

The importance of vaccinations and smoking cessation

Greetings! Congratulations for surviving shelter-in-place for 4 months.

- Get vaccinated with Prevnar 13 and Pneumovax 23 ASAP per CDC Guideline ¹. Please check with your primary care physician or pharmacist if you have not been vaccinated previously.
- Get the influenza vaccine this fall
- STOP cigarette smoking, vaping, marijuana smoking, and cigar smoking

Bacterial co-infection was responsible for the majority of fatal or life-threatening pneumonia during the 1918 influenza pandemic ². More recently, *Streptococcus pneumoniae* bacteria infections impaired the immune response of patients during the H1N1 virus pandemic in 2009. Therefore, pneumococcal vaccination should be expanded to include all adults.

Cigarette smoking allows *streptococcus pneumoniae* to attach to the lungs. Additionally, tobacco smoke suppresses innate immunity, which leads to increased viral replication and increases the severity of respiratory disease. Smoking is the strongest independent risk factor for invasive pneumococcal disease among healthy non-elderly adults. Smoking also increases the virus associated mortality risk among elders.

From my first COVID 19 letter, I hope you are taking N-acetylcysteine (NAC) 1000 mg twice a day. NAC is an immuno-modulator that inhibits several types of viral replication, suppresses cytokine dysregulation, and enhances adaptive immunity during viral infections.

Stay Healthy,

Helen Feng M.D.

References:

1. <https://www.cdc.gov/vaccines/vpd/pneumo/index.html>
2. The W-shape mortality – age distribution of novel H1N1 influenza virus helps reconstruct the second wave of pandemic 1918 Spanish flu. KY Lai et al. *Journal of pulmonary and respiratory medicine*, 5:245 ,2015.