

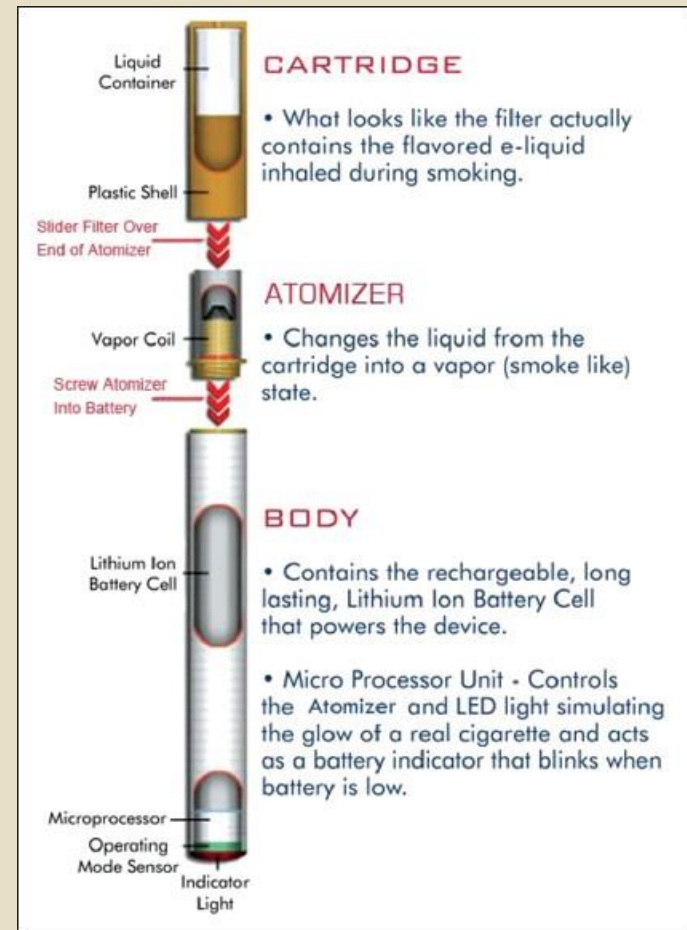


E-CIGARETTES OVERVIEW

Rob Earl, Staff to Rep. Bob Herron
Sponsor, HB 40

What are they?

- E-cigarettes are battery-powered electronic (nicotine) delivery systems.
- They consist of a cartridge that contains the “e-juice”, an atomizer that vaporizes the juice via a heating coil and the large body that is the lithium ion battery.
- There is also a small microprocessor that controls the atomizer and the LED light that lights up the end of the “cigarette”.



A cigarette by any other name still does not smell sweet...

- E-cigarettes deliver nicotine, produce “smoke” and imitate the practice of smoking.
- First generation devices also termed, “Cigalikes”.
- The subsequent generations of the product have been-rebranded as vape-pens, e-hookah’s, or hookah-pens.



Tank Systems

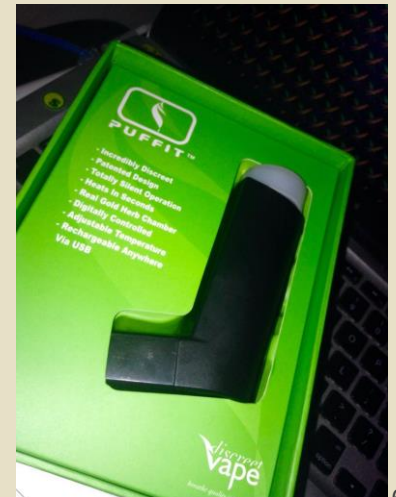
- ▶ The refillable tank system is the more popular device now.
- ▶ The “tank”, also known as a cartomizer is the cartridge and atomizer in one piece.
- ▶ You can refill the tank with customized e-juice.
- ▶ These devices can be hacked and modified





Dry/Whole “Herb”

- ▶ You can use these devices to smoke marijuana and other drugs.
- ▶ They do not smell like tobacco smoke nor pot which makes their use hard to detect.
- ▶ People use them indoors, kids are using them in schools.



E-juice

- ▶ Propylene glycol or vegetable glycerin, nicotine, flavorings.
- ▶ Propylene Glycol:
 - ▶ generally recognized as safe to be used in cosmetics, pharmaceuticals and is commonly used in stage smoke.
 - ▶ causes eye and respiratory irritation and exposure should be limited according to the FDA safety data sheet.
 - ▶ safety has never been assessed for daily, deep inhalation into the lungs.
 - ▶ Studies show that heating propylene glycol creates carcinogens (Henderson et al., 1981)

Second-Hand Aerosol?

- ▶ Today's batteries are stronger, the liquid is heated to a higher temperature which aerosolizes more toxins in smaller more dangerous particles.
- ▶ The aerosol that is exhaled from the lungs is not “harmless water vapor” it contains nicotine, ultra-fine particles and chemicals and other carcinogenic toxins.
- ▶ Some research shows equal and even higher concentrations of toxicants in e-cigarette aerosol compared to tobacco smoke (Williams et al., 2013).
- ▶ Williams et al., found elevated levels in aerosol for tin, silver, iron, nickel aluminum and silicate nanoparticles (Williams et al., 2013).

Cessation Research

- ▶ Though studies show a reduction in cigarette consumption initially, after a year of using e-cigarettes as a cessation device, 89% had not quit and were still using traditional cigarettes. (Adkison, et al., 2013).
- ▶ People using e-cigarettes were significantly *less* likely (by about 1/3) to have quit cigarettes at follow-up.
- ▶ There is no difference between placebo e-cigs and nicotine e-cigs in quit rates (Vansickle, AR, 2010)
- ▶ Smoking 1–4 cigarettes per day was associated with a significantly higher risk of dying from ischemic heart disease and from all causes, and from lung cancer in women (Bjartveit and Tverdal, 2005).

Harms?

- ▶ E-cigs could serve as an initiation tool for nicotine addiction and tobacco use in youth.
- ▶ E-cigs could re-normalize cigarette smoking in public.
- ▶ E-cigs could discourage or delay tobacco cessation because they are viewed as “safer”.
- ▶ E-cigs could tempt former smokers to return to nicotine and relapse into smoking.
- ▶ E-cigs can be used to discretely “vape” THC oil.

Conclusion

- ▶ E-cigarettes should be considered a tobacco product and should be subject to all laws and regulations that govern tobacco products.
- ▶ More research needs to be done into e-cigarettes, their potential benefits and harms.
- ▶ E-cigarettes are now included in the Juneau Clean Air Ordinance which means that there is protection from second-hand aerosols inside public places in Juneau.

Thank You

HB 40 – Relating to the use of electronic cigarettes

Representative Bob Herron, Sponsor