Statement by the COPD Foundation Medical and Scientific Advisory Committee on Use of Electronic Cigarettes and Vaping

This statement is designed for patients, caregivers and the lay public

Introduction

Recent reports of severe and even fatal lung injury after using electronic cigarettes (e-cigarettes) is of concern. This brief was written to help the COPD community better understand the harms and benefits of e-cigarettes, vaping and similar devices. The COPD Foundation’s Medical and Scientific Advisory Committee (MASAC) looked at the available data to write this report for the COPD Foundation community. New information is arriving daily and may change our current suggestions.

Background

E-cigarettes are sometimes called “e-cigs,” “vapes,” “e-hookahs,” “vape pens,” and “electronic nicotine delivery systems” (ENDS). Using these may be called “Vaping”, “Juuling” or “Dabbing”. Each of these devices is different and may have different risks for each person with COPD.

The devices use a small container or pod filled with liquid or “juice”. Nicotine, THC and CBD (the active parts of marijuana), flavors, glycerol or ethylene glycol (also used in antifreeze), and other things are added to the liquid or juice. None of these are reviewed or approved by the government. The pods and the juice may be:

- made at home
- made by local dealers
- or purchased already made online, at vaping shops or in convenience stores.

All e-cigarettes and vaping devices include a heating element which heats the juice or liquid and things that have been added to form a vapor or mist that is breathed into the lungs. The nicotine and other things added into the liquid are quickly taken up by the lungs and may also go into the blood stream and the whole body. The vapor or mist from e-cigarettes or vaping contains chemicals called volatile organic compounds (VOCs) which can irritate, inflame and harm the lungs and other organs like the liver or heart. The added flavors like bubble gum can contain diacetyl that has been linked to “popcorn” lung (bronchiolitis obliterans). Heavy metals and formaldehyde which can cause cancer have been also been found in the devices and e-cigarettes. Users may not even know exactly what is in the vapor or mist that is going into the lungs.
The Food and Drug Administration (FDA) does review the safety of the foods that we eat and drugs that we take. This is not the case for e-cigarettes. FDA approval of e-cigarettes and vaping devices and liquids will not be required until 2022. Right now, some groups are working to speed up the FDA approval and some groups are working to slow it down. At this time, the FDA only requires that e-cigarettes include general health warnings. It is illegal to sell e-cigarettes to minors under age 18, and the FDA does monitor marketing for manufacturers of e-cigarettes. The FDA has no control of the local dealer made or home-made liquids for vaping or use in these devices.

E-cigarette and Vaping Associated Lung Injury (EVALI) Epidemic

An outbreak of lung injury has been linked to e-cigarette use and is called “E-cigarette and Vaping Associated Lung Injury” (EVALI). By October 25, 2019, the CDC reported more than 1,600 cases and 34 deaths from EVALI in 49 states. Those dying from EVALI ranged in age from 17 to 75 years. More people with EVALI and deaths are being reported every day.

Most of the people with EVALI used e-cigarettes or vaping with THC, coming from illicit dealers or friends and family. But, EVALI is not limited to this group. 1 out of 8 patients with EVALI used only nicotine products. The people who did the worst with EVALI were 50 and older or had heart or lung disease like COPD. We do not know exactly what causes EVALI, who is most likely to suffer EVALI and if this is new or has been around and just not noticed before.

Are e-cigarettes safer than tobacco cigarettes?

Stopping all tobacco cigarettes and replacing them with e-cigarettes or vaping may give people less exposure to toxic chemicals. However, mice who vaped had changes in their lungs much like changes caused by tobacco smoking. This included emphysema-like changes. The harms of using e-cigarettes for a long time are not known. The recent epidemic of EVALI suggests this possible benefit must be balanced against the risk of having some people with severe, and sometimes fatal events after vaping. People with COPD are likely to be at high risk for lung injury, failure and death with EVALI.

Recommendations

Adapted from the CDC guidance, MASAC agrees with the following:

• Everyone and especially people with COPD should not vape or use any of the device liquids that may contain THC, or CBD or that you get off the street or from family and friends. It may be hard to know what they really contain.
• People using oxygen should not use e-cigarettes or vape due to risk of fire from the device’s heating element.
• Contact your doctor, nurse, clinic or a hospital if you use e-cigarettes or other devices and develop cough, shortness of breath, chest pain, nausea, vomiting, stomach pain, diarrhea, or new tiredness, fever, or weight loss. These may become EVALI over days or weeks. EVALI has happened in people who vaped as long as 90 days ago.
• If you are trying to quit smoking cigarettes ask for help and use proven treatments like counselling and FDA-approved nicotine replacements and medicines. Talk to your doctor!
• If you have quit smoking cigarettes by using e-cigarettes or vaping---don’t go back to smoking. Instead use FDA approved nicotine gum, patches, lozenges, nasal spray, or inhaler. You can also ask for doctor or nurse about other FDA approved medicines to lower your urge to smoke. (Varenicline or Bupropion)

• If you see or know about a vaping or e-cigarette problem report it to your health department or the FDA at https://www.safetyreporting.hhs.gov/SRP2/en/Home.aspx?sid=4a255290-ae49-4e96-b911-5b511ba4fa5f

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https://www.ncbi.nlm.nih.gov/books/NBK507181/#sec_000021


3 https://www.cdc.gov/mmwr/volumes/68/wr/mm6841e3.htm


5 https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease/need-to-know/index.html