



On March 17, 2020 the COPD Foundation hosted the webinar, “COVID-19, COPD and You: Important Strategies from Leading Medical Experts on Managing Your Health.” The questions that are answered below were submitted before and during the webinar. Answers have been created with the guidance of Dr. Byron Thomashow, Chief Medical Officer of the COPD Foundation and Dr. Barbara Yawn, Consultant to the COPD Foundation. The recording of the webinar is available now and recorded question and answer chats reviewing these answers are in production and will be available at <https://www.copdfoundation.org/Learn-More/I-am-a-Person-with-COPD/Coronavirus-Information.aspx>.

*The information discussed below should not serve as a substitute for medical advice and should not be used for medical advice, diagnosis or treatment. Please consult with a physician before making changes to your own COPD management plan and if you have any concerns about COVID-19 symptoms. The information presented about COVID-19 was current as of Monday, March 23. The information about the disease and the recommendations discussed are changing rapidly.*

## Questions About How the Coronavirus Spreads?

Q 1. How long can the coronavirus remain stable on different types of surfaces? Can you catch COVID-19 from these surfaces?

- A. First-just because you can detect or find the virus, does not necessary mean it will be contagious. Your best bet is still to wash your hands after you touch surfaces outside of your home! Here are a few examples of how long it can be found on various surfaces:
- i. Aerosols: up to 3 hours
  - ii. Copper: up to 4 hours
  - iii. Cardboard: up to 24 hours
  - iv. Plastic and stainless steel: up to 2-3 days

Q 2. Can the virus be spread through handling cash or credit card processing machines?

- A. Technically the answer is yes, but only if you came into contact with money or a surface that had stable virus on it AND then touched your face. Money is known to be filled with germs, so it is always best practice to wash your hands often and avoid touching your face while you are out and handling money or credit card machines.

Q 3. Can the virus be spread through food? If so, will cooking food kill the virus?

- A. There is currently no evidence to suggest that the coronavirus is spread through contaminated food. However, we do suggest you wash your hands before handling food, wash fruits and vegetables and avoid uncooked or rare food to be on the safe side (this is good practice anytime!).

Q 4. Is the virus airborne and for how long are the droplets active? If so, is it safe to go outside when it is windy?

- A. This is mostly a droplet infection so the virus is only in the air for very brief time when it can spread about 3-6 feet in a cough. Windy weather shouldn't affect your risk if you are practicing safe social distancing behaviors. It is possible that the virus can be aerosolized but this would mostly be a concern in a hospital intensive care unit setting during certain procedures. Some are also concerned that nebulizer or bipap use by an INFECTED person could lead to aerosolizing the virus too.

Q 5. Can pets carry the virus and transfer it to humans?

- A. According to the World Health Organization and the American Veterinary Medical Association, there is **currently** no evidence that pet dogs and cats can get COVID19 and spread it to other animals or humans.

Q 6. At the onset of infection, no symptoms are present, yet the carrier can infect others. Do some of these early carriers test negative?

- A. It is possible that someone with no symptoms in the very early stages of infection could test negative but later test positive. As more testing is done in the U.S., more will be learned about the accuracy of early tests and how easily the virus is transferred by people who do not have symptoms.

Q 7. How long does a patient shed virus for?

- A. Symptomatic patients are the most contagious, though it appears people without symptoms can also be contagious. People may test positive for longer than they are shedding the virus and thus contagious. We are still learning more about the virus so we can't be certain of exact times. One recent study estimated that someone with mild symptoms would shed the virus for about 10 days.

Q 8. What information do we have about re-infection with covid-19? Are individuals who have recovered from COVID-19 infection resistant to re-infection? If someone recovers from COVID-19, are they safely immune?

- A. We do not yet know if people who have recovered from COVID-19 are immune to reinfection. There are reports of a small number of people in China testing positive again after having recovered, however these are reports only and there is not enough information to determine why this happened. Even if people are not fully immune after recovering, it is likely they will have some degree of immunity.

Q 9. Will the warm weather stop the virus from spreading?

- A. Since it is a new virus, we do not yet know if warm weather will decrease the cases of COVID-19. We hope it behaves like flu and decreases with warm sunny weather, but even if it does the odds are it will return to some degree in the fall.

Q 10. When the spread of COVID-19 lessens and schools reopen, is it still possible for kids or people who go out of the house to contract COVID-19 and put someone with lung disease at risk?

- A. It is unclear how communities will decide when to reopen schools and resume normal day to day business operations. If these decisions are made while the virus is still actively being transmitted, there will still be a risk that anyone interacting outside of your home could contract the virus and spread it to people in your home.

## Questions About COPD and COVID-19-Signs, Symptoms, Treatment

### Signs/Symptoms

Q 11. Does someone who has COVID-19 always get a fever?

- A. Over 90% of cases (9 out of every 10 people) of COVID-19 will have a fever. The chances are even higher in someone who has a serious infection.

Q 12. Will my oxygen levels go down if I get COVID-19?

- A. It is possible. This is one of the symptoms that you should call your doctor to discuss if you notice your oxygen levels decreasing more than normal.

Q 13. Is the cough associated with COVID-19 a “dry” cough compared to the “wet” cough or “phlegm” cough that many with COPD have?

- A. A cough associated with COVID-19 is typically a dry cough.

Q 14. If you have been exposed to an infected person, what else should you do besides look for the symptoms and isolate yourself?

- A. The best course of action is to stay home, stay hydrated and keep up with your COPD management.

### Treatment

Q 15. What is the protocol for treating COVID-19 in a COPD patient?

- A. Be sure you discuss your My COPD Action Plan with your provider and make a detailed plan for how they want you to handle any exacerbations during this time as well as what they want you to do if you feel you are experiencing COVID-19 symptoms. It would also be wise to discuss any recommendations they have regarding any steroid therapy for flare ups.

Q 16. How do the protocols differ for someone at home and someone in the hospital?

- A. The main difference is that there are more treatments and therapies available in the hospital. Also, if a person is hospitalized, the doctors will weigh risks and benefits of all treatments including role if any of steroids.

Q 17. Is there a treatment role for antibodies, and off label HIV and Ebola anti-virals in COPD patients who get COVID-19?

- A. There has been some interest in whether these treatments might have some place in the treatment of COVID-19. While it is still too early to tell if these treatments hold any promise, research efforts will continue to explore existing medications to see if there is any potential for treating COVID-19.

Q 18. If we have a non-productive cough should we use OTC cough syrup, and should it be suppressant or expectorant?

- A. A cough is one of the symptoms of COVID-19 but is also a symptom that people with COPD experience every day. If you are experiencing a non-productive cough, it seems likely that we would recommend a cough suppressant to provide some relief.

Q 19. If I get COVID-19 should I stop irrigating my sinuses to avoid spreading the virus?

- A. The answer depends on if you have close contact with others. If you don't have close contact, it is fine to keep irrigating your sinuses, just make sure to thoroughly clean and disinfect the area. If you do have close contact, be aware that if you have COVID-19 (even without symptoms) you run the risk of exposing others to the illness. It is still possible to irrigate your sinuses, but just be extra careful to make sure all nearby surfaces are disinfected thoroughly.

Q 20. Is using quinine and/or chloroquine helpful?

- A. These medications are currently being tested to see if they are effective in treating COVID-19. The reports that they are effective are anecdotal (based on individual reports) and not based on clinical trials. Do not use these medications without a prescription from your doctor.

Q 21. Is it safe to use over the counter medications to reduce a fever if you get COPD and COVID-19?

- A. We do have some information coming in from France that suggests that people should use acetaminophen to treat high or symptomatic fever and should avoid using non-steroidal anti-inflammatory medicines such as ibuprofen.

Q 22. Should you use a nebulizer if you contract COVID-19? Why could it increase infection?

- A. There is some concern that nebulizers used by those infected by COVID 19 could increase risk of aerosolizing the virus and infecting others in the surrounding area. An aerosolized virus potentially could stay in the air for 3-4 hours, much longer than the droplets we sneeze or cough into the air.

While there is the option of avoiding nebulizer use and switching to an inhaler regimen during this present COVID 19 epidemic, medical regimens should never be changed without discussing with your health care provider. Furthermore, for some with more severe disease or those who do not have the ability to successfully use an inhaler regimen, nebulizers may still be the preferred option. For those who need their nebulizer but understandably want to limit risk to those around them your provider could recommend a PARI filter for use with nebulizers that is reportedly equivalent to an N95 mask. <https://www.pari.com/us-en/products/accessories-other/pari-filter-ventilator-set-2/>

Q 23. Should you keep using your meter dose inhalers if you get COVID-19?

- A. Yes, you should keep taking your metered dose inhalers and other medications as your doctor instructs you to do.

Q 24. Should you stop using ace inhibitors if you have symptoms of COVID-19?

- A. The issue of ACE and ARB drugs is currently being evaluated-do not stop any medicine without talking with doctor. It may be harmful to stop these drugs suddenly.

Q 25. Can anti-inflammatory medications make COVID-19 symptoms worse?

- A. Unfortunately, this is something that is not known at this time. There is a lot of study going on to try and answer this question so that we can know more about the effects of steroids on a COVID-19 patient. If you are taking anti-inflammatory medicines for a chronic illness, do not stop them without talking to your doctor first.

Q 26. If you have a rapid heart rate and can't take prednisone, what else can we be given?

- A. Prednisone would likely have nothing to do with a rapid heart rate-ask your doctor about what else might be causing the rapid heart rate.

Q 27. Should someone with asthma and COPD who is currently on an inhaled corticosteroid continue to take it now? Will they cause complications if they get COVID-19?

- A. Do not stop taking your usual asthma or COPD medicines without talking to your healthcare team or doctor. Right now, we do not have all the necessary information to understand any risks there may be from inhaled corticosteroids. It may increase risks concerning complications of COVID-19, but that needs to be weighed with need to keep underlying lung disease as well controlled as possible, so talk to your doctor. Do not change any of your meds without talking to your doctor.

Q 28. Will someone with COPD who gets COVID-19 end up needing a ventilator? If so, what would happen if none are available?

- A. Most will hopefully have mild cases and not need a hospital at all. We also suspect that most of those who are hospitalized will not need ICU or a ventilator. There are efforts in place to ramp up production of ventilators to increase the supply in case there is a demand for them.

Q 29. In those that die from COVID-19, how does it kill you?

- A. Let us first keep hope up that you're not going to die. For those who do not survive the illness, the cause of death is often varied and due to underlying health conditions. The COVID-19 virus can create complications such as pneumonia, and multi-system organ failure.

Q 30. Does COVID-19 close your lungs?

- A. COVID-19 can cause shortness of breath and lead to pneumonia, both of which can feel as though your lungs are closing up. The best plan is to continue to protect yourself and your loved ones from becoming ill. Wash your hands often and thoroughly, and practice social distancing if you must venture outside of your home.

## Questions About COVID-19 Risk

Q 31. What is the virus attacking that makes it particularly risky for people with COPD? Does it attack a component of our immune system or a part of our damaged lungs?

- A. We do not yet know if a patient with COPD is at a higher risk of developing COVID-19. We do know from data that those individuals with underlying conditions such as COPD do have an increased risk of having complications with the infection. Therefore, medical recommendations are to try to decrease an individuals' risk of getting infected

Q 32. Does taking antibiotics for an existing exacerbation raise your risk of contracting COVID-19?

- A. From what we know now, taking antibiotics for an exacerbation does not raise your risk of contracting COVID-19.

Q 33. Is a COPD patient's immune system compromised if they use prednisone?

- A. To some degree, yes, especially when taken daily over a long period of time. Most data suggest that oral steroids like prednisone should only be used for between 5-10 days for the treatment of an acute exacerbation.

Q 34. Are people on Azithromycin 3 times a week and on daily steroids at higher risk?

- A. Taking antibiotics does not increase your risk of developing COVID-19. Daily steroids may increase your risk of developing COVID-19 but you must balance that potential risk with also managing your COPD. It is crucially important that you discuss your specific medical history with your doctor to determine the best way to manage your disease.

Q 35. Regardless of age, is having COPD, on its own, considered risk factors for COVID-19? Is risk cumulative if you have multiple risk-factors?

- A. It is a new virus, so we are still learning, however it does seem likely that having COPD on its own is a risk factor for complications. In general, the worse your health status is, the greater the risk of developing severe complications if you become infected, so again, the best approach is to prevent infection.

Q 36. Do the risks of complications from COVID-19 change depending on the stage of COPD?



A. Your risks from complications from COVID-19 increase the more severe your COPD is.

Q 37. Are people with bronchiectasis, NTM or MAC at higher risk for contracting the disease and/or developing more severe complications?

A. Individuals with bronchiectasis most likely will have an increased risk for COVID-19. At this point there isn't any data available relating to NTM or MAC. For this reason, individuals are advised to aggressively minimize their exposure and practice social distancing, good handwashing and other hygienic measures.

Q 38. Are people with alpha-1 antitrypsin deficiency or carriers of alpha-1 at higher risk for contracting COVID-19 and for having severe complications?

A. We suspect that individuals with Alpha-1 have a similar risk profile to those of individuals with COPD. However, we need more data on this to determine if this is the case. People with Alpha-1 should continue their augmentation therapy.

Q 39. Are patients in the emergency room for COPD at higher-risk of contracting COVID-19? How can we keep them out of the ER?

A. All patients including those with COPD are at a higher risk of contracting COVID-19 when they go to the ER where there are likely to be infected patients. Therefore, please make sure you work with your doctor or healthcare provider to develop a personalized action plan to reduce the possibility you will need to visit the emergency room and talk to your doctor or healthcare team before you go to the ER unless it is truly an emergency.

Q 40. Are patients who have had bilateral lung volume reduction surgery due to emphysema at higher risk?

A. There is no universal answer to this question, however if the lung volume reduction was successful in improving your lung function than it is likely you could have somewhat lower risk of developing severe complications.

Q 41. Should all healthcare workers be tested to ensure patients are not exposed to the virus as they seek care?

A. As soon as testing becomes available, healthcare workers should be tested.

Q 42. Are people with COPD and autoimmune conditions at greater risk of contracting the disease and getting severe complications if so?

- A. We do not have enough data to know if individuals with autoimmune disease have increased risks of developing COVID-19. However, since these individuals have impaired immune function, we suspect they would be at higher risk of complications if they did contract COVID-19.

## Questions About Preventing COVID-19

### Preventing COVID-19 At Home

Q 43. How should we be sanitizing our homes? What if bleach and other disinfectants bother my breathing? What can I do to keep my home safe?

- A. The CDC recommends routine cleaning of areas in your home that are touched often (counters, doorknobs, etc.) with soap and water. Their recommendations are at <https://www.cdc.gov/coronavirus/2019-ncov/prepare/disinfecting-your-home.html>. **If someone at home is sick or you are concerned about shipments coming into your home**, your best option is to try to find sanitizers that do not bother you or affect your breathing. The CDC has a list of approved disinfectants <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2> and you can also reference <https://www.americanchemistry.com/Novel-Coronavirus-Fighting-Products-List.pdf>. If all options bother you, get someone else to clean the area you are concerned about. Stay out of the room being cleaned until the odors are gone.

Q 44. I live alone and will not be having others in my house. Do I still need to regularly disinfect my home?

- A. It is hard to say with certainty, but our experts suspect that you do not need to regularly disinfect your home if living alone, not going out and not having others to your home. But good handwashing and keeping hands away from your face are always good ideas.

Q 45. Is it dangerous for people with COPD to breathe around spray disinfectants?

- A. Some of these products can affect breathing. Pay attention to what appears to bother you and avoid those products.

Q 46. How should I disinfect packages that are delivered or products such as fruit and vegetables?

- A. Wash fruits and vegetables well. Consider using gloves or cover your hands in plastic bags like those from the grocery store to open cardboard boxes and bags. Dispose of these after use or wash them well with soap and water like you do your hands.

Q 47. How do I disinfect a fever thermometer?

- A. Disinfecting instructions for thermometers may vary, so we encourage you to look online for directions specific to your brand and model.

Q 48. Is it safe to allow family to visit who haven't been self-quarantining themselves?

- A. There are always risks. If they appear completely well, be sure they wash hands as soon as they arrive and keep a 6-foot distance from you and others in the home.

Q 49. My spouse works outside of the home. Is it putting me at risk?

- A. Unfortunately, yes. You can take the precautions outlined to try to reduce that risk (e.g., frequent thorough hand washing, keeping your hands away from your face and self-distancing).

Q 50. If I stay home, does my spouse or other caregiver that I live with need to as well?

- A. If they can stay home, that is best. If they must go to work or other essential activities, remember to make efforts to reduce that risk (e.g., frequent and thorough hand washing, keeping distance).

Q 51. If my spouse is discharged from the hospital for a non-COVID-19 related issue, should they stay quarantined at home for a period of time?

- A. Good question. When we have more testing, our experts suspect this group will be routinely tested. Take precautions, including frequent and thorough hand washing. If possible, 10-14 days of home-based quarantine would be good.

Q 52. What precautions should I take before allowing a caregiver or healthcare worker into my home?

- A. Make sure they do not have any symptoms of illness. Have them wash their hands thoroughly, wear gloves and avoid close contact with you as much as they can. If they are showing any symptoms, they should not come. If they are helping with your self-care like bathing, make sure they wash hands before helping and consider asking that they wear a cover up or change clothes if they have been to help others in their homes.

Q 53. Should people at high-risk avoid children all together?

- A. Unfortunately, that is a good idea for now until we know more. Again, this depends on what is feasible given your circumstances. If the children live in the same house, make sure they use good handwashing technique, keep their hands away from their face and consider keeping a distance between them and you as feasible. If the children become ill, it is best if you are not their caregiver if at all possible.

Q 54. Should I stop my house cleaning service?

- A. Maybe. We do not know how long this situation may last; we advise you to follow guidance given in related questions. Certainly, if anyone comes into your home, ask them about symptoms through the front door before allowing them in. If they have any symptoms, ask them not to return for at least 14 days and to send another cleaner if possible.

Q 55. Should I start taking vitamins of any kind to boost my immunity to the virus?

- A. Our experts do not believe this would have a significant impact.

Q 56. Should I preventively request oxygen in case I get COVID-19?

- A. Only request oxygen if you are using it already and have a prescription from your doctor.

Q 57. Should I stop using my Aerobika airway clearance device?

- A. You should not stop using your device if it is helping to control your symptoms. Remember to talk to your doctor and limit your exposure to others.

Q 58. How much medication should we have to prepare?

- A. If you can get 90-day supplies of medications, that would be safest.

Q 59. How do we obtain insurance coverage for extra supplies of our medications?

- A. You will need to talk to your insurance company to see if they have made exceptions to rules about medication supply limits. Many companies have waived rules and there is discussion in Congress to mandate that insurance companies allow for early refills and 90-day supplies, but nothing has been finalized into law now.

### **Preventing COVID-19 While Out of the Home**

Q 60. Should I wear latex or rubber gloves while I am out?

- A. You can cover your hands while you are out with gloves but be sure to take them off before you enter your home and wash them frequently. You can use what you have on hand; you do not need health care worker gloves, such as latex or rubber.

Q 61. Should I wear a face mask? Does it matter what type of mask?

- A. You should cover your face when you are around other people outside your home (examples: an elevator, a store, a crowded street). It is important to understand that the primary purpose of covering your face when you go out of your home is to prevent your own respiratory droplets from infecting others. Currently, the CDC recommends that only people who are sick or are caring for sick patients need to wear masks. However, on April 3<sup>rd</sup>, the CDC issued a new recommendation that people consider wearing cloth face coverings in public settings where other social distancing measures are difficult to maintain (e.g., grocery stores and pharmacies) **especially** in areas of significant community-based transmission.

Since COVID-19 might be contagious in the days before someone experiences symptoms, more public health and medical professionals are recommending that people cover their faces when in public. Unfortunately, there is not enough evidence to definitely say if wearing a mask will protect someone from contracting COVID-19, so public health professionals are relying on the best available information and adjusting their suggestions as new information emerges.

It is important to note that while you should consider covering your face, we are NOT recommending the use of medical masks such as surgical masks and N95 masks. These are critical supplies that should be reserved for the healthcare and first responder workforce who face a much higher risk of catching COVID-19 due to their close physical contact with infected patients. Additionally, medical masks are often used incorrectly or

not properly fitted to the user, making them less effective for the general public. Covering your face while you are out of the house is NOT a substitute for other precautions. Cloth masks do not filter out the virus. You still need to regularly wash your hands, stay home whenever possible and stay at least 6 feet away from others.

Many people with COPD or other lung diseases have a hard time breathing with masks on, especially the N95 masks. If you use oxygen, it may be even more difficult to wear a mask properly. If you can tolerate it, there does not appear to be other downsides to wearing a face covering of some type (washable scarf or home-made face mask), and it may help remind you not to touch your face while you are out as an added benefit. So, wash your hands often before and after you cover your face and check out these ideas to find a face covering that will be comfortable enough to wear if trips outside of your home are essential.

- Consider using a cloth mask. Many organizations are organizing groups of volunteers who are sewing cloth masks. If you sew, you can find instructions on sites like this one (<https://www.nytimes.com/article/how-to-make-face-mask-coronavirus.html>) or consider asking for a donated mask via your neighborhood email list-serv, community-based organization or other local resources. It is recommended that cloth masks be made from 100% cotton, percale or denim and consist of at least 2 fabric layers.
- If you cannot use a cloth mask comfortably, try a standard bandana with hair ties to hold it on. There are tutorials online such as this one <https://youtu.be/EAj12GKuAEk>.
- When in doubt, reach out to your healthcare team to ask for suggestions based on your individualized needs.

Q 62. Why do healthcare providers wear masks if they do not help the public?

- A. Healthcare workers have a much higher risk of exposure because of their proximity to infected patients. While out, you should stay 6 feet from others which gives you protection that healthcare workers cannot get.

Q 63. Can I walk outside without risk?

- A. Yes, if you stay away from groups of people and maintain the recommended 6 feet of physical distance. Getting out can help with the feelings of isolation. Activity is also good for most people.

Q 64. Can I still go to work? Does the setting matter? For example, a warehouse vs a convenience store?

- A. As many people as possible should work from home. Some people clearly need to continue to work outside of the home. Those considered “at risk” who are older especially with comorbidities should work from home. Those who work outside are the safest. For indoor work, the less crowded the spaces the better.

Q 65. Can all doctors offer telehealth visits to minimize risks to patients?

- A. At some point, most healthcare providers will have access to support patient needs through telehealth systems. We have supported the need for policy changes to make telehealth services more accessible in people’s homes and should see availability increase over time. Remember that a telephone call is a very common way that most people have gotten telehealth information for years.

Q 66. Should I cancel a rhinoplasty?

- A. Yes, you should cancel any non-essential medical visits and surgeries.

Q 67. Is it safe to go to a chiropractor appointment?

- A. It is recommended to avoid healthcare settings unless absolutely necessary.

Q 68. Will using my oxygen in public increase the risks of contracting COVID-19?

- A. No, and it is important to maintain your oxygen use as prescribed by your healthcare provider. There are protections you can take to keep your oxygen equipment clean
- ✓ Regularly wipe down your tubing and canula with alcohol pads
  - ✓ Use a fresh canula when you leave the house and wipe it down when you return
  - ✓ Don’t set your portable oxygen concentrator or tank down while you are out if possible and be sure to wipe it down with alcohol pads when you return
  - ✓ Make sure you wash your hands or use sanitizer before touching your tubing or canula
  - ✓ Bring an extra set of tubing in case yours accidentally falls onto the ground or another surface

Q 69. Why should we try not to use our medications while we are out?

- A. If you can avoid it then it is simply one less potential exposure to the virus. If you need a quick reliever while you are out, use it but try to do so while maintaining the 6 feet of separation from others.

## **General COVID-19 Related Questions**

Q 70. Are there any recommendations for pregnant women?

- A. From what we know right now, there doesn't seem to be anything to say that pregnant women are at any higher risk than other people. There were some risks for pregnant women with the SARS outbreak in 2003, but from what we know right now, that does not seem to be the case with this current outbreak of COVID-19. So the recommendations for pregnant women are the same as for everyone.

Q 71. Has there been any reason or research why COVID-19 has not affected the territories in Canada?

- A. The data show that Canadian territories are being impacted with 1300 cases and 18 deaths. The Canadian government is encouraging social distancing and mandatory 2-week quarantine period for anyone entering the country among other measures. Remember that many regions of Canada are less populated than US cities and so will have fewer numbers of cases.

Q 72. Does the same advice given to people with COPD here also apply to people with asthma?

- A. Yes, we would certainly advise people with asthma to follow these same guidelines. We don't fully know how the underlying condition of asthma might impact someone who contracts COVID-19.

Q 73. Does the same advice given to people with COPD here also apply to those with bronchiectasis and NTM?

- A. Yes, the advice given here would also apply to bronchiectasis. But we don't know any data regarding NTM without bronchiectasis yet.

Q 74. Where can we listen to useful podcasts?



- A. The Johns Hopkins ones are very good. Here is a link to the one Dr. Sharfstein mentioned on the webinar: <http://bit.ly/publichealthoncall>

Q 75. Where can we find the coronavirus/COVID-19 information on the COPD Foundation website?

- A. On the COPDF site look for the Learn More tab and then the section labeled Coronavirus Information. Here is a direct link: <https://www.copdfoundation.org/Learn-More/I-am-a-Person-with-COPD/Coronavirus-Information.aspx>

Q 76. Does COVID-19 cause lasting lung damage? What other changes in the lungs can it cause?

- A. This is a good question, but unfortunately it is too soon for us to know what kind of lasting damage may be done. We are designing studies to find answers to this and other important questions about any long-term impact of COVID-19.

Q 77. Is lung fibrosis common in COVID-19?

- A. This is something that is too soon to know, we will only know as time goes on.

Q 78. What is the best thinking about people with ILD who are using cellcept or prednisone?

- A. It seems that they would seem to be at greater risk but we don't know of any data yet. This disease is still too new for us to have concrete data about specific populations.

Q 79. What is the role of inhaled corticosteroids in COPD patients who have frequent exacerbations?

- A. The mainstay of therapy in COPD is bronchodilators. Inhaled steroids do have a role in COPD, mostly for those with frequent exacerbations. Data suggests that inhaled steroids do not have a clear role in COPD patients who do not have frequent exacerbations, particularly if the eosinophil count is low. These are all issues that should be discussed with your doctor and you should not make changes to your treatment until you have consulted with your doctor.

Q 80. Is there an equivalent in the world of viruses to the bacteriophages which attack specific bacteria?

- A. Bacteria, as well as humans, can be attacked by viruses that are known as phages. As a single cell organism, bacteria have a well-developed genetic mechanism for warding off phages that is different than the immune mechanisms that humans have developed. At present, there is active research to find phages that can successfully attack bacteria without harming humans and to use these to fight off bacteria that are resistant to antibiotics.