



AIR

You Are What You Breathe: The Myths & Facts

TAKE A DEEP BREATH... WE SPEND OVER 90% OF AN AVERAGE DAY indoors and inhale 22,000 breaths daily. With each breath that we take, we inhale 45,000 to 75,000 particles of pollutants which add up to a whopping 16 kilograms of dirty air into our lungs.

Today, asthma kills 180,000 sufferers worldwide and is documented as the most common childhood chronic disease. In Singapore, asthma and allergies are as common as Europe and Australia. It has also been found that asthma affects 5 to 10% of the population and up to 7% of new onset adult asthma may be caused by the workplace. The United States Environmental Protection Agency also states that indoor air pollution is one of the top five risks to our health.

Even though Singapore does not experience major industrial-like pollution, the seasonal haze has been a constant worry and threat to the health of many. Indoors, there is increasing cause for concern too. Old buildings with neglected air conditioning system can be potential breeding grounds for bacteria and viruses. New buildings and renovation work result in the emission of harmful formaldehyde from paints, furnishings and lacquers. With a combination of airborne pollutants from everyday life such as pet dander, pesticides, carpets and upholstery fibres, indoor air is far from clean. Long term exposure to such pollutants is likely to affect a person's health, especially those who are prone to respiratory tract infections such as asthma and chronic obstructive pulmonary disease.



Some Common Myths

Myths	Truths
<ul style="list-style-type: none"> If you can't smell or see anything, the air must be OK 	<ul style="list-style-type: none"> Just because you cannot smell it does not mean air is clean. Air is not static. Within any indoor space, there is a constant air content change, with micro-particles, microorganisms and gases added all the time. Even routine events such as foot traffic can stir up dust and particles which can trigger allergies or asthma attacks. Microorganisms can become airborne from coughing, sneezing and shedding of the human skin which is a natural process.
<ul style="list-style-type: none"> Since there is no haze, there is nothing to worry about 	<ul style="list-style-type: none"> Even without the haze, exposure to compounds such as vehicle and machine exhaust, industrial chemicals, cooking fumes, combined with poorly maintained air ventilation systems pose a constant threat to health. Where possible, preventative measures should be taken to minimize the ongoing and anticipated health threats.
<ul style="list-style-type: none"> My family and I don't have any history of respiratory illnesses 	<ul style="list-style-type: none"> Airborne pollutants are the main cause of illnesses to the young, elderly and vulnerable. In more serious instances, the looming threat of SARS and Avian Flu puts everyone at risk. The issue that we face today is not only about addressing health issues of those with respiratory problems – but to protect everyone who is at risk.
<ul style="list-style-type: none"> My home is air conditioned and newly renovated 	<ul style="list-style-type: none"> Homes and offices are built with more synthetic building materials that were not used 20 years ago. Carpets, synthetic fibres from sofas and lacquer from furniture are among the key contributors to airborne contaminants. These odours are trapped within the air conditioned environment and repeatedly re-circulated through the air conditioning system, and the human respiratory system.

Air Quality Solutions: Why Some Don't Work

- Filters – There are many different types of filtration systems, ranging from HEPA to Ultraviolet Light. However, only Enhanced Media Filtration (EMF) air purification systems with HEPA grade filters have the ability to trap and kill up to 99.99% of airborne microorganisms.

- Water Based Filters – Water itself is a breeding ground for bacteria and fungi, unless well-maintained, the filters might spread more germs than they eliminate. While water may trap particles, it certainly does not kill micro-organisms in it.

- Airborne Scents – Perfume or scent dispersants only mask the smell but is not effective against removing or killing airborne microorganisms.

Monitor and Clear the Air

In par with developed air-quality and environment-aware countries such as the USA, Australia and New Zealand, Singapore today has state-of-the-art technologies that enable owners of commercial, industrial and residential buildings to monitor and assess the respiratory system of buildings such as the air ventilation and ducting systems. The unique feature is that this can be done on a real time basis, from a 24-hour to weekly periods, non-stop.

Ducted ventilation systems can now have a professional mechanical scrub and sanitization to remove odours and bacteria and viruses breeding within. Indoor air and surfaces can be treated with air filtration systems that trap and kill almost 100% of airborne contaminants such as mould, fungi, bacteria and viruses.

Save Cost, Save Energy: Go Green

At work and at home, electrical energy is the predominant recurring cost. With ever-increasing energy tariffs in Singapore and other countries, it has become the goal of home and business owners alike to minimize energy costs.

However, regular and professional maintenance routines can improve the efficiency of air ventilation and ducting systems and that can result in tangible energy costs savings and provide a better working environment for building occupants. These Green practices have been proven to reduce energy consumption by 15 to 90 percent. The increasing significance of Green Buildings does not just mean being responsible for our planet's health, but also for the health of the people who inhabit it (the Earth).

So if you are not 100% certain if you are living, working or playing in an optimized clean indoor environment, contact your indoor air quality professionals for an air quality monitoring and assessment. You can change the way you breathe.

About IEQ Global Pte Ltd

Founded by the late Tang Wee Cheng, IEQ Global Pte Ltd is the premier end-to-end indoor environmental solutions provider in the Asia Pacific region. It offers state-of-the-art spectrum of environmental engineering solutions that address energy/operating cost optimization and reduction as well as improve Indoor Environmental Quality (IEQ) needs of customers. IEQ Global has a team of in-house experts with extensive accumulated experience in environmental engineering, quality control and property management. Supported by professional expertise, processes and technology, IEQ Global is fully committed to ensuring that customers have access to the best solutions for addressing their IEQ requirements. For more information,

visit <http://www.ieqglobal.com>. ♦

