company plaintiffs. The U.S. Court of Appeals reversed a lower court decision that disallowed the FDA from banning the importation of e-cigarettes while the litigation proceeded. This April 2, 2010 ruling is a win for the FDA. Read the April 2, 2010 U.S. Court of Appeals decision at <http://www.ash.org/ecigstay>. Read the April 21, 2010 newsclip on our website <http://www.njgasp.org/e-cigs-fda-ban-04-2010-article.pdf>.

**March 1, 2009, U.S. FDA: FDA opened an investigation, refusing to allow e-cigarettes, e-cigars and e-pipes to cross the border** on a case-by-case basis. The FDA concludes that e-cigarettes meet the definition of a combination drug device product under the Federal Food, Drug and Cosmetic Act, considers e-cigarettes new drugs that require FDA approval:

The U.S. Food and Drug Administration has reviewed several electronic cigarettes, cigars, and pipes, and refused these products at the United States border. The agency has acted because these products offered for import appear to require FDA approval to be legally

marketed in the U.S and have not been reviewed by the agency.

These products consist of devices that turn nicotine and other chemicals into a vapor to be inhaled by the user. They are typically designed to look like conventional cigarettes, cigars, and pipes, and to be used the same way.

**The FDA is concerned about the potential for addiction to and abuse of these products. They may also be perceived as safer alternatives to conventional tobacco use and possibly initiate nicotine use among those who have never smoked, or among former smokers. The agency is also concerned that this could lead to an increase in the use of conventional tobacco products by young people, with well-known adverse health consequences.**

As of March 1, 2009, the FDA had refused 17 shipments of various brands of these "electronic" cigarettes, cigars, and pipes, and their components. At that time, the FDA stated it would continue to evaluate these products on a case-by-case basis.

<http://cfc.wjla.com/external.cfm?p=fdaecigs033109>

See FDA statement for full details.

## 12. State, county, local laws restricting e-cigarette use and sales in the U.S.

- **Effective October 1, 2012 Maryland** bill [HB1272](#) bans the sale of e-cigarettes to minors.
- **Effective June 23, 2011, Clark County in Washington State** banned the sale of e-cigarette to minors. [http://www.oregonlive.com/clark-county/index.ssf/2011/06/clark\\_county\\_bans\\_sale\\_of\\_e-cigarettes\\_to\\_minors.html](http://www.oregonlive.com/clark-county/index.ssf/2011/06/clark_county_bans_sale_of_e-cigarettes_to_minors.html)
- **San Francisco signed into law on June 21, 2011** a ban on using e-cigarettes in public places and workplaces covered by their smokefree air law.
- **Effective September 19, 2011, Bullitt County Board of Health in Kentucky** bans smoking in public places and workplaces, including the use of e-cigarettes (law passed 3/22/10). <http://www.bullittcountyhealthdept.com/BOH%20Regulation%2010-01.pdf>
- **July 1, 2011, effective in Colorado** bans the sale of e-cigarettes to minors. [http://www.leg.state.co.us/clics/clics2011a/csl.nsf/fsbillcont3/78CCDD6C6E59B37187257808008013AE?open&file=1016\\_enr.pdf](http://www.leg.state.co.us/clics/clics2011a/csl.nsf/fsbillcont3/78CCDD6C6E59B37187257808008013AE?open&file=1016_enr.pdf)
- **June 6, 2011 effective in Madison County, Kentucky** amended its smoking ban ordinance to include a ban on using e-cigarettes in public places and workplaces. Voted April 6, 2011. read law at [http://www.madisoncountyhealthdept.org/Documents/Community/REVISED\\_MCHR\\_700.pdf](http://www.madisoncountyhealthdept.org/Documents/Community/REVISED_MCHR_700.pdf) and newsclips at <http://www.kentucky.com/2011/06/01/1758625/madison-countys-ban-on-e-cigarettes.html> and <http://www.whas11.com/news/health/Madison-County-adds-e-cigarettes-to-smoking-ban-119406749.html>
- **March 31, 2011 Washington State's Spokane County and cities of Spokane and Spokane Valley** banned the sale of e-cigarettes to minors.
- **January 2011 Savannah, Georgia** banned the use of e-cigarettes in public places and workplaces, effective January 2011.
- **December 2010 King County, Washington State** banned the use of e-cigarettes in public places and workplaces, and banned the sale to minors.

- **December 16, 2010 King County (Washington State) Board of Health** bans the use of e-cigarettes in public places and work places, restricts the sales of e-cigarettes or any other unapproved nicotine delivery devices only to people 18 and older, and prohibits free or highly discounted electronic smoking devices or unapproved nicotine delivery products. Press release [http://www.njgasp.org/King\\_County\\_Washington\\_ecigs\\_12-16-2010.pdf](http://www.njgasp.org/King_County_Washington_ecigs_12-16-2010.pdf). Ordinance [http://www.njgasp.org/King\\_County\\_Washington\\_ecig\\_Ord\\_12-2010.pdf](http://www.njgasp.org/King_County_Washington_ecig_Ord_12-2010.pdf).
- **August 1, 2010 New Hampshire** bans e-cigarette sales to minors.
- **August 1, 2010 Minnesota's Tobacco Modernization and Compliance Act of 2010** took effect, banning the sale of e-cigarettes to minors, banning self-service displays of tobacco products and e-cigarettes except in adult-only facilities, and allowing for municipalities to license and regulate retail sales of e-cigarettes and tobacco products. See <http://publichealthlawcenter.org/content/passage-tobacco-modernization-and-compliance-act-2010> and <https://www.revisor.mn.gov/laws/?id=305&year=2010&type=0>
- **July 29, 2010 the California Attorney General entered into a Stipulated Consent Agreement** with NJOY, an e-cigarette manufacturer and retailer. The Agreement settles the lawsuit filed by the Attorney General, making it unlawful for NJOY to sell e-cigarettes to a minor, along with other restrictions on marketing and sales of e-cigarettes. See <http://ash.org/settlementcalecig>
- June 2011, effective date for the city of Bardstown, Kentucky banning the use of e-cigarettes in public places and workplaces; signed into law on March 9, 2010. <http://www.cityofbardstown.org/pdfs-ordinances/Chapter%20123.pdf>
- June 2011, effective date for the city of Glasgow, Kentucky banning the use of e-cigarettes in public places and workplaces; signed into law in March 2010. <http://blogs.theheart.org/melissa-walton-shirley-blog/2010/3/26/glasgow-kentucky-goes-smoke-free-war-and-peace-part-1>. See also <http://www.ctpost.com/news/article/Madison-County-adds-e-cigarettes-to-smoking-ban-1326985.php>
- **May 11, 2010: Minnesota** bans sale of e-cigarettes. Governor Pawlenty signed into law the Tobacco Modernization and Compliance Act of 2010 which, among other things, prevents the sale of e-cigarettes to minors, effective August 1, 2010. [www.njgasp.org/Minnesota\\_PR\\_Tob\\_Mod\\_Compl\\_Act-2010.pdf](http://www.njgasp.org/Minnesota_PR_Tob_Mod_Compl_Act-2010.pdf)
- **March 13, 2010: New Jersey bans use/sale of e-cigarettes.** On January 11, 2010 New Jersey Governor Corzine signed into the law banning the use of e-cigarettes in workplaces and public places, and banning the sale of e-cigarettes to persons 18 years and younger. The law amended the 2006 NJ Smokefree Air Act. **New Jersey is the first state in the nation to ban the use of e-cigarettes in public places and workplaces.** [www.njleg.state.nj.us/2008/Bills/A4500/4227\\_U1.PDF](http://www.njleg.state.nj.us/2008/Bills/A4500/4227_U1.PDF)
- **November 23, 2009: New Jersey's Paramus Board of Health bans use of e-cigarettes at certain locations.** Resolution prohibits the use of e-cigarettes in public places and work places effective December 1, 2009. <http://www.njgasp.org/Electronic%20Cigarettes%20Paramus%20Ordinance%2012-2009.pdf>
- **October 7, 2009: New Jersey's Bergen County Board of Chosen Freeholders bans use of e-cigarettes at certain locations.** Resolution prohibits the use of e-cigarettes at all county parks where children are present, and inside county buildings and county vehicles.

Bergen County resolution at [http://www.njgasp.org/Bergen\\_ecigs\\_resolution.pdf](http://www.njgasp.org/Bergen_ecigs_resolution.pdf); press release is [http://legis.suffolkcountyny.gov/press/do18/2009/do18pr\\_081809\\_ecig.pdf](http://legis.suffolkcountyny.gov/press/do18/2009/do18pr_081809_ecig.pdf).

- **August 2009: Suffolk County, New York bans use/sale of e-cigarettes.** The Suffolk County Legislature voted to ban the use of e-cigarettes in workplaces and public places, and banned the sale of e-cigarettes to persons under age 19. The law takes effect November 1. Suffolk County ordinance at <http://legis.suffolkcountyny.gov/Resos2009/i1347-09.pdf>; their press release at [http://legis.suffolkcountyny.gov/press/do18/2009/do18pr\\_081809\\_ecig.pdf](http://legis.suffolkcountyny.gov/press/do18/2009/do18pr_081809_ecig.pdf)
- **July 2009: Oregon Attorney General bans e-cigarette sales.** The Oregon Department of Justice today filed two settlements that prevent two national travel store chains from selling "electronic cigarettes" in Oregon. <http://www.doj.state.or.us/releases/2009/rel073009.shtml>

#### **Other U.S. federal policies; University policies that restrict e-cigarette sales and use**

- **February 2011: The U.S. Department of Transportation (DOT) communicated in writing to New Jersey Senator Frank Lautenberg that the use of smokeless e-cigarettes on airplanes is prohibited.** The DOT plans to issue an official ban in the spring of 2011. According to the Associated Press, Transportation Secretary Ray LaHood said the DOT has been informing airlines and the public that it interprets smoking regulations to include e-cigarettes. [http://www.njgasp.org/DOT\\_Policy\\_on\\_ecigs\\_feb\\_2011\\_ltr\\_to\\_lautenberg.pdf](http://www.njgasp.org/DOT_Policy_on_ecigs_feb_2011_ltr_to_lautenberg.pdf)

Examples of enforcing the no e-cigarette use policy in-flight:

- In July 2011, a passenger refused to extinguish his e-cigarette in-flight from Los Angeles to Salt Lake City on Southwest Airlines, and upon disembarking, the FBI charged him with interference with the flight crew. [http://connect2utah.com/search-fulltext?nxd\\_id=156217](http://connect2utah.com/search-fulltext?nxd_id=156217)
- January 24, 2011 an Allegiant Airlines flight was diverted when a passenger refused to stop using their e-cigarette in-flight. The passenger argued with the flight attendant, and the pilots diverted the plane. <http://www.wvec.com/home/Electronic-cigarette-leads-tounexpected-landing-in-Norfolk-114504289.html>

Senator Lautenberg wrote the 1987 law that banned smoking on airplanes; he asked the DOT to clarify the rule. In 2010, GASP requested Senator Lautenberg's office to look into clarifying the 1987 law banning smoking on airlines, to have it apply to electronic smoking devices as well. <http://www.sfgate.com/cgi-bin/article.cgi?f=/n/a/2011/02/11/financial/f055143S14.DTL#ixzz1Dt14gqZJ> On January 24, 2011 an Allegiant Airlines flight was diverted when a passenger refused to stop using their e-cigarette in-flight. The passenger argued with the flight attendant, and the pilots diverted the plane. <http://www.wvec.com/home/Electronic-cigarette-leads-tounexpected-landing-in-Norfolk-114504289.html>

- **August 2010: The Air Force surgeon general, Lt. Gen. (Dr.) Charles B. Green, has issued a memo alerting all Airmen about safety concerns regarding electronic cigarettes.** The memo states that due to the nature, appearance and safety concerns of electronic cigarettes, they are considered to be in the same category as tobacco products, the use of which is governed by Air Force Instruction 40-102, Tobacco Use in the Air Force. This new product will be included in the upcoming revision of AFI 40-102 due out this fall. [http://www.af.mil/news/story\\_print.asp?id=123218666](http://www.af.mil/news/story_print.asp?id=123218666)

- **August 2010: The U.S. Navy has announced that smoking will no longer be permitted below decks on its submarines, effective December 31, 2010.** The policy was initiated to protect the health of nonsmoking sailors. The Navy offers smoking cessation programs and nicotine replacement therapy will be widely available on the submarines.

Prescription drugs will be off-limits due to the potential to modify behavior patterns. Electronic cigarettes are not authorized.

[http://www.njgasp.org/kitsapsun\\_navy\\_news\\_4-8-2010.pdf](http://www.njgasp.org/kitsapsun_navy_news_4-8-2010.pdf)

- **August 2010: Central Michigan University banned the use of e-cigarettes in all buildings and residence halls , and within a 25 feet perimeter of all buildings**  
<http://www.cm-life.com/2010/08/19/electronic-cigarettes-banned-in-campus-buildings-residence-halls/>

#### **Laws outside the U.S. that restrict e-cigarette sales and use**

- **Argentina: May 2011:** resolution 3226/2011 bans the importation, distribution, commercialization and advertising of e-cigarettes and paraphernalia related to them.  
[http://www.njgasp.org/Argentina\\_bans\\_e-cigs\\_YahooNews\\_5-9-2011.pdf](http://www.njgasp.org/Argentina_bans_e-cigs_YahooNews_5-9-2011.pdf)
- **July 2010: Singapore bans e-cigarette importation, distribution and sales** under Section 16 (1) of the Tobacco (Control of Advertisements and Sale) Act, enforced by the Health Sciences Authority (HSA). Prohibits the importation, distribution, sale or offer for sale of any confectionery or other food product or any toy or other article designed to resemble a tobacco product or packaging which is designed to resemble the packaging commonly associated with tobacco products. Fine is of up to \$5, 000 upon conviction. See <http://www.gov.sg/smokefree/> and [www.njgasp.org/Singapore\\_ban\\_7-19-10.pdf](http://www.njgasp.org/Singapore_ban_7-19-10.pdf)
- **January 2010: Malta bans e-cigarette use in public places where smoking is banned; bans sale to minors.** <http://archive.maltatoday.com.mt/2010/01/10/t14.html>
- **2009: Brazil bans the sale, importation and advertisement of electronic cigarettes.** The Brazil's health and sanitation federal agency, Anvisa, found the current health safety assessments about e-cigarettes not to be yet satisfactory to make the product eligible to be approved for commercialization. <http://www.estadao.com.br/noticias/vidae,anvisa-proibe-comercializacao-do-cigarro-eletronico,427373,0.htm>
- **July 2009: Israeli Health Ministry bans e-cigarette sales and importation.**  
<http://www.israelnationalnews.com/SendMail.aspx?print=print&type=0&item=132629>
- **June 2009: Panama bans the importation, distribution and sale of e-cigarettes.** Ministry of Health cites FDA findings as reason for their ban.  
<http://mensual.prensa.com/mensual/contenido/2009/10/22/hoy/panorama/1969677.asp>
- **In March 27, 2009: Canada bans sale of e-cigarettes that contain nicotine.** Health Canada called for the immediate cessation of imports, sales, and advertising of electronic smoking products containing nicotine, and advised Canadians not to purchase or use any electronic smoking products. Under the Canadian Food and Drugs Act, Food and Drugs, electronic smoking products containing nicotine require market authorization before they can be imported, marketed, or sold. As of March 27, 2009, no electronic smoking product has been authorized for sale by Health Canada. See Health Canada's March 27, 2009 Notice at [http://www.hc-sc.gc.ca/dhp-mps/prodpharma/applic-demande/pol/notice\\_avis\\_e-cig-eng.php](http://www.hc-sc.gc.ca/dhp-mps/prodpharma/applic-demande/pol/notice_avis_e-cig-eng.php)

- **March 2009: Hong Kong bans the use and sale of electronic cigarettes, unless registered as a pharmaceutical product with the government.**  
[http://www.tco.gov.hk/textonly/english/infostation/infostation\\_04032009.html](http://www.tco.gov.hk/textonly/english/infostation/infostation_04032009.html) and [http://www.thestandard.com.hk/news\\_detail.asp?pp\\_cat=30&art\\_id=79120&sid=22983216&con\\_type=3](http://www.thestandard.com.hk/news_detail.asp?pp_cat=30&art_id=79120&sid=22983216&con_type=3)
- **January 2009: Jordan's Ministry of Health banned the import of the electronic cigarettes,** citing World Health Organization's health concerns.  
<http://www.jordantimes.com/?news=13857>
- **January 2009: Victoria (Australia) bans e-cigarette use, sales and advertising.** Australian law classifies nicotine as a poison (only exemption is for cigarettes and for cessation products). E-cigarettes have not been evaluated for safety and efficacy:

According to a spokesperson for the [Federal Department](#) of Health and Ageing, every form of nicotine except for replacement therapies and cigarettes are classified as a form of poison. Last October, the National Drugs and Poisons [Schedule Committee](#) (NDPSC) decided that this classification should remain for e-cigarettes, which effectively makes it illegal to sell nicotine e-cigarettes in all states and territories.

"The e-cigarette has not been evaluated for safety or efficacy," said a spokesperson for the Federal Department of Health and Ageing. "Nicotine has well recognized physiological and pathological effects and, as with conventional cigarettes, the e-cigarette would be expected to lead to, and sustain, nicotine addiction." <http://www.news.com.au/technology/story/0,28348,24930638-5014239,00.html>

- **March 2008: Turkey's Health Ministry banned the sale and importation of e-cigarettes,** classifying e-cigarettes as a pesticide. Ads of ecigarettes are also banned.  
<http://arama.hurriyet.com.tr/arsivnews.aspx?id=-621407> and <http://arama.hurriyet.com.tr/arsivnews.aspx?id=-622303>

### 13. Transcript highlights from FDA's July 2009 media call re: preliminary analysis

Several leading experts provided information on the FDA's media call in July 2009, to discuss the FDA's findings in their preliminary analysis of a sampling of e-cigarettes:

**Dr. Jonathan Samet**, Director of the Institute for Global Health at the University of Southern California, is a leading authority on the health effects of smoking and air pollution and he serves as Consulting Editor and Senior Scientific Editor for the Surgeon General Reports on smoking and health including the 1985, 1986, 1990, 2004 and 2006 reports. Dr. Samet commented on the study, stating that:

- "... one group of compounds were the **tobacco specific nitrosoamines** which are quite closely linked in smokers to lung cancer and they were found in detectable - they **were detected.**" (page 19)

**Mr. Westenberger** is the Deputy Director at the Center for Drug Evaluation and Research at FDA in the Division of Pharmaceutical Analysis. He has served with FDA for 39 years. The CDER is where the FDA's preliminary testing was conducted on electronic cigarettes. Testing was performed by a team of analytical chemists under his supervision and he wrote the final report. On the media call, Mr. Westenberger stated the following:

- "... the majority of the **samples tested positive for the presence of tobacco specific impurities suspected of being harmful to humans such as anabasine, myosmine, and beta-nicotyrine.**" (page 4)
- "... **Half the samples also tested positive for the presence of certain tobacco specific nitrosoamines that are known human carcinogens such as N-(nitrosonornicotine), and 4-(methylnitrosoamino)-1-(3-pyridyl)-1-butanone.** In addition to these carcinogenic impurities one cartridge was found to have approximately 1% diethylene glycol present a toxic compound to humans. As far as the manufacturing quality **some of the cartridges listed as containing no nicotine were actually found to have nicotine present.**" (page 4)
- "... **Variability in the amount of nicotine delivered is also an issue. Three different cartridges with the same label contained significantly different amounts of nicotine per puff** ranging anywhere from 27 to 43 micrograms. All of these results indicate a lack of general overall quality control. **In summary these results suggest e-cigarettes could have safety and quality concerns.**"(page 4)

**Dr. Jonathan Winickoff** is a practicing Pediatrician and Assistant Professor of Pediatrics at Harvard Medical School and the Chair of the American Academy of Pediatrics Tobacco Consortium.

- "... electronic cigarettes are available on the market in a **variety of flavors** such as bubblegum, chocolate and mint. **Past experience suggests that these products may be particularly appealing to young people.**" (page 7)
- Flavored regular cigarettes promote youth initiation and help young occasional smokers to become daily smokers. Similarly e-cigarettes might encourage children, teens and young adults to take their first step toward smoking cigarettes. **Young people may be attracted to these products due to their novelty, safety claims and the availability of the products in a variety of fruit, candy, cola and chocolate flavors.** In addition these products are **easily accessed online, in stores and at mall kiosks where young people often hang out.** (page 7)
- **One cigarette company is claimed to be putting vitamins in the cartridges. This is either a direct or an implied health claim that may confuse some potential users into thinking that the product promotes health** when it actually might lead to nicotine dependence. The advertising warning that "this product is for adults only" appears tailor made to appeal to kids. (page 7)
- Nicotine addiction is one of the hardest addictions to break. **An expanding pool of unregulated nicotine products that appeal to youth might increase the overall number of individuals who become nicotine dependent for life** and later use regular cigarettes. (page 8)
- Once you've smoked the e-cigarette and are nicotine dependent the leap to a regular cigarette may not seem as great. **Between 1/3 and 1/2 of all youth who try a regular cigarette will become daily smokers because of the highly addictive nature of nicotine.** It is therefore **vital to decrease exposure to products that would lead to experimentation with nicotine. It is not a safe drug to try.** (page 8)
- **My last point is that nicotine can be toxic in higher amounts for adults but it takes much less to have toxic effects in children.** It is unclear what safety mechanisms are in place for these devices. For example, **a young child modeling a parent might be able to inhale the entire nicotine load of an e-cigarette cartridge simply by puffing until it was empty.** (page 8)

## **14. New Jersey Nuisance Code**

### **NJSA 26:3-46. Abatement of nuisances**

The local board, within its jurisdiction, shall examine into and prohibit any nuisance, offensive matter, foul or noxious odors, gases or vapors, water in which mosquito larvae breed, and all causes of disease which may be known to the board or brought to its attention, which, in its opinion, are injurious to the health of the inhabitants therein, and shall cause the same to be removed and abated at the expense of the owner.

### **NJSA 26:3-47. Abatement without ordinance**

The power given to the local board to remove and abate nuisances, sources of foulness, or causes of sickness hazardous to the public health, shall not depend upon whether the board has exercised its power to pass, alter, or amend ordinances in relation to the public health.

### **NJSA 26:3-48. Nuisance on public property; notice**

Whenever a nuisance, noxious odors, gases or vapors, water in which mosquito larvae breed, or cause of ill health or disease is found on public property or on a highway, notice shall be given by the local board to the person officially in charge thereof to remove and abate the same within such time as the board may specify. If he fails to comply with the notice, the mode of procedure shall be the same as is hereinafter provided in case of a like condition existing on private property.

### **NJSA 26:3-49. Nuisance on private property; notice**

Whenever any nuisance, noxious gases or vapors, water in which mosquito larvae breed, or cause of ill health or disease is found on private property, the local board shall notify the owner to remove and abate the same, at his own expense, within such time as the board may specify. A duplicate of the notice shall be left with one or more of the tenants or occupants. If the owner resides out of the state or cannot be so notified speedily, a notice left at the house or premises with the tenant or occupant, or posted on the premises, shall suffice.

### **NJSA 26:3-50. Failure to comply with notice; abatement**

If the owner when notified, as provided in section 26:3-49 of this title, shall not comply with the notice or order of the local board within the time specified, the board shall proceed to abate the nuisance and remove the cause of such foul or noxious odors, gases or vapors, water in which mosquito larvae breed, or other thing detrimental to the public health.