Prioritizing indoor air quality

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Understanding the factors that can harm your indoor air quality and what you can do about them.

There's little that is more important than the air we breathe every day—and that includes the air inside your properties. Your customers—and even more so your employees—spend a considerable amount of time in your locations. The quality of the air inside can impact not just their comfort, but their health and safety—especially amid the pandemic.

There are many factors that could be negatively affecting your air quality—but don't worry, there are methods to keep it in check.

Airborne Contaminants

Contaminants in the air can have short- and long-term negative effects on the health of your employees and customers. Some immediate effects include irritation of the eyes, nose, or throat, as well as headaches, dizziness, and some airborne diseases. And other effects may not show up for years after repeated exposure, including heart and lung disease or cancer.

What are the different types of contaminants?

Airborne contaminants fall into three main categories: particulate, biological, and gaseous.

- **Particulate**: dust, dirt, lint, hair, and more
- **Biological**: bacteria, viruses, pollens, and mold
- **Gaseous**: chemical vapers, carbon dioxide, and more

The presence of any of these contaminants could be damaging your indoor air quality.

How do you monitor airborne contaminants?

There are handheld devices that can be used to track the levels of contaminants in your air. Regular particle readings should be part of your annual strategy—taking place at least twice a year—in order to continuously monitor the air quality and implement solutions when needed.

How can you control airborne contaminants?

Source control

The first option is to control the contaminants at the source. A few examples:

- Excess moisture can lead to mold. Identifying the source of the moisture is an essential first step. Many find that high levels of humidity is the culprit—which is why we've dedicated a full section to the topic (on page 4) with tips to help you get it in check.
- Inefficient cleaning can lead to a build-up of dust and other particulate contaminants. For this, the solution could be as simple as bringing in help for your janitorial services or creating a checklist to ensure everything is properly cleaned.

Ventilation

Proper ventilation can also prevent and fix issues of airborne contaminants. Check out page 5 for tips on ensuring your locations have proper ventilation.

> **Ensuring the right amount of outdoor air coming inside will help reduce the amount of indoor air pollutants.**

Ionization

Ionization is a more recent development in the pursuit for indoor air quality. When positive and negative ions are released into the air—through a ventilation system—they can attack viruses and bacteria as well as target particles. Ions leave certain viruses and bacteria inactive by disrupting their surface proteins. Ions can also combine with particles so that they cluster and become easier to remove from the air via the filtration system.

Humidity

Everyone hates being in a building that's too humid. It's uncomfortable and makes you want to leave the second you step foot inside. But poor humidity levels affect much more than just comfort. When your properties are too humid, it can have structural implications like warped wood or mold. In a grocery store, high humidity can lead to foggy freezer doors or large blocks of ice forming in island coolers. And dry environments come with their own issues: dry air means static, which can do damage to computer systems.

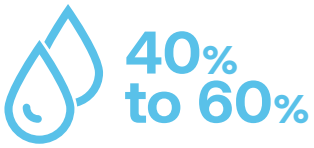
And for the people in your locations, poor humidity levels can mean not only discomfort, but health concerns. If it is too low, bacteria and viruses can live longer and can lead to more infections. In the middle of a pandemic, this is even more important to think about. But if it is too high, it can lead to skin irritation, lethargy, headaches, and other health issues.

How do you monitor humidity levels?

Most rooftop HVAC units are able to monitor humidity, and some properties have additional sensors inside. With an Energy Management System (EMS) in place, you can remotely track levels using the rooftop units without needing additional sensors.

What is the ideal humidity level?

The American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) recommends maintaining a relative humidity at **40-60%**.



How do you control indoor humidity levels?

For those unfamiliar with the inner workings of an HVAC unit, here's a simplified explanation of how they work to control humidity.

Every unit has a coil inside, and this coil is cooled down using a refrigerant. As the air flows through the coil, it removes heat and moisture. The longer the unit runs, the more it dehumidifies a space.

> **Implementing a consistent preventative maintenance (PM) program can help make sure everything is working correctly, the coil is being properly cooled, and your spaces are maintaining the right temperature and humidity level.**

What should be included in a PM?

During a PM, make sure your service provider is checking these items that can impact humidity levels:

- ☑ Coil
- ☑ Belt
- ☑ Refrigerant levels
- ☑ Unit run time

Ventilation

Ventilation is one of the most important factors to consider when looking at indoor air quality.

> **Poor ventilation can lead to various other issues—including contaminants and humidity—that negatively impact indoor air quality.**

There are two methods of ventilation you should consider to help.

Spot ventilation
Spot ventilation requires the use of localized exhaust fans. Think of the fans you have in your bathroom or above your stove at home—these are able to remove pollution and moisture at the source. Installing spot ventilators at the source of the problem will help ensure proper indoor air quality.

Dilution ventilation
Instead of attacking the source, dilution ventilation addresses the entire indoor space. This works through the exchange of indoor and outdoor air, both naturally (through windows, leakage, etc.) and mechanically (through controlled ventilation). HVAC units are able to ensure proper ventilation—but only when they are correctly maintained.

> **Implementing a comprehensive preventative maintenance program will help ensure your units are properly ventilating your properties.**

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With so many factors impacting the air quality in your locations—and consequently the comfort and health or your employees and customers—it's essential to make controlling air quality a priority.

At SMS Assist, we believe in the power of your spaces—and that includes your air quality. Partner with us to ensure your locations are as safe and comfortable as they can be for your employees and customers.

About SMS Assist

SMS Assist is redefining the way service providers and property owners work together by delivering unprecedented transparency and control within the facilities maintenance industry. Retail stores, banks, restaurants, rental homes, and more make up the 200,000+ properties that rely every day on our technology platform, in-house subject matter experts, and 24/7 support. We leverage our network of 20,000 skilled providers across more than 55 trades—including HVAC reactive and preventative maintenance—to deliver an exceptional maintenance experience to the communities where we live and work.