



Understanding the Role of the Indoor Environment in Human Health

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The average person spends 90% of their time indoors, making the indoor environment one of the largest determinants of occupant health. Despite this exposure, current building standards focus on aesthetics, energy and dramatic failures such as fire and earthquakes... not on the indoor environment and occupant health. With no health standards for indoor air quality metrics, how do you really know if your ventilation, filtration, humidity management and other air cleaning interventions are actually benefiting the occupants? Understanding the interrelationships between indoor environments and human occupants is complex because there are multiple interacting factors. For example, in addition to outdoor gases and particles infiltrating into the building, occupants and indoor processes introduce additional chemicals and microbes. This results in complex indoor ecosystems which impact our overall health, immunity and productivity. Where are the doctors to lend medical expertise to creating an indoor air health standard?

Building4Health monitors indoor spaces from the perspective of health metrics, giving clear visibility to the impact of the indoor environment on both short-term and long-term occupant physiological functioning.

Please attend this presentation and share your expertise and experience as a building occupant. Together, we can learn to manage buildings to protect both outdoor environments through energy efficiency and indoor human occupants through visibility of the health impact of indoor spaces. The studies have shown that air cleaners can improve indoor air hygiene, but in terms of infection control they should not be considered the sole solution, as they can only lower the risk of indirect infections, but cannot prevent direct infections. They further do not exchange, but only recirculate the air and can thus not replace window airing.

The importance of the different parameters, filter efficiency and flow rate, affecting the efficacy of air cleaners will be presented along with the results of the different studies and discussed in view of the usefulness of these devices in different scenarios.