Summary: Fresh-air ventilation has been determined to have an effect similar to the effect of vaccination. The cost-effective and proven way to achieve it is Passive House for all buildings.

- CDC: 100% fresh air for COVID-19
- Conventional building: 6x increased energy consumption
- Passive House building: One-twelfth the energy use of conventional building + 100% fresh air
- Every building becomes infection control facility
- End to social distancing?
- New construction
- Retrofit

A medical study asserts the ASHRAE level of ventilation (3 Air Changes per Hour) provides the similar effect of an effective vaccine with 60% of the population vaccinated. No doubt the 100% continuous fresh air Passive House systems correspond to a much higher rate of vaccination. A copy of the paper on the study is attached. The study was cited in a Passive House article here: Building Science and the Prevention Of Covid-19 www.builderonline.com/building/building-science/building-science-and-the-prevention-of-covid-19

Here is a link to a feasibility study related to the project and which discusses HVAC at length: https://issuu.com/fxfowle/docs/final_report-170330-final

"Increase the percentage of outdoor air potentially as high as 100%." https://www.cdc.gov/coronavirus/2019-ncov/community/office-buildings.html

"The firm's research suggests that the "Hygiene Ventilation" approach is only really feasible from an energy perspective for Passive House buildings, while conventional buildings might require up to six times the amount of energy to maintain 100% fresh air circulation." https://archinect.com/news/article/150195914/hygiene-ventilation-and-the-case-for-green-stimulus
The COVID-19 answer for all occupied spaces in all buildings is Passive House with vertical upward air flow. 100% fresh air ventilation plus a reduced energy bill. See architect and real estate developer Lloyd Alter’s article: https://www.treehugger.com/green-architecture/european-engineers-stop-recirculating-air-buildings.html

Many different experts across the country and around the world are making the connection between coronavirus, ventilation, and Passive House.

PROSOCO, the other company I work for, has products that are important for causing new construction and existing buildings to be air tight. For example, on two large building projects using our products and striving to meet the code blower-door option of 0.4cfm/sqft building envelope, they inadvertently met the Passive House standard 0.08cfm/sqft building envelope – with no leak chasing. If you have clients who are considering high levels of air tightness, we have experts who can mark up drawings and photos free of charge to show how it is done quickly and effectively with our fluid-applied products that replace tapes, peel&stick, and building wrap. We have code reports on these products.

I have on board an air sealing specialist contractor and PROSOCO product staff experts, an infectious disease facility expert, an HVAC contractor that is expert in energy recovery ventilation, and an HVAC engineering company. I am seeking a building that wants a free COVID-19 retrofit. I am seeking buy-in from a county that a retrofit will eliminate social distancing or greatly reduce it. I am seeking funding from other sources. We have contacts at DOE.

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Passive House 2020: Choose Your Future
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Every Wednesday, June 24–July 29, 1:00 – 4:00 PM (EST)
A Focus on Covid-19

June 1, 2020 by NAPHN


This focus marks a return to the roots of Passive House. While dramatic energy reductions were the climate imperative and headline, less appreciated has been that better indoor hygiene was also a key founding goal of the Passive House standard and that the criteria for ventilation and airtightness were concerned about improved health outcomes as well as energy efficiency. Today’s wake-up call, driven by our global pandemic, is an important notice to building owners, developers, and professionals of the inherent tools Passive House provides to support healthy outcomes.

In a session titled It’s About the Outside Air: Why Passive House Ventilation is the Invisible Hand of High Performance, scheduled for Wednesday, June 24 at 3 PM EST, in a general presentation on the scientific criteria, equipment certification and systems design – the presenters will review critical issues like ventilation recirculation and cross-contamination, that if not addressed properly, as is the case in typical construction, can be contributors to virus transmission, and how Passive House specifications deliver lower-risk solutions.

Then on Wednesday, July 15 at 3 PM EST, a session titled Why does Covid-19 Hate Passive House? Strategies to Mitigate the Spread of Viruses, will take a serious look, in a panel discussion, at virus transmission, Covid-19 specifically, the science, the mechanics, and the implementation of controlling the built environment to minimize the risks to our health. It will debunk the myths and give attendees actionable information to help make buildings a true pandemic refuge.

“Building design cannot outperform fundamental preventative measures like social distancing to prevent the spread of the Coronavirus”, said NAPHN President, and session panelist, Bronwyn Barry. “But founding Passive House principles and strategies do contribute to healthy outcomes. And we look forward to a lively discussion among panelists and attendees digging into the subject.” See the full program and register.