# INDOOR AIR QUALITY
## PERFORMANCE
## Talking Points

**Keywords:** Indoor air quality, performance, absenteeism, cogintive function, ventilation

### Performance in Offices

- Recent research suggests that indicators like CO2 have an influence on human performance at thresholds lower (600ppm) than those that were developed as acceptable standards (1000ppm) based on human comfort and that CO2 may not be just an indicator but a direct pollutant (Allen 2016).
- Increasing outdoor ventilation rates between 14 to 30 cfm/person, lowering CO2 concentrations below 600ppm, and lowering total volatile organic compounds (TVOCs) concentrations improve indoor air quality and significantly improve cognitive function, decision making ability, and productivity (Allen 2016, Satish 2012).

### Performance in Schools

- Cognitive function can be impacted by CO2 concentrations above 600ppm. A large percentage of schools in the United States have many spaces that exceed 1,000ppm, the ASHRAE standard (Fisk 2017, Allen 2016, Satish 2013, Corsi et al. 2002, Shendell et al. 2004).
- Students perform better academically and yield less health related absences in classrooms with a minimum outdoor ventilation rate of 7 L s-1 which is associated with a lower concentration of CO¬2 (Fisk 2017, Shendell et. Al. 2004).

### Reduced Absenteeism

- Adequate ventilation and the absence of volatile organic compounds leads to happier, healthier workers and can increase performance by 8% and reduce absenteeism (Miller 2009, Macnaughton 2015).

## *KEY REFERENCES*

### *Review Articles*


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### *Primary Research*


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