AEROSOLS ARE THE ANSWER [AND THE PROBLEM]

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Ever been in a park and without seeing them knew that someone was smoking a cigar? Or been on a walk and knew that someone was burning leaves in their yard?

You recognize these smells because of ***aerosols,*** which are tiny solid or liquid particles that are too small to see and that can float in the air for minutes or hours before settling onto a surface or the floor. Burning tobacco or leaves produces aerosols that cause the smells that let you know about their presence.

Aerosols are also produced when we cough, sneeze, talk, and sing. When we do those things, aerosols from deep in our lungs go out of our mouth or nose and into the surrounding air. If we are not sick, they are usually of no concern. We cannot see them and don't even know they are there. If we are sick (or even if we don't feel sick but have a virus or bacteria in our lungs), they can be very important to those around us because the aerosols that we produce can carry bacteria or viruses which can remain in the surrounding air for hours. Just as we inhale smoke from a nearby fire that we cannot see, we inhale the aerosols in the air that others produce when we are in a room, a car, or other contained space where others are or have recently been.

As we learn more and more about COVID-19 infections, we are realizing that many infections are the results of coronavirus-carrying aerosols produced by infected individuals that are inhaled by healthy people in their vicinity, who then become sick because of inhaling enough of the virus.

Since we cannot see or detect these aerosols in the surrounding air and do not know when we are breathing them, **what can we do to reduce our risk of becoming infected** because of them? (keeping in mind that the BEST way to reduce our risk is to stay at home and avoid potentially infected persons in the first place!):

1. ***Minimal effectiveness***: Avoid or minimize time in rooms, stores, or cars with poor ventilation where others are or have been talking, coughing, or sneezing, especially if they were not wearing masks. Even if others are gone, aerosols that may contain virus particles can linger in the air and you can breathe them for some time after they have left.
2. ***Moderate effectiveness***: Eat or shop outdoors as much as possible where fresh air and breezes dilute any aerosols and reduce the amount you may inhale.
3. ***Significant effectiveness***: Spend your time around people who are socially distancing and wearing **masks** or **facial coverings**! Masks and face coverings ***worn by others*** prevent most of their aerosols from getting into the air in the first place which then reduces the amount that you may breathe. In turn, when you wear a mask, you are not only reducing the droplets in the air from entering your nose and mouth, but you are also preventing others from breathing your aerosols and returning the favor. Your mask helps you some, and others a LOT!

The idea of aerosols that we cannot see or smell that can make us sick can be overwhelming and even a bit frightening. Understanding the concept, however, can lead to a wonderfully simple way to combat this hidden

menace: **MASKS!** Be a good example and wear a mask or face covering when in public, and tell your friends about aerosols and why it's so important to reduce them.

If we can convince enough folks to wear them when out and about and around others, we can reduce the threat that aerosols represent, and have a quicker and safer exit from this pandemic.

References:

Video of aerosols from cough--https://www.youtube.com/watch?v=md6G2hqrhBE

Effectiveness of surgical face masks--https://pubmed.ncbi.nlm.nih.gov/32371934/

Effectiveness of cloth masks against aerosol spreading--https://pubmed.ncbi.nlm.nih.gov/32329337/

CCTF COVID-19 Community Task Force

The COVID-19 Community Task Force (CCTF) is a volunteer organization established to engage the community in responding to the COVID-19 Pandemic and to support and augment the County's efforts. The information shared by the CCTF is not an official communication from Pamlico County, its Health Department or the Pamlico County COVID19 Task Force.