

# ELECTRONIC CIGARETTES

## Ingredients & adverse reactions



These ingredients may not be in the vapors of all electronic cigarettes. Of those e-cigarette vapors that have been tested, here are the chemicals that have been present:

**Acrolein:** When heated at high temperatures, can cause a vapor. It is not known to cause cancer, but can cause irritation to the eyes and lungs.

**Formaldehyde:** Used to preserve dead bodies and is used in wood products. Increases the risk of cancer of the nasal passages.

**Diethylene Glycol:** Is poisonous, can cause kidney failure and it is not allowed for use in food by our federal government. Commonly used in antifreeze.

**Propylene Glycol:** Can cause irritation to the eyes, throat and lungs. The EPA considers it so toxic, it requires gloves, clothing, goggles and disposal by burying and warns against skin contact to prevent brain, liver and kidney abnormalities.

**Vegetable Glycerin:** Used as a skin softener and also used in baked goods to keep in moisture. Can cause pulmonary problems such as pneumonia and pleurisy (inflammation of the lining of the lungs.)

**Toluene:** Used as a solvent, likely to dissolve the above items into ultrafine particles. Can cause cancer and is a reproductive toxin.

**Diacetyl:** Used as a food additive, most commonly in microwave popcorn. When inhaled, could cause "popcorn lung".

**Pyrazine:** Reinforces the addictive qualities of nicotine. Prolonged exposure can result in brain damage.

**Arsenic:** Found in bug spray. Strengthens copper (the copper coils.)

**Benzaldehyde:** Makes perfume smell nice. More commonly used in cherry flavored products. It irritates the airways.

**Cadmium:** Used in batteries, particularly rechargeable batteries.

**Fluorine:** Keeps your refrigerator cold.

**Aluminum:** Care to inhale a soda can? Aerosol contains higher concentrations than conventional cigarette smoke. Acts as a metalloesrogen which can increase the risk of breast cancer.

**Lithium:** Used to make rocket fuel.

**Rubidium:** Turns fireworks purple.

**Lead:** Signs of lead poisoning include abdominal pain, vomiting, constipation, headaches, difficulty with thinking or concentration, loss of appetite and weight loss, muscle weakness, mood swings, trouble sleeping.

In 2010, an average of one person per month had nicotine poisoning from e-cigarettes. In 2017, it averaged 204 per month with 51% of those under the age of six (the highest rate was year 2014 with an average of 335 per month.) Liquid nicotine can be absorbed through the skin causing an overdose (agitation, dizzy, nausea.)

Call **800-222-1222** for the American Association of **Poison Control** Centers. An e cigarette can have anywhere from 6-34 mg of nicotine, even among the same brand.

**Reported effects from using e-cigarettes:**

- Hearing loss
- Skin Rashes
- Explosions
- Nausea/vomiting
- Joint pain
- Persistent cough
- Nicotine poisoning
- Hypotension (low blood pressure)
- Swelling
- Dizzy
- Headaches/migraines
- Chemical taste in the mouth/chemical breath

Many people have used e-cigarettes without any adverse effects and some have been able to quit nicotine completely although studies are mixed as to whether or not it helps people quit smoking. Like any product that contains a variety of known and unknown chemicals, be aware of reactions to using them. Keep them away from children and pets.

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*E-CigsAdverseReactions2019*



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