

Bridgewater-Raynham Regional School District
Health Services
HEALTH BULLETIN
February 13, 2018

What is vaping? What is juuling?

Vapes (sometimes called e-cigarettes) are devices used to ingest vaporized liquid nicotine, liquid THC from marijuana, flavorings, or a combination. Vape devices consist of a battery, an atomizer with a heating coil, and an absorbent material that absorbs a liquid called “e-juice” that can contain nicotine, THC, flavoring, and always containing a variety of chemicals.

The battery allows the atomizer to heat the liquid which creates an aerosol vapor that is breathed into the lungs and breathed out into the air repeatedly - sometimes forming large aerosol clouds. Spend some time conducting YouTube searches to view how-to videos, vape cloud contests, and user reviews of vape products to get a sense of the vape culture.

Vape products were created by the tobacco industry to replace lost customers of cigarette smoking, which has been steadily declining over the years. There are literally thousands of e-juice flavor options such as Cool Cucumber and Mango, a marketing tactic to lure new customers that is especially appealing to young people. Many consumers are unaware of the harms from vaping. Some people believe that it’s safer than smoking, even though there is no science yet to support that theory. This hottest vape product on the market is the juul vape, (from www.juul.com). Juuls, as they are called, are appealing to the youth and college market for several reasons: sleek look; slim, discreet size; comes with a USB charger; easy to use pods in desirable flavors; low cost (around \$40); and high function. Basically, juuls work well: the technology creates a strong “throat hit” and delivers bursts of nicotine to the user. One pod – which might be shared with a group of friends in one hangout, or consumed over the course of a few days by an individual user – contains the same amount of nicotine as a pack of cigarettes.

How common is vaping?

There has been a dramatic increase in the use of vapes by youth in the last few years (tripling among US HS students between 2013 and 2014). Vaping is now the most common way to use nicotine in the United States. The tobacco industry is marketing to young people with fruity flavorings, cool technical devices, and a vape culture, that is not branded like a tobacco product.

We have recently observed an overall increase in youth use over the past year at our middle schools and high school. We will continue to closely monitor trends and adapt our health curriculum and supports accordingly. In Massachusetts, almost half (45%) of all high school students report having tried vaping at some point in their life, and 24% report using a vape in the past 30 days (according to the 2015 Statewide YRBS). Massachusetts (30% vs. 24%).



How harmful is vaping?

- It's just too new to tell what the long-term health consequences of vaping will be. We do know from research that the chemicals found in vapes are not harmless to the user or the people around them.
- Ear, eye, and throat Irritation is common among people who vape.
- Nicotine is highly addictive – It doesn't matter how nicotine is ingested, because the nicotine itself is addictive. All juul products contain large amounts of nicotine (up to 5%). The earlier teens start using any product with nicotine, the stronger their addiction will be and the harder it will be for them to quit (according the American Academy of Pediatrics, AAP). Only 4% of adolescents who attempt to quit nicotine are successful. Early use of vapes is also linked to cigarette smoking, meaning it is fairly common to use both eventually. There is no evidence that vaping helps anyone discontinue nicotine, even though it is promoted as a 'cutting down' strategy for adult smokers.
- The aerosols produced by the chemicals in e-juice, enter into the user's lungs and leave chemical residue behind. These may include propylene glycol, glycerin, flavorings, nicotine and other harmful chemicals and toxins, some known to cause cancer. Even the flavorings that do not contain nicotine have chemicals and toxins.
- Popcorn lung, or bronchiolitis obliterans, is an incurable medical condition that results from long term exposure to a flavoring chemical called diacetyl that is found in both traditional cigarettes and many e-juice products (<https://ehp.niehs.nih.gov/15-10185/#tab1>). Breathing in diacetyl may scar the smallest air passageways, causing coughing and shortness of breath.
- Correlated to polysubstance use and adult addiction – The early use of any substance – most commonly nicotine, alcohol or marijuana – increases the likelihood of other substance use and the chance of having a substance use disorder as an adult. There is no "gateway drug" that causes a young person to use another drug. But there is strong evidence that using anything early increases chances of addiction later in life. (<http://www.jhsph.edu/news/news-releases/2000/smoking-drugs.html>)
- Some vape devices are known to explode. Batteries can malfunction and cause vape devices to catch on fire or explode during use. This is common with cheaper models that have "mechanical mods" - as well as among inexperienced users.

- There are no federal regulations on e-juice products yet, so there are no child safety precautions on the caps, making them dangerous to others besides the user. Young children accidentally ingest the poisonous e-juice, thinking it's just cherry juice, etc.
- Third-hand smoke refers to the chemicals in vapes/aerosol that remain on surfaces and in dust, even after the vapor and aerosol are gone, which react with other chemicals in the environment to form toxic chemicals that are known to cause health problems.

What can do if my child is vaping?

- Intervene immediately –It is ideal to interrupt early experimentation before a habit or dependence sets in. Sometimes young people are simply bored, curious, or are participating so they can fit in or feel cool. Regardless of the reasons provided, early use is a major risk factor for a host of problem behaviors later and should not be taken lightly. Remember, most young people are not vaping. If your child is vaping, it's reason for concern.
- All teenagers make mistakes, it's completely normal and can be an opportunity to learn. Even when serious mistakes happen, try to keep your emotions in check. Take time to cool off then express your disappointment, anger, or frustration calmly. Believe it or not, kids do not want to disappoint their parents, so this is often an effective approach.
- Next, establish clear rules & consequences for having vape paraphernalia or for using nicotine. The long-term threat of addiction is usually not compelling for a young person. Think of immediate consequences that will affect your child right away.

We wanted you to be aware of the health implications associated with early use of these vaping devices. Please contact your health care provider, school nurse or counselor for additional resources or referral information. (Some are listed below.)

Thank you for your attention and concern.

Other resources:

<https://e-cigarettes.surgeongeneral.gov/>

<http://med.stanford.edu/tobaccopreventiontoolkit/E-Cigs.html>

Recent articles:

<https://www.npr.org/sections/health-shots/2017/12/04/568273801/teenagers-embrace-juul-saying-its-discreet-enough-to-vape-in-class>

<https://www.npr.org/sections/health-shots/2017/05/25/530026958/many-adults-dont-think-exposure-to-vaping-is-bad-for-kids>

<https://www.theverge.com/2017/11/16/16658358/vape-lobby-vaping-health-risks-nicotine-big-tobacco-marketing>

<https://www.cbsnews.com/news/more-teens-vaping-as-cigarette-smoking-declines/>