



Why Indoor Air Quality in the Office Matters and How to Improve It

Indoor air quality (IAQ) refers, most plainly, to the ‘quality’ of the air within an indoor space. ‘Quality’ here can be loosely understood as how ‘fresh’ or how ‘clean’ the air is. More scientifically, we are talking about the absence of air pollutants ranging from animal dander to dust floating around in the air – as well as the level of circulation of this air throughout the entire building. Improving on these two fronts equates to less sneezes and more restorative breaths of healthy, fresh air.

Because we spend about 90% of our time indoors, bettering the quality of the air within it results in a direct betterment of comfort, health, well-being, and productivity. The trick is figuring out ways to bring the ‘fresh air’ in and circulate it throughout the office – for all workers to enjoy its innumerable benefits.

How Does Air Quality in the Office Affect Comfort and Productivity?

The Link Between Air Quality and Productivity

Greener office environments are linked with higher cognitive functioning across the board. In layman's terms, this means that fresh air increases our ability to reason, retain information, and maintain focus. Thus, enhancing the air quality in the office benefits job performance overall. In fact, a green office environment is correlated with a cognitive performance score of double that of a typical office environment, where the air is not 'fresh,' or cleaned of pollutants and circulating properly.

"Readily available, energy efficient technology can turn office buildings into human resource tools that improve the health and productivity of the people inside."

—John Mandyck, UTC Chief Sustainability Officer

A study led by industry-leading health and building experts even finds that doubling the ventilation rate in the standard office – which costs less than \$40 per person per year on average – results in an 8% improvement in employee performance. This 8% increase translates into a \$6,500 increase in productivity overall, each year.



The Health Benefits of Fresh Air

Anyone who takes breaks throughout the day by stepping outside and going for a walk will tell you that fresh air has an uncanny ability to restore energy, relieve stress, and create a happier, calmer state of mind. This much is intuitive, but there's plenty of hard science that confirms the strong role that air quality plays within the collective health and well-being of a building's inhabitants.

The research is conclusive: fresh air increases the flow of oxygen in the body, lowers blood pressure and heart rate, strengthens the immune system, cleans the lungs, relieves stress, energizes the body, and sharpens the mind – through the greater oxygen exchange.

“...even modest improvements to indoor environmental quality may have a profound impact on the decision-making performance of workers.”

–Dr. Joseph Allen, Harvard T.H. Chan School of Public Health

Conversely, because air pollutants trigger asthma and allergies, and cause an array of flu-like symptoms, headaches, nausea, fatigue, and irritation of the eyes, nose and throat, removing them is a foolproof way to boost the comfort, health, and well-being of an entire office's fleet of workers through a singular focus.

Like a Breath of Fresh Air...

We do tend to have our best ideas outdoors, where fresh air is in ample supply. Bringing this quality of air inside only makes sense when the work is 'knowledge work' and deskbound by nature – and thus demands creative and strategic higher order thinking. Eliciting that effect of revitalization through the supply of fresh air is a sound strategy for performing at our best – and with a greater sense of well-being.



What Factors Contribute to Indoor Air Quality?

Indoor air quality is a “constantly changing interaction of complex factors.” According to the EPA, The most important factors to understand are:

- Sources of air pollutants or odors
- Design, maintenance, and operation of building ventilation systems
- Moisture and humidity
- Occupant perceptions and susceptibilities (i.e. allergies and asthmatic conditions)

For context and a broad understanding, an air pollutant is solid particle, gas, or liquid droplet in the air that adversely affects human health. The EPA classifies air pollutants within three categories: **biological contaminants** (bacteria, viruses, molds, dust mite allergens, animal dander, pollen), **chemical pollutants** (tobacco smoke, VOC’s, carbon monoxide and nitrogen dioxide), and **particles** (dust, dirt, saw dust, drywall powder, and other substances that can be created within or drawn into the building).

Because each of these kinds of pollutants, in excessive concentration, can yield negative health effects ranging from minor short-term discomfort to serious, long-term conditions, reducing, eliminating, and trapping them is critical to protecting the health and well-being of the workforce over the long haul.

How to Improve the Office's Air Quality by Bringing More Fresh Air Inside

The EPA's 3-pronged strategy to improving indoor air quality below is a comprehensive framework for taking the steps toward bringing more fresh air into the office, starting today.

1. Eliminate the sources of air pollutants
2. Improve the office's ventilation system
3. Use air cleaners and purifiers in the space

Each prong can be worked toward through various plans of attack listed below – both big and small. As you or your team takes on each step in the pursuit of fresher air in the office, appreciate that clean, fresh air is a multi-faceted shared responsibility with an enlivening shared benefit. All within the office play an important part in reporting any air quality concerns and keeping the office clean, together.

1. Eliminate the sources of pollutants in the office

- Avoid bringing products and equipment into the office that could off gas harmful VOC's
- Ensure smoking policy is respected
- Store food properly
- Clean water spills promptly
- Remove garbage routinely
- Clean office regularly
- Use cleaning products that are 'natural' or low in VOC's

2. Improve the office's ventilation system

- Open windows when possible
- Keep air vents and grilles open and unblocked
- Maintain and clean air filters, air cleaners, and HVAC systems – regularly inspecting air ducts
- Plan the space's furniture layout around airflow, ensuring fresh air is brought to each worker
- Run fans to increase air circulation
- Maintain a humidity level between 30-50%

3. Use air cleaners and purifiers in the space

- Invest in high-quality room air cleaners or air purifiers
- Maintain office plants
- Use quality vacuum systems with HEPA filtration
- Lay down mats in every doorway to trap soils and particles
- Use microfiber dust mops and cloths

Room air cleaners or air purifiers are powerful pollutant-trapping machines that make a world of a difference for people who have allergies or asthma. Additionally, there are models designed specifically for the desktop that take up little space, are energy-efficient, and run quietly. Take the FreshView Wellness Monitor Stand, for instance – it doubles as a monitor stand and an air purifier, making it ideal for the desk.

The air purifier insert on the FreshView is also modular, so it can also be switched out for a space heater or fan insert. This kind of functionality is a great workaround for achieving comfort for all where personal preferences come into play (i.e. the EPA's "occupant perceptions and susceptibilities" factor).

Furthermore, testing the air routinely and subscribing to updates from the EPA and OSHA regarding indoor air quality is highly recommended for sustaining progress.

Fresh Air Is a Shared Responsibility with a Shared Benefit

Note that your employees are often the first to notice any odors or uncomfortably hot and stuffy work rooms indicative of an air quality issue. Encouraging them to report any concerns or complaints is one of your best lines of defense in protecting and improving the air – for everyone's comfort and enjoyment.

And because the factors that contribute to indoor air quality are diverse – ranging from the quality of air flow afforded through fans to the presence or absence of dust and mold – there are opportunities at numerous levels to make improvements. Through good housekeeping in the form of routine cleaning, for instance, regular maintenance of the HVAC system, and use of the right products like air purifiers that remove pollutants on the spot for an immediate benefit – cleaner air is within reach.

Check out Kensington's Ergonomic Products for more ideas on improving your air quality.



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