Keep Your Lungs Healthy and Safe!

Smoking and vaping affect your health. Tobacco smokers are at higher risk for infections in the lungs such as the flu, tuberculosis, and pneumococcal pneumonia than nonsmokers.¹⁻³ Tobacco smoking can also lead to long-term lung illnesses such as asthma, chronic obstructive pulmonary disorder (COPD), and lung cancer.⁴ Smoke breathed out by smokers (secondhand smoke) can also lead to lung problems like bronchitis and asthma, particularly in children.¹ Vaping and marijuana use can lead to some similar harmful health effects.^{5,6}

It is understandable that there is a lot of uncertainty during the Coronavirus Disease 2019 (COVID-19) outbreak. Information about COVID-19 is constantly evolving. Although there is currently limited research on the effects of smoking or vaping on COVID-19, smokers and vapers could be at higher risk of COVID-19-related complications.



COVID-19, Smoking, and Vaping

- COVID-19 is caused by a new virus that causes lung infections in some people. These infections range from mild to severe and can sometimes result in serious illness or even death.⁷
- Because the virus that causes COVID-19 affects the lungs, COVID-19 could be an especially serious issue for people who smoke or vape.⁸
- Based on early evidence from the COVID-19 pandemic, and what we know about smoking and other lung illnesses, it is possible that people who have weakened lung function or lung disease related to smoking, such as COPD, are at risk for serious complications from COVID-19.9,10
- Although it is too soon to know for sure, vaping may also affect the severity of lung infections like COVID-19.⁵

How Smoking and Vaping Affect the Lungs and the Immune System

- When the smoke from tobacco products enters the lungs, the cells that produce mucus make more mucus than normal. Cilia are little hair-like cell parts in the lungs that move the toxins and the mucus out of the airways and help clear the lungs. Cilia may also be damaged from smoking, and the lungs may be more inflamed, making it harder to get rid of excess mucus. The extra mucus buildup makes the lungs more prone to infection.²
- Smoking and vaping, whether it is tobacco or marijuana, lower the body's ability to fight off infections, and users are more likely to have a worse outcome when they get an infection.^{11,12}

Keep Your Lungs Healthy and Safe!

Recommendations

• Now is the time to stay healthy! Quit smoking or vaping. You can find more information on quitting resources from the <u>California Smokers' Helpline</u>. Helpline counselors are available six days per week for consultations and follow-up counseling, and there are several virtual options available including text, web chat, mobile phone apps, and Alexa Skills.



- Avoid secondhand smoke and aerosol. If you live in an apartment complex and are exposed to secondhand smoke or aerosol, reach out to your local public health department.
- Keep a smoke-free home to protect others. Secondhand smoke worsens lung health for nonsmokers, especially children.
- Urge your local policymakers to strengthen smoke-free policies to protect your community from smoke and aerosol.

References

- 1. Jayes, L., Haslam, P. L., Gratziou, C. G., Powell, P., Britton, J., Vardavas, C., Jimenez-Ruiz, C., Leonardi-Bee, J., Dautzenberg, B., Lundbäck, B., & Fletcher, M. (2016). SmokeHaz: systematic reviews and meta-analyses of the effects of smoking on respiratory health. *Chest*, 150(1), 164-179.
- 2. University of Pittsburg Medical Center. (2016). How smoking cigarettes affects your lungs. https://share.upmc.com/2016/04/how-smoking-affects-lungs/. Accessed on March 25, 2020.
- 3. Han, L., Ran, J., Mak, Y. W., Suen, L. K. P., Lee, P. H., Peiris, J. S. M., & Yang, L. (2019). Smoking and influenza-associated morbidity and mortality: a systematic review and meta-analysis. *Epidemiology*, 30(3), 405-417.
- 4. Arcavi, L., & Benowitz, N. L. (2004). Cigarette smoking and infection. Archives of Internal Medicine, 164(20), 2206-2216.
- 5. Hwang, J.H., Lyes, M., Sladewski, K., Enany, S., McEachern, E., Mathew, D.P., Das, S., Moshensky, A., Bapat, S., Pride, D.T., & Ongkeko, W.M. (2016). Electronic cigarette inhalation alters innate immunity and airway cytokines while increasing the virulence of colonizing bacteria. *Journal of Molecular Medicine*, 94(6), 667-67.
- 6. American Lung Association (LUNG 1). (2020). Health effects of smoking. https://www.lung.org/quit-smoking/smoking-facts/health-effects/smoking. Accessed on March 26, 2020.
- 7. U.S. Centers for Disease Control and Prevention. Coronavirus (COVID-19). https://www.cdc.gov/coronavirus/2019-ncov/index.html. Accessed on March 27, 2020.
- 8. US Centers for Disease Control and Prevention. (2020). Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html. Accessed on March 24, 2020.
- 9. Lippi, G., & Henry, B. M. (2020). Chronic obstructive pulmonary disease is associated with severe coronavirus disease 2019 (COVID-19). *Respiratory Medicine*.
- 10. Vardavas, C. I., Nikitara, K. (2020). COVID-19 and smoking: A systematic review of the evidence. *Tobacco Induced Diseases*, 18 (March), 20.
- 11. Huttunen, R., Heikkinen, T., & Syrjänen, J. (2011). Smoking and the outcome of infection. *Journal of Internal Medicine*, 269(3), 258-269.
- 12. National Institute on Drug Abuse. (2019). What are marijuana's effects on lung health? https://www.drugabuse.gov/publications/research-reports/marijuana/what-are-marijuanas-effects-lung-health. Accessed on March 30, 2020.

