

Doc Talk: Lung health – together we can breathe easier

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1. Can you talk a little bit about COVID-19 and lung health, understanding that the people with lung diseases are especially vulnerable?

As a pulmonologist and critical care specialist, I have seen firsthand how devastating COVID-19 can be to those with chronic medical problems such as COPD, obesity, renal failure, cancer and immunocompromised state. Most infected with COVID-19 have mild symptoms: fever, cough, sore throat, shortness of breath and fatigue. Unfortunately, some may develop serious illness and may require hospitalization. We know that the novel coronavirus targets the lungs and can cause severe pneumonia, decreased oxygen levels in the body and respiratory failure. In extreme circumstances, COVID-19 infections can lead to prolonged mechanical ventilation, organ failure and even death.

The medical community has learned a great deal about COVID-19 since the outset of the pandemic. We know that at-risk populations (the elderly, underserved African-American and Latino

communities, and those with poor access to medical care) are especially vulnerable. We also understand that COVID-19 can be transmitted by those infected with COVID-19 who are asymptomatic (especially the young and healthy). This is why it is so important for everyone to continue to practice social distancing, good hand hygiene and mask-wearing.

2. Can you offer advice that you share with your patients with COPD right now?

COPD is a chronic illness that affects the lungs. As mentioned, those with COPD are at risk to develop serious illness if infected with COVID-19. Those with COPD are also susceptible to worsening of their breathing as a result of exposure to smoke, air pollution or other lung infections.

3. With the recent fires, can you talk about how smoke and poor air quality is affecting your patients due to the smoke? Are you seeing more patients presenting with more serious conditions?

Inhalation of smoke from wildfires is dangerous and should be avoided. Smoke and poor air quality are

particularly detrimental to those with asthma, COPD and heart conditions. Those living in Southern California are familiar with how bad air quality used to be in Los Angeles. These poor air quality conditions are worsened with the burning of wood and other organic matter. A toxic and complex mixture of liquid droplets, fine particles and gases is produced by fires. The polluted air and smoke can enter our respiratory system and cause symptoms. As brush fires and smoke in the air have increased, more people are visiting their primary physicians, pulmonologists, urgent care facilities and emergency rooms. They report scratchy throat, watery eyes, runny nose, difficulty breathing, cough and chest discomfort.

Interestingly, the recent fires have had the positive effect of keeping people at home and away from public outdoor venues. With less people interacting with each other, less people are transmitting COVID-19 or other respiratory illnesses to one another.

Wearing masks also has the double effect of protection from COVID-19 and smoke inhalation. If outdoor activities are essential during particularly smoky

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or poor air conditions, an N95 mask with proper fitting is recommended.

Here is some basic advice related to smoke exposure from local fires:

- **Stay indoors.** Close your windows and doors, and turn on your air conditioner (if you have one). Make sure you keep the fresh air intake closed, and change your air filter if it has not been changed recently. You don't want to let any outside smoke enter your home. When you are indoors, try not to increase the amount of smoke inside the house. Don't use any wood-burning fireplaces, try not to use any candles, and do not smoke cigarettes indoors.
- **Measure air quality.** Most smart phones have weather apps that can determine the Air Quality Index (AQI). You can also visit <https://www.iqir.com/us/usa/california/los-angeles> to determine AQI. The AQI measures the level of air pollution. It is scored from 0 to 500. The higher the number, the worse the air quality. An AQI of 101 or greater is unhealthy for sensitive groups. Even if you don't know the AQI, use common sense. If you see smoke, or it smells smoky, it is not a good time to go outdoors.
- **Organize a fire safety plan.** In case you have to evacuate your home, create a fire safety plan. Gather everyone in your household, walk them through the house, and let them know the exits and escape routes. Those with children should consider drawing a floor plan and marking the location of smoke alarms and exits. Determine an outside emergency meeting place

(e.g., a neighbor's house) in case someone gets lost.

- **Keep emergency phone numbers handy.** Memorize important phone numbers (e.g., the fire department's and personal emergency contacts'). This is especially important if you lose your smart phone and contact list.
- **Get early medical attention.** If you experience severe cough, shortness of breath, fatigue, chest pain, dizziness or confusion after smoke exposure, seek immediate medical attention. Symptoms may worsen over time depending on the amount of exposure. Most physicians are available in their offices or via telemedicine. If your symptoms are severe enough, do not hesitate to go to your local urgent care or emergency room.

4. What can people do to maintain lung health during this incredibly challenging time?

I advise my patients to continue to remain strong. These are challenging and unprecedented times. With the ongoing global coronavirus pandemic, it seems that we are even more unlucky as we deal with local fires that bring smoke and poor air quality. I have told my patients to not lose hope. We have improved our techniques with treating COVID-19. Hospitalizations and death rates are declining. The scientific community is working hard to find a vaccine for the virus. All our efforts to mitigate further spread of the disease seem to be working.

Here are some other tips I give my patients (the AEIOUs of lung health):

- A:** Avoid unhealthy air and smoke.
- E:** Eat a balanced and healthy diet. Vitamin C, vitamin D and zinc can supplement your diet and boost your immune system to deal with infections.
- I:** Increase exercise daily. Increasing muscle tone can improve respiratory strength and exercise tolerance. Try walking 30 minutes a day to improve cardiovascular conditioning. Try yoga, stretching and deep breathing exercises to prevent shortness of breath.
- O:** Obtain an annual flu shot and pneumonia vaccine if needed.
- U:** Use prescription medicines as directed. If you do not know how to use your medications, ask your physician.