#THECOGFXSTUDY

THE IMPACT OF BUILDINGS ON COGNITIVE FUNCTION

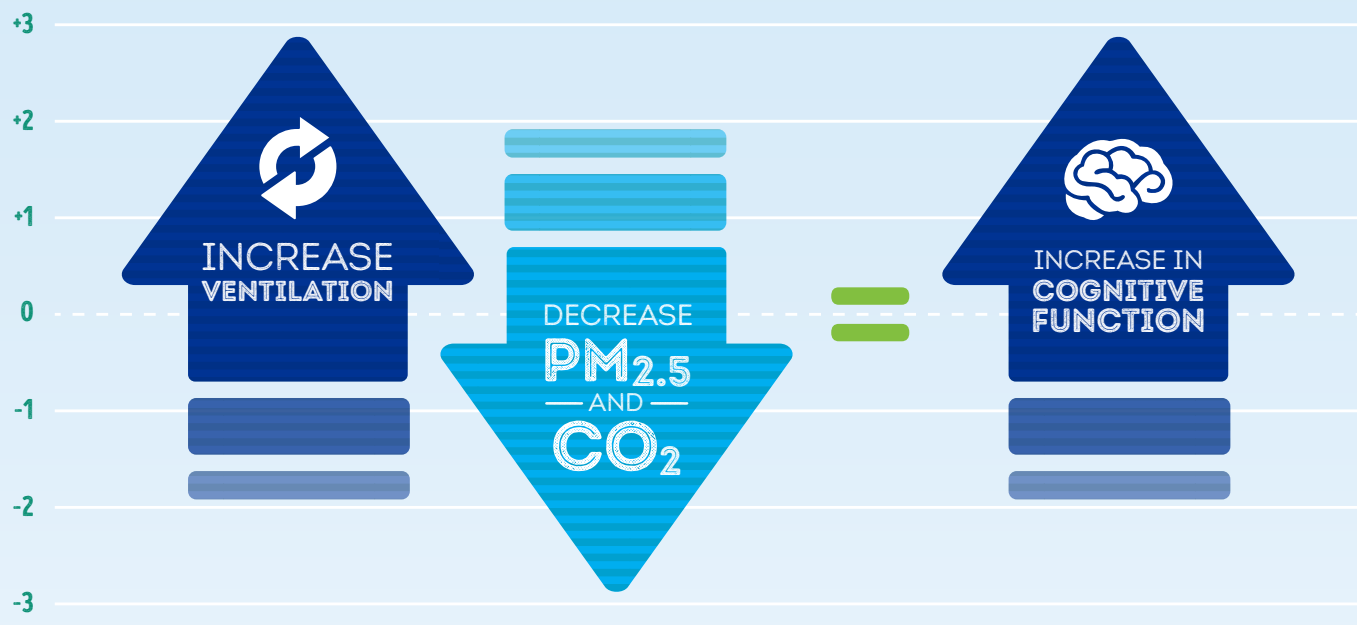
STUDY 3: GLOBAL BUILDINGS

Buildings as a powerful tool for

HEALTH AND PRODUCTIVITY

AIR QUALITY AND COGNITIVE FUNCTION

There is a direct relationship between ventilation rates and cognitive function, as ventilation impacts levels of $PM_{2.5}$ and CO_2 exposure. For each decrease in the levels of exposure, there will be an increase in cognitive function.



QUICKER RESPONSE TIMES

INCREASED ACCURACY

EVEN GOOD BUILDINGS CAN BE BETTER

Even buildings operating at the industry standard of 1,000 ppm of CO_2 can see improvements in cognitive function with increased ventilation.

KEY TAKEAWAYS

AIR QUALITY HAS A DIRECT IMPACT ON COGNITIVE PERFORMANCE

The study concluded that there is a direct relationship between the level of $PM_{2.5}$ and CO_2 exposure and the impact on cognitive function. For every decrease in the levels of exposure through ventilation and filtration, there will be an equal increase in cognitive function.

HIGHER VENTILATION RATES AND ENHANCED FILTRATION ARE IMPORTANT PUBLIC HEALTH STRATEGIES

Improved indoor air quality can enhance cognitive function and health, improving occupants' ability to think and solve problems, while protecting them from the harmful effects of indoor pollution.

INDOOR AIR QUALITY INFLUENCES HEALTH AND PERFORMANCE IN PROFOUND WAYS

Even small effects on cognitive function and health can translate into substantial short- and long-term benefits. When you consider that 90 percent of the costs in a building are associated with the people inside – including salaries and benefits – the ability to improve cognitive performance and reduce infectious disease transmission, sick building symptoms and missed workdays through improved indoor air quality is powerful.

VENTILATION

Ventilation refers to the rate of air exchange in buildings. Ventilation rates can impact the concentration of CO_2 and other pollutants.

$PM_{2.5}$

$PM_{2.5}$ refers to tiny particles in the air. They can can travel deep into your respiratory tract, impacting your health and cognitive function.

THE PROVEN POWER OF BUILDINGS

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Results across the COGfx studies show that, with the right strategies in place, buildings can play a significant role in improving **cognitive function, health** and **productivity,** while delivering **bottom line benefits to businesses** and **health benefits to society.** These findings were proven over time in the lab, across the United States and **in buildings around the world.**

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The COGfx Studies were led by researchers at the Harvard T.H. Chan School of Public Health.

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