

Smoking: How E-cigarettes and Vaping Affect Your Body

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What Is Vaping?

It's when you use a handheld tube, or tank, attached to a mouthpiece that makes a vapor you inhale. There are different types, such as vape pens, e-cigarettes, e-hookahs, and mods. But they all heat liquid chemicals ("e-juice") into a mist you breathe in like a cigarette or pipe.



Is Vaping Safe?

We don't know all the risks. But in the U.S., several people have died and hundreds had lung injuries linked to vaping. Many used marijuana products, but not all. Until we have the answers, the CDC says:

- Youths, young adults, and pregnant women shouldn't vape.
- If you don't vape, don't start.
- If you vape, don't buy devices or liquids off the street.
- Don't change a vaping device or add anything to it that the maker didn't intend.



What's in the E-Liquid?

The FDA regulates e-liquids sold in stores, but not ones you buy on the street. The liquid, or "e-juice" can contain marijuana or other drugs. But nicotine, which is known to be addictive, is the most common active ingredient. The liquid has other chemicals that may be dangerous. Two of them -- diacetyl and formaldehyde -- are linked to lung disease and cancer. Researchers are looking at the health effects of other e-juice ingredients.



Flavoring

Some e-juice is flavored. Even without nicotine, these flavorings can cause DNA damage or kill cells that line your blood vessels. One study showed that cinnamon and menthol flavors were especially harmful. Young people may be drawn to vaping by sweet, candy-like flavors and smells. To help stop this, several U.S. states have banned the sale of flavored vaping liquid. The federal government also plans to ban their sale nationwide.



Toxic Metals: Surprising Byproduct

Besides chemicals, researchers have found levels of metals in e-cig vapor that may not be safe. These include lead, chromium, and nickel, as well as the metal-like element arsenic. Studies suggest that most of these metals are released by the coils inside the device that heat the liquid. Breathing them in is linked to lung, liver, immune system, and brain damage, as well as several cancers.



Nicotine and Your Body

Nicotine in e-liquid goes quickly from your lungs to your bloodstream. It causes your body to release adrenaline, a hormone that raises your pulse, blood pressure, and breathing rate. This could play a role in raising your heart attack odds. You may also feel more alert and need to cough. If you vape marijuana, the high will be stronger than if you smoke the same amount. You may feel more anxious. Your eyes and mouth will be drier, too.



Is Vaping Addictive?

Nicotine is highly addictive. So you're likely to get hooked if you vape regularly. Young people are especially at risk of becoming addicted. Because their brains are growing so quickly, new habits take root very fast, and they "learn" to be dependent easily. Nicotine can also wire the brain for addiction to other drugs, like cocaine and alcohol.



Vaping and Your Heart

Studies show vaping may make heart disease more likely. Nicotine boosts plaque buildup in your arteries, which makes it harder for blood to reach your vital organs. This can lead to a heart attack or stroke. Smoking marijuana raises your heart rate, which makes your ticker work harder. Vaping the drug strengthens this effect. Just being around people who are vaping is a risk because you can breathe in the vapor.



Vaping and Your Lungs

You might cough and wheeze. If you have asthma, vaping can make it worse. Scientists think the chemicals often found in e-juice can cause other serious lung problems. A chemical called acrolein, for example, is mainly used to kill weeds. It can cause sudden lung injury and trigger serious respiratory illnesses like COPD and lung cancer.



Vaping and Your Brain

Your brain continues to grow until age 25. Before then, it's highly sensitive to the effects of e-cigarette chemicals, especially nicotine. It can disrupt your brain growth, with lasting effects on your learning and thinking skills. It's also linked to depression and schizophrenia.



Vaping and Your Immune System

Scientists already know that nicotine and marijuana can weaken your body's ability to fight germs. Research shows that vaping is especially bad for your immune system.



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