I was going to title this "Vaping THC for Dummies," but I thought it may be offensive to some and instructional to others. Frankly, until people started getting sick from what the Centers for Disease Control and Prevention (CDC) has awkwardly termed "E-cigarette, or Vaping, Product Use Associated Lung Injury" (EVALI), I never really gave vaping THC much thought. In the past few months, however, I have learned that there are different ways of vaping cannabis and one particular method is more dangerous than others.

Vaping dry herb, flower, bud or whatever term for dried cannabis plant material one wants to use:

There are multiple dry weed vaporizers available on the market and they all work in a similar manner. The dried plant product is placed and packed in the vaporizer. When turned on, the vaporizer acts as an oven (either a conduction or convection oven) and heats the dried herb, vaporizing the THC and related compounds without burning the plant product. The vaporized THC is then inhaled without the harsh burned plant smoke one may get with a joint, blunt or a bong.

Vaping concentrate, extract, wax, dab, shatter, BHO or any other names for a concentrated THC product:

Concentrates are created when THC and other related products are removed from the plant in either a mechanical or a solvent-based extraction process. Concentrates can range from 40% to over 90% THC and does not contain any plant matter that may produce harsh smoke when burned. Given the high THC concentration of the product, a little goes a long way. It is recommended by many that only experienced users use concentrates.
Vapes for concentrates and extracts work similarly to dry herb vaporizers. The concentrate is placed in the vaporizer heating chamber. When heated, the product transforms into a gaseous form and the resulting vapor is inhaled.

Vaping THC oil in cartridges or carts:

According to the CDC, the majority of EVALI cases are associated with the use of THC oil cartridges. To create the liquid for these cartridges, concentrates or extracts which are solid are dissolved in an oily base which can then be heated and vaporized. The cartridges can be purchased as pre-filled cartridges and used with the appropriate vaporizer or can be refillable cartridges and refilled with bulk THC oil.

Some of the many different clinical syndromes associated with EVALI include scary sounding names like acute eosinophilic pneumonia, organizing pneumonia, lipoid pneumonia, diffuse alveolar damage, diffuse alveolar hemorrhage, giant cell interstitial pneumonitis and acute respiratory distress syndrome. For those with a technical interest on the different clinical syndromes, more information can be found here and here. The CDC recently implicated vitamin E acetate as a potential cause of EVALI. However, with so many different clinical presentations, it is possible that there are other compounds in the THC oil sold by various different products that may be implicated in this disease outbreak in the future.

The Illinois Poison Center (IPC) tracks cases and trends of injury that are associated with cannabis. There are risks with the use of cannabis as some people are more vulnerable to adverse effects than others just like with any other pharmaceutical or non-pharmaceutical drug.

The IPC understands that people who like THC are going to use THC, and the number and frequency of people using the drug in Illinois will increase greatly after Jan. 1, 2020 when recreational cannabis becomes legal in the state.

In this environment, the IPC advocates for a simple harm reduction technique to avoid EVALI: If you are going to use THC, please do not use THC cartridges when vaping cannabis.

As always, we welcome your questions and comments, Mike

Click here for vaping and E-cigarette education resources (for adults, teens and educators

* [https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html)