

SMOKING AND E-CIGARETTE USE INCREASES RISK OF CORONAVIRUS (COVID-19)

SMOKING AND VAPING INCREASE SEVERITY OF COVID-19

Individuals with a history of smoking are over 9 times more likely to develop severe illness when infected with COVID-19 than those with no smoking history [27.3% vs. 3.0%, $\chi^2 = 9.291$, $P = 0.018$] (Liu et al. 2020).

Menthol and other flavorings have been shown to cause more severe lung inflammation (Lin et al. 2019; Gerloff et al. 2017), a major risk factor for viral infection.

Smoking and e-cigarette use are associated with a significantly higher risk of the development of chronic obstructive pulmonary disease [COPD] (Osei et al. 2020). COPD is an important risk factor for the severity of illness of individuals with COVID-19 (Guan et al. 2020).

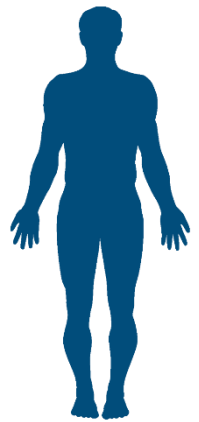
SMOKING AND VAPING DECREASE THE BODY'S DEFENSES

Tobacco use may increase the expression of angiotensin-converting enzyme 2 [ACE2], the binding receptor and point of entry for COVID-19 (Cai 2020).

Ciliary dysfunction is associated with e-cigarette use (Carson et al. 2017), facilitating viral entry through lungs.

Impairment of neutrophil function has been observed in e-cigarette users, including an increase in neutrophil extracellular trap formation, which is injurious to the lungs (Reidel et al. 2018; Law et al. 2017; Clapp et al. 2017).

E-cigarette flavorings have been shown to decrease cellular immunity in the respiratory tract (Murakami et al. 2007; Clapp et al. 2019; Chao et al. 2008; Kim et al. 2010; Jung et al. 2010; Kim et al. 2011).



SMOKING AND VAPING INCREASE SPREAD OF COVID-19

Smokers are more likely to have a cough during the asymptomatic phase of illness COVID-19, thus unknowingly spreading the disease. They are additionally more likely to misrecognize illness-induced cough to be "smoker's cough".

Smoking and vaping involves hand to mouth contact, which increases transmission risks of COVID-19 (CDC 2020).



HOW TO QUIT SMOKING AND VAPING TO PROTECT YOURSELF FROM COVID-19

It is very important for people who smoke and vape to make every effort to quit. There is support to help you.

- Using nicotine patch plus gum to quadruple your chances of success and/or one of the other approved smoking cessation medications (bupropion or varenicline).
- Pair these medicines with expert coaching and support from the quitline (**1-800-784-8669**) and SmokefreeTXT (**text the word "QUIT" (7848) to IQUIT (47848) for free help**).

With these steps, you will have the best chance of quitting smoking and vaping. Quitting smoking and vaping can help protect you and your family from COVID-19. Please share this information with relatives or friends who may still be smoking or vaping.

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