

# ESCAPE THE VAPE

## WHAT IS VAPING?

Vaping is inhaling aerosol from a device, sometimes called an e-cigarette.

The device is filled with vape liquid, it heats up, the liquid is aerosolized into millions of tiny droplets, and then inhaled.

### What's in the liquid?

Vape companies call it "juice," which sounds harmless. They even use fake flavors to make it taste like candy, cakes, and fruit. But it's not flavored air. And it's not just water. Vape liquid is a mixture of highly addictive nicotine, potentially harmful chemicals, and other additives that can damage your body.

### What's in the aerosol?

Aerosol almost always contains chemicals that weren't originally added into the liquid.



**Benzene**

### How can that be?

Heating the vape liquid produces dangerous byproducts, including heavy metals like lead, aluminum & nickel. It's chemistry at work. And it means that you can't avoid those chemicals by mixing your own liquid or buying local or organic versions.

# THE CHEM CREW

ESCAPE THE VAPE

## Diacetyl



### What it's used for:

As a liquid, diacetyl gives foods a buttery taste such as piña colada & chocolate cake. In a recent study, researchers found diacetyl in more than 75% of the vape liquid they tested.

### How it affects the body:

It's okay to EAT small amounts of diacetyl, but inhaling it can cause "popcorn lung," a serious disease that first affected a group of microwave popcorn factory workers. The disease causes scarring of the tiny air sacs in the lungs, resulting in wheezing, coughing, and shortness of breath.

## Aluminum

### What it's used for:

You probably use aluminum every day. It's in foil, soda cans, door frames, hair spray cans, screens, siding, engines, vacuum cleaners, toasters, kitchen utensils...need we go on?

### How it affects the body:

Inhaling aluminum has been shown to cause chemical pneumonia—an inflammation of the lungs caused by inhaling toxins or poisons. In kids, toxic levels of aluminum have been shown to cause slowed growth and deformed bones.



## Silver



### What it's used for:

Silver is used in photography, mirrors, medical equipment and jewelry!

### How it affects the body:

Inhaling silver dust can cause breathing problems, lung and throat irritation, and stomach pain. Prolonged exposure to silver dust can cause permanent blue-gray staining of the eyes, nose, mouth, throat, and skin.



### What it's used for:

Nicotine is highly addictive and is found in all forms of tobacco such as regular cigarettes, vape liquid, and chewing tobacco.

### How it affects the body:

Nicotine affects the brain. When you use nicotine products, it's quickly absorbed into the bloodstream, reaching your brain within seconds.

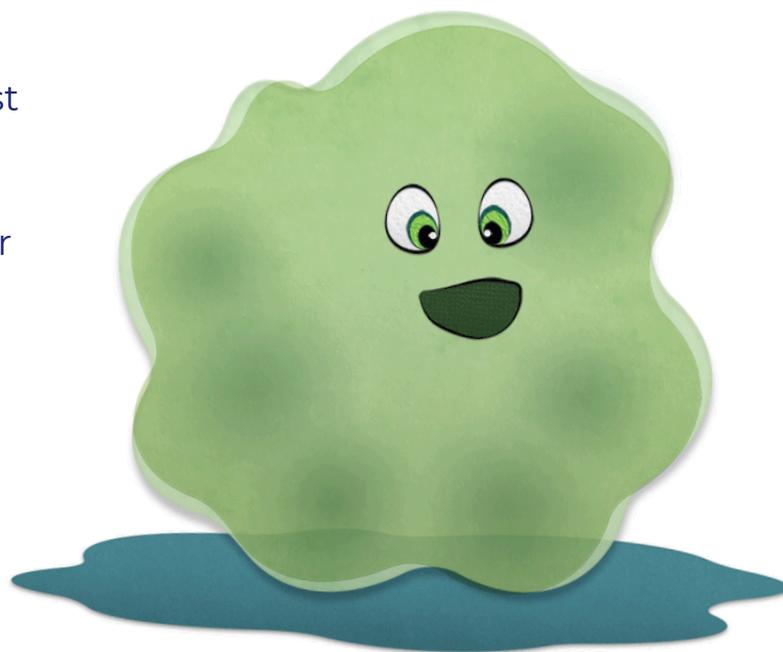
## Benzene

### What it's used for:

Benzene is produced by volcanoes and forest fires, and is a byproduct of crude oil production. It's used in paints, gasoline, as well as an ingredient in vet medicines that kills parasites. Tobacco smoke is also a major source of benzene.

### How it affects the body:

Inhaling benzene can cause dizziness, tremors, confusion, and rapid or irregular heartbeat. Long-term exposure to benzene can cause your body's cells to not work correctly, damaging things like your immune system. It's also a carcinogen, which means that it's known to cause cancer.



## Arsenic

### What it's used for:

Since ancient times, arsenic has been used as a poison. These days, it's commonly found in rat poison, pesticide, and treated wood.

### How it affects the body:

Arsenic is toxic. Low doses can cause nausea, vomiting, diarrhea, and stomach cramps. Larger doses can cause abnormal heart beat, damage to blood vessels, skin warts, and death. Inhaling arsenic can lead to lung cancer.



## Cadmium



**What it's used for:**  
Batteries!

**How it affects the body:**  
Low levels of cadmium can cause nausea, vomiting, and diarrhea (FUN!). Inhaled, cadmium dust causes dryness of the throat, choking, headache, and pneumonia-like symptoms. A cadmium poisoning disease called itai-itai, Japanese for "ouch-ouch," causes aches and pains in the bones and joints.

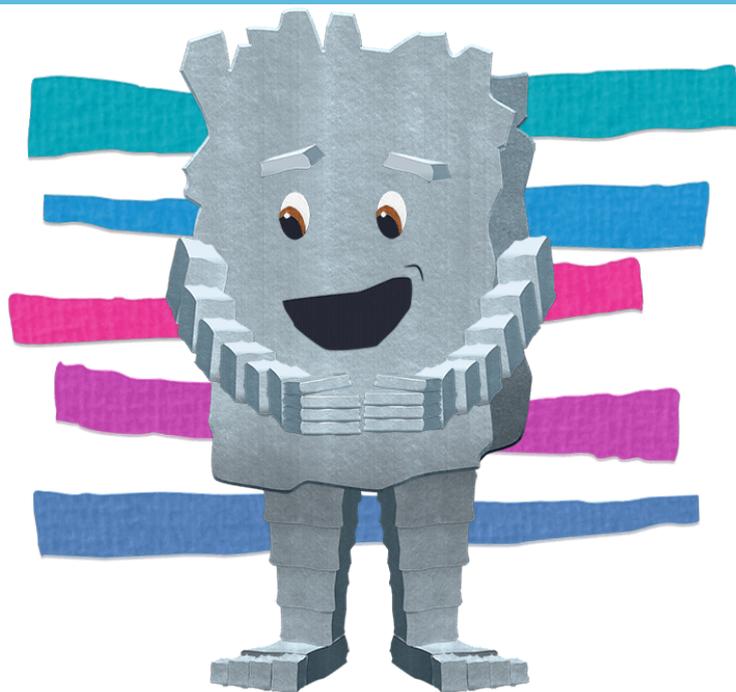
## Lead

**What it's used for:**

Lead's been used to make things like pipes, roofing, and paint. It's also in the heavy apron used to shield people from extra radiation during an x-ray.

**How it affects the body:**

Two words: Lead poisoning. Lead is known to cause both immediate and long-term health problems, especially in kids. It's toxic when swallowed, eaten, or inhaled, and can lead to nerve damage, digestive system issues, and death. In young people, significant exposure has been shown to cause a drop in IQ level.



## Formaldehyde

**What it's used for:**

Formaldehyde is used in products such as carpets, furniture, glue, hair straighteners, and concrete. But, it's mostly known for embalming dead people.

**How it affects the body:**

Inhaling formaldehyde can make you feel sick, causing symptoms like sore throat, cough, scratchy eyes, and nosebleeds. It's also known to cause cancer, particularly of the nose and throat.



## Fluorine



### What it's used for:

Fluorine is the part of toothpaste that helps prevent tooth decay (yay fluoride!). In the chemical world, the gas form of fluorine is known to be extremely reactive. That's why it's been used to melt glass and make rocket fuel.

### How it affects the body:

When inhaled in small amounts, fluorine can cause severe irritation to the respiratory system (nose, throat, and lungs). In large amounts, it can cause death.

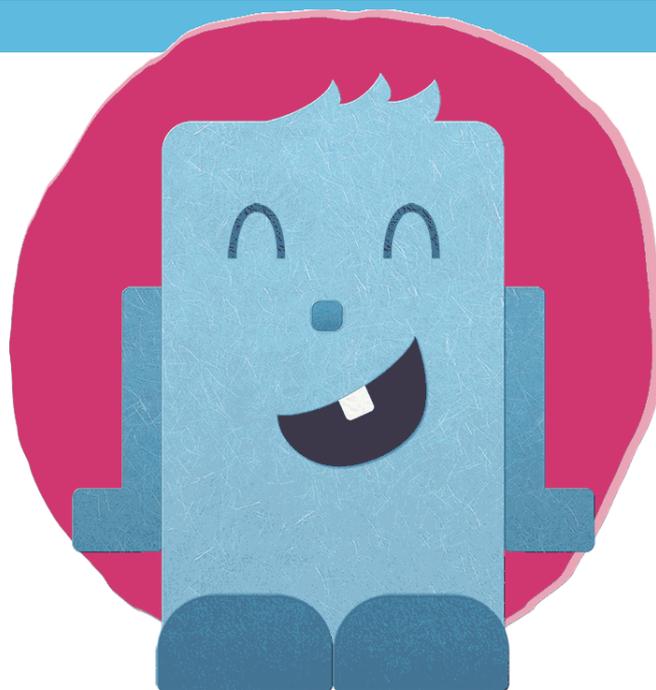
## Manganese

### What it's used for:

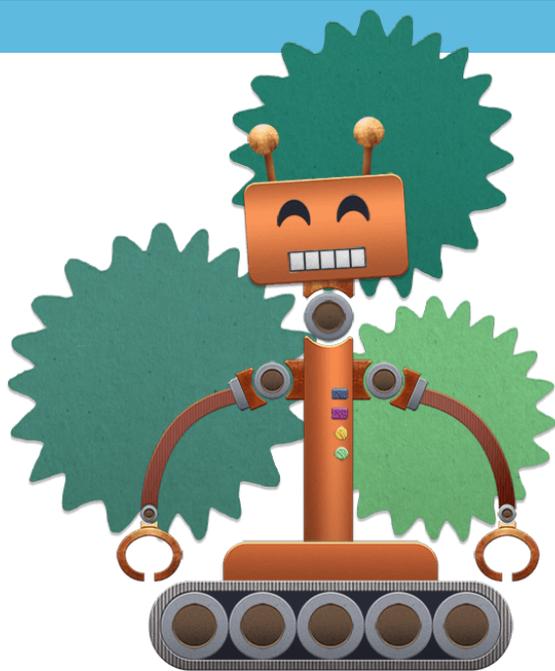
Manganese is used to make soda cans, rifle barrels, railroad tracks, and prison bars.

### How it affects the body:

Manganese is unsafe when inhaled over long periods of time. Excess manganese in the body can cause symptoms such as hallucinations, forgetfulness, nerve damage, tremors, headaches, and insomnia. It's also been linked to Parkinson's disease, impotence in men, and schizophrenia.



## Copper



**What it's used for:**  
Wires and plumbing.

### How it affects the body:

Real talk: humans need a very small amount of copper in their body to be healthy. But when excess copper enters the body, it can damage major organs like the brain, liver, and kidneys.