

Air & EnviroSolutions Technologies Group

Just Breathe.....



Air Purification and Coronavirus by Douglas Hoffman

Air Purification and Coronavirus

There is a flurry of information floating about regarding concerns over COVID-19 and much of it, frankly, is either simply common sense or flat-out wrong. Recommendations from the World Health Organization seem to be right on point with what my mother taught me years ago. Let's address the common sense first:

- **WASH HANDS**—Regularly washing your hands consistently and thoroughly is never a bad idea. It's frankly comforting to know that more and more people are heeding this advice and we look forward to a less threatening flu season this year as a result. In 1847 when Semmelweis proposed the practice of washing hands, skeptics abounded, and he never lived long enough to see the benefits. Since then, this standard practice has saved tens of thousands, maybe millions, of lives and continues to be the "go-to" to prevent contact transmission of disease. Using sanitizers before you shake hands or serve others is a good practice. Not a bad idea to do this if we understand the limitations of hand sanitizers. Alcohol-based sanitizers, when not in short supply, require a specific procedure leaving the goop on your hands long enough to kill the micro-organism. There are several good ones on the market and finding one that is alcohol-free is best because it is easier on your skin.
- **RESPIRATORY HYGIENE**—When you sneeze, droplets can spread the virus. To protect the people around you, cover your mouth and nose with your bent elbow or tissue when you cough or sneeze. Mother taught us this when we were young but sometimes, we forget. It's still a very good idea.
- **SOCIAL DISTANCING**—In our current lifestyle, avoiding large crowds is difficult but should be considered. Stuffy subways, crowded elevators, packed airports or bus terminals can be a breeding ground for all sorts of disease. The recommendation to avoid such areas has correctly been followed with the suggestion that these could be especially problematic for immuno-compromised or elderly individuals. Young healthy adults should be able to manage these environments, especially if they are used to eating right, getting plenty of rest and exercise. Our immune systems are incredibly powerful and can overcome a lot of the microbes we're exposed to every day, including viruses.

What hasn't been discussed in a lot of detail is air purification. HEPA, high efficiency particulate air, has been touted as a good solution for purifying the air but its limited effectiveness against sub-micron particles, like viruses, has been largely over-looked. The best filter on the market must allow some particles to pass so that no strain is put on the blower motor. The best filters out there, even HEPA filters, are passive in nature and require bringing the pollution to the solution, trying to filter out contaminants. Viruses, if they could be drawn to the filter, typically go right through the media and are recycled back into the breathing environment.

The most effective air purification technologies, which have been around for years, proactively send oxidizers into the environment, kill or neutralize all microbes and leave the air and surfaces free from microbial contamination. Photo-catalytic oxidation and dielectric barrier ionization, trademarked as www.multiclusterionization.com, is an example of a technology that has been utilized for years to reduce indoor environments of mold, bacteria and viruses. NORMI, the National Organization of Remediators and Mold Inspectors, has been training IAQ professionals since 2004. Those professional incorporate the NORMI Professional Practices Sanitation Protocol, a simple and practical solutions to healthier living indoors. Even once this immediate COVID-19 crisis subsides, keeping air and surfaces clean will always be the goal of the NORMI training program.

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