

Facts about E Cigarettes

Protecting your property from damage and yourself from liability

There is no longer any question that exposure to secondhand tobacco smoke is dangerous. (Secondhand smoke is the smoke that comes off the end of the cigarette or cigar combined with the smoke exhaled by the person who is smoking.) According to the U.S. Surgeon General report of December, 2010, cigarette smoke contains more than 7,000 chemicals and compounds. Hundreds are toxic and more than 70 can cause cancer. Also, the Surgeon General has stated *for some time* that there is no safe level of exposure to secondhand tobacco smoke.

In addition, air quality scientists are showing that secondhand tobacco smoke can actually move from one unit to another, even in high rise buildings. A recent study published by the American Academy of Pediatrics showed that children living in apartment buildings (where smoking is permitted) with parents who don't smoke showed evidence of exposure to tobacco smoke.

Apartment owners and condominium boards have the legal right to regulate the use of tobacco products in units, common areas inside and outside and on balconies and patios. So what else is new? How about Electronic Cigarettes?

And Now There Are Electronic Cigarettes!

Electronic cigarettes (e-cigarettes) are devices, about the size and appearance of a regular cigarette. They operate electronically by vaporizing a solution in a cartridge that contains nicotine, and creating a mist which is then inhaled. They come in various flavors, and the nicotine cartridges are supposed to be in various strengths.

When a user inhales on the mouthpiece, the vaporizer is turned on and converts the liquid in the cartridge into a vapor. A rechargeable battery powers the vaporizer and there is an indicator light to show when the device is in use.



- Cartridges are sold with various amounts of nicotine, from 0 mg. (milligrams) to 18 mg. of nicotine or more. Researchers have found that the amount of nicotine advertised on the product may be different from the actual amount in the cartridge.
- Some users refill their own cartridges, which may be dangerous because it involves dealing with toxic levels of nicotine. Some refill bottles contain over 1,000 mg. of nicotine, and the fatal dose for children is estimated at only 10 mg. For adults, the fatal dose is estimated at 30-60 mg.
- Tests by the FDA (Food and Drug Administration) have shown that the liquid in some

e-cigarette cartridges contained detectable levels of known cancer causing chemicals besides nicotine. In one sample, the FDA also detected diethylene glycol, a chemical used in antifreeze that is toxic to humans.

- Scientists are suggesting that **the mist or vapor that comes off the end of the e-cigarette contains a complex mixture of chemicals and not just pure nicotine.** Nicotine causes the formation of cancer causing chemicals when it reacts with nitrous acid, a common component of indoor air. See the explanation of third-hand smoke above. The mist or vapor may be an irritant to children and to persons with asthma and other lung conditions. It may also have some other long-term effects.
- Because e-cigarettes look like regular cigarettes, their use in places where smoking is banned can be disconcerting. Also, people who are addicted to real tobacco products may believe that using a real cigarette will be acceptable in a location where e-cigarettes are being used.
- Some industries, cities, states, and countries are banning the use of e-cigarettes wherever smoking is prohibited. E-cigarettes have already been banned outright in Australia, Brazil, Canada, Israel and Mexico.

Health advocates are recommending that e-cigarettes not be used in areas where people will be exposed to the vapors they give off until much more is known about them. For landlords and condominium boards, banning e-cigarettes except in specific outdoor locations may be the best solution for now.

New Information: A study published in *Indoor Air* from the Fraunhofer Wilhelm-Klauditz-Institut in Germany examined secondhand emissions from several e-cigarettes in a human exposure chamber. Each e-cigarette was puffed 6 times and data were collected for a conventional cigarette, also puffed 6 times.

While the e-cigarette produced lower levels of toxins in the air for nonsmokers to breathe than the conventional cigarettes, there were still elevated levels of acetic acid, acetone, isoprene, formaldehyde and acetaldehyde, averaging around 20% of what the conventional cigarette put into the air.

Thus, while not as polluting as a conventional cigarette, the e-cigarettes *are* putting detectable levels of several significant carcinogens and toxins in the air. From the Blog of Stanton A. Glantz, Ph.D.

Prepared by the Smokefree Apartment House Registry
P.O. Box 246, Newbury Park, CA 91319
A project of Smokefree Air For Everyone (S.A.F.E.)
818-363-4220 www.smokefreeapartments.org

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