

Improving Children's Respiratory Health: The Role of Housing Quality and MVHR



Our Focus in this blog is to look at Improving Children's Respiratory Health and The Role of Housing Quality and Mechanical Ventilation with Heat Recovery (MVHR).

Studies have shown that children exposed to substandard housing quality with poor ventilation, are at higher risk of respiratory issues. Common culprits that contribute to respiratory issues are dampness, mould, cold environments, and pollutants. These factors all contribute to poor indoor air quality (IAQ), a significant determinant of respiratory health.

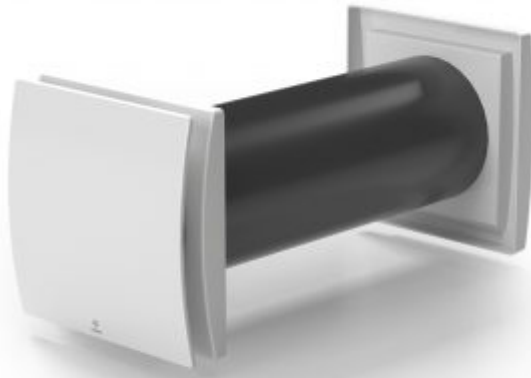
One promising solution to mitigate these effects is the implementation of Mechanical Ventilation with Heat Recovery (MVHR) systems. Implemented correctly, these have been proven to improve IAQ and contribute to good respiratory health.

The Link Between Housing Quality and Children's Respiratory Wellbeing

Children living in homes with poor ventilation, dampness, and mould are more likely to suffer from asthma and other respiratory conditions. In fact, up to 14% of childhood asthma cases are attributed to living in homes with mould. Cold homes, often caused by poor insulation and inefficient heating systems, further exacerbate respiratory health by increasing the risk of viral infections and damp conditions, which can trigger asthma and wheezing.

According to one systematic review, children exposed to damp or mould in early life were significantly more likely to develop asthma by the age of 3. In the UK, it's estimated that 3.6 million children live in poor-quality housing. These children, especially those from low-income households and living in rented accommodations, are the most vulnerable. Overcrowding, a common issue in low-income housing, further compounds these risks, leading to higher moisture levels and poor IAQ.

Mechanical Ventilation with Heat Recovery (MVHR): An Efficient Solution to



Poor IAQ

One of the most effective ways to combat the issues of poor IAQ is through the installation of MVHR systems.

MVHR works by continuously supplying fresh, filtered air to the home while extracting stale, polluted air.

This process removes indoor pollutants such as mould spores, volatile organic compounds (VOCs), and particulate matter (PM). Additionally it also recovers heat from the outgoing air to maintain a comfortable indoor temperature without wasting energy.

With our [FLUXO®](#) , Over 82% of the heat is retained inside the property due to an innovative heat exchanger inside the core.

Several studies have demonstrated the effectiveness of MVHR in improving indoor air quality:

1. **Improved IAQ:** MVHR systems have been shown to reduce indoor pollutants by up to 80%, significantly lowering the concentration of allergens, VOCs, and particulate matter . This is particularly important in homes where gas stoves or open fires are used, as they release nitrogen dioxide (NO₂) and carbon monoxide (CO), which are harmful to respiratory health.
2. **Health Benefits:** Research has revealed that homes equipped with MVHR see a reduction in respiratory symptoms, especially in children with asthma. A [New Zealand study showed a 33% reduction in respiratory symptoms when children moved to homes with better ventilation](#) . Another study in the USA indicated that children living in homes with optimal ventilation had fewer asthma-related hospitalizations and a decrease in the use of reliever medications .
3. **Energy Efficiency and Comfort:** MVHR systems also help maintain a stable indoor temperature, reducing damp and mould. By preventing cold spots and condensation, these systems create an environment less conducive to the growth of mould and dust mites. This helps to decrease the likelihood of respiratory issues.

Statistics on MVHR and IAQ Improvement

- MVHR systems can improve indoor air quality by reducing pollutant levels by up to 90% .
- [In homes with MVHR, asthma-related hospital admissions in children can decrease by as much as 30%](#) .
- Studies also found that the risk of respiratory tract infections decreases by around 20% in homes with efficient ventilation systems .

Conclusion

Upgrading housing quality and IAQ is crucial for improving the respiratory health of children and young people.

The link between Improving children's respiratory health, housing quality and MVHR is clear. Without properly implemented ventilation schemes, IAQ is poor and directly impacts children's wellbeing. MVHR offers a practical, energy-efficient solution to mitigate the detrimental effects of poor air quality in homes. By investing in ventilation solutions like [FLUXO®](#), we can significantly reduce the incidence of respiratory illnesses in children. This helps to ensure a healthier future for the next generation.