



# EVIA'S EU MANIFESTO

GOOD INDOOR  
AIR QUALITY IS  
A BASIC HUMAN RIGHT

[www.evia.eu](http://www.evia.eu)



# Foreword by our chairman

In recent decades, policymakers, activists and scientists worldwide have dedicated significant amounts of time and energy to improving outdoor air quality by taking measures such as limiting the amounts of particulate matter and nitrogen oxides from cars that are released into the atmosphere.

Society considers this issue so important that many states have even incorporated a healthy environment into their constitutions as a fundamental right. However, it is often forgotten that clean air does not stop at one's doorstep, but also includes the air we breathe indoors, where most of us spend up to 80% of our daily lives.

Numerous contemporary scientific studies indicate that the air within homes and other buildings can be even more seriously polluted than the outdoor air in even the largest and most industrialised cities (source: epa.gov).

Poor indoor air quality (IAQ) can pose serious health risks, and in the short term can lead to coughing, sneezing, fatigue and headaches.

In the long run, poor IAQ is connected with a range of undesirable health effects, such as allergic and asthma symptoms, lung cancer, chronic obstructive pulmonary disease, airborne respiratory infections and cardiovascular disease.

Bad IAQ is not only a health problem - it can also weigh heavily on the economy because of its negative impact on the workforce and young people.

The EU and its member states have already taken important steps to improve IAQ – for example, by prohibiting smoking in public spaces and banning the use of some chemicals such as lead-based paints.

However, this is only part of the solution. Improving IAQ requires a multifaceted approach that not only bans the most obvious pollutants such as smoke and certain chemicals, but also necessitates other important measures. A badly ventilated building is an ill building, and this will inevitably lead to ill occupants.

Therefore, raising ventilation standards is a critical next step, especially since new and renovated buildings are made increasingly air-tight. This makes it even more likely that in a badly ventilated building, issues such as mould could arise.

The fight to systematically improve IAQ through better ventilation is still in its infancy. What we need now is to take some of the great energy dedicated to improving outdoor air quality and bring it indoors in the form of well thought-through regulation.

Concretely, we call for legislation requiring the mandatory inspection of ventilation systems to trigger repair and renewal when needed and to define minimum air quality requirements and related airflow rates in European buildings. Only with these measures can we systematically improve overall IAQ. This is not a luxury, but a basic human right.

**Joan Miró Ramos, EVIA Chairman**



# CALL TO ACTION

**It is essential to support the inclusion of ambitious indoor air quality requirements in Europe!**

## **BOOSTING INDOOR AIR QUALITY IN BUILDINGS: LET'S KEEP UP THE MOMENTUM!**

EVIA welcomed the adoption of the new Energy Performance of Buildings Directive (EPBD), which represents a major first step in recognising the crucial importance of IAQ in buildings for citizens' health, comfort and productivity. However, we regret that the key role of ventilation in that respect is not fully acknowledged.

EVIA advocated for an EPBD framework that could drive the much-needed changes and improvements in the existing building stock and promote systems and solutions that result in high IAQ, low energy consumption and consumer empowerment.

Setting the mandatory inspection of stand-alone ventilation systems would ensure their optimal performance, improve IAQ, tap into the huge energy saving potential of the existing building stock, and raise awareness among consumers about how they themselves can influence IAQ.

- ▶ **Recognising the key role of ventilation to address poor IAQ**
- ▶ **Promoting systems and solutions that result in good Indoor Air Quality & low energy consumption**
- ▶ **Setting the mandatory inspection of stand-alone ventilation systems to ensure optimal performance**
- ▶ **Raising awareness among consumers about how they can influence IAQ**





# Why should we care about Indoor Air Quality?

Indoor air quality (IAQ) is equally – if not more – important than outdoor air quality when it comes to people's health. Many studies have shown that IAQ is frequently much worse than outdoor air quality in even some of the most polluted areas, such as city centers. In fact, the indoor air in our homes, schools, offices, and factories can be twice, or even five times more polluted than outdoor air. It is not only the quality of the air that matters, but also the amount of time we spend in it.

**Most Europeans spend more than 20 hours per day, or more than 90% of their time indoors.**

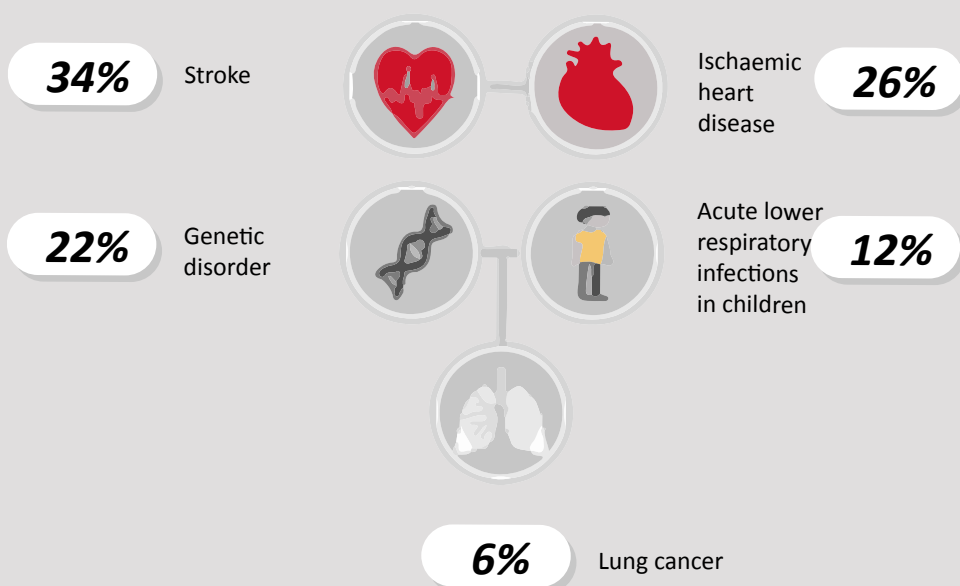
Moreover, the most vulnerable sections of our population - the elderly and children under five - tend to spend more time indoors than other members of society.

## WHAT CAUSES POOR IAQ?

The level of IAQ within a building can be affected by many factors including humidity, odours, chemicals, and outdoor air particles that are trapped within buildings. More specifically, factors such as mould, lead-based paints, second hand smoke and high levels of CO<sub>2</sub> can create unhealthy and even dangerous living conditions.

In recent decades, IAQ has also been significantly affected by the dramatic increase in the air tightness of modern buildings. While making buildings more airtight will indeed ensure they are more energy efficient, it will also make it much harder for polluted air to escape.

## INDOOR AIR POLLUTION-CAUSED DEATHS:



source: <http://who.int/mediacentre/news/releases/2014/air-pollution/en/>

# What is the impact of poor IAQ and ventilation?

## WHAT IMPACT CAN POOR IAQ HAVE ON SOMEONE'S HEALTH?

A badly ventilated building is a sick building and will inevitably lead to ill occupants. Poor IAQ can pose serious health risks - in the short term can lead to coughing, sneezing, fatigue and headaches, and in the long run, is connected with a range of undesirable health effects

People who spend a lot of time in poorly ventilated rooms have a 50% higher risk of developing allergies.

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## WHAT IMPACT CAN POOR IAQ HAVE ON THE ECONOMY?

Poor IAQ is not only a health problem. If it is systematically present in society, it can also weigh heavily on the economy. The Promoting Action for Healthy Indoor Air Project (IAIAQ) calculated that in the European Union every year two million healthy years are lost due to poor IAQ. This not only means a loss in productivity, it is also places a heavy burden on our healthcare systems.

**In the European Union every year two million healthy years are lost due to poor indoor air quality!**

## POOR IAQ CAN ALSO IMPACT THE ENVIRONMENT

IAQ not only affects people's health and the economy, it also has significant environmental implications. Buildings account for approximately 40% of the EU's overall energy consumption and 36% of the EU's overall emissions of greenhouse gas. Being able to effectively renew indoor air while maintaining its quality will also help the EU achieve its environmental objectives. Indeed, ventilation improves the energy consumption of buildings by limiting air renewal to what is necessary to ensure a satisfactory indoor environment. Thus, it avoids unnecessary thermal/cold losses and optimises heating and cooling needs.

# How can better ventilation improve Indoor Air Quality?

## HOW VENTILATION CAN HELP YOU ACHIEVE A HEALTHY LIVING ENVIRONMENT?

An ideal energy-efficient home is airtight and well insulated, with a ventilation system that ensures good indoor air quality to keep you healthy.

The primary causes of poor indoor air quality are condensation and mould. There are many factors which contribute to this such as poor insulation, inadequate heating and ventilation, and the lifestyles of the occupants. Ventilation is often forgotten as we invest in our heating and building fabrics.



## THE NEED TO PROPERLY VENTILATE

Every day we cook, bathe, clean or adjust the heating periodically to maintain a comfortable temperature. All of these activities can lead to the creation of Volatile Organic Compounds (VOCs) or moisture within the air.

For example, the average family of four produces 10 litres of moisture per day. This moisture can in turn lead to mould growth, the creation of mould spores, and an increase in the number of dust mites. Going beyond what we generate ourselves, the home itself can increase moisture levels through condensation because of inadequate ventilation to remove the moist and/or stale air, especially when homes are insufficiently heated.

The build-up of high VOC levels is also very detrimental to the health of the building's occupants, as it can lead to serious cardiovascular and respiratory diseases as well as cancers.

Old buildings in particular ventilate naturally by allowing air to pass through the building fabric. Unfortunately, this ventilation is uncontrolled and depends largely on external influences such as wind pressure.

Most people air their homes by opening their windows. However, IAQ deteriorates very quickly when windows are closed again, e.g. when cooking or taking a shower. The best solution is a controlled ventilation system!



## ABOUT EVIA

The European Ventilation Industry Association (EVIA) was established in Brussels in July 2010. EVIA's mission is to represent the views and interests of the ventilation industry and serve as a platform between all the relevant European stakeholders involved in the ventilation sector, such as decision-makers at the EU level as well as our partners in EU Member States.

Our membership is composed of more than 40 member companies and 6 national associations across Europe, achieving an annual turnover of over 7 billion euros and employing more than 45,000 people in Europe.

EVIA aims to promote highly energy efficient ventilation applications across Europe, with high consideration for health and comfort aspects. Fresh and good indoor air quality is a critical element of comfort and helps keep people healthy in buildings.

With a comprehensive understanding of how healthier surroundings can improve our indoor life, work, study and living environments, EVIA members focus on ensuring that high quality indoor air remains a key European policy priority. Europeans spend 80% of their time indoors, inside buildings where pollutant levels are often much higher than those found outside.



