

IMPROVING INDOOR AIR QUALITY WHILE COOKING

WHAT WE LEARNED FROM SALMON EXPERIMENTS

Researchers at SINTEF Community conducted a unique experiment:
72 salmon dinners were prepared in small test apartments.

They monitored:

- Fine particles and gases released during cooking
- How effectively different ventilation systems removed them

KEY FINDING:

The standard ventilation rates in Norwegian flats are:

- Base ventilation: 36 m³/h
- Forced ventilation: 108 m³/h

These levels were not enough to clear pollutants during cooking.

- When the airflow increased to 180 m³/h, the indoor air quality improved significantly.

WHY DOES THIS MATTER?

Cooking releases:

- Fine particles (PM)
- Gases and odours
- Moisture that can contribute to mould

Proper ventilation **reduces health risks and keeps indoor spaces safer and more comfortable.**

HOW DOES THIS APPLY IN KHIA?

As part of the K-HealthinAir project, we have already created guidance materials on effective ventilation.

This study reinforces our core message:

COOKING VENTILATION GUIDELINES

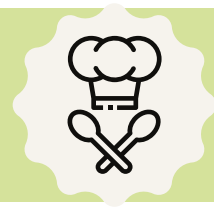
- ✓ Increase ventilation when cooking, especially in smaller spaces
- ✓ Use extraction systems vented outdoors, not just recirculating filters
- ✓ Keep ventilation running for a few minutes after cooking, depending on how efficient the kitchen hood is

AIR QUALITY IMPACT

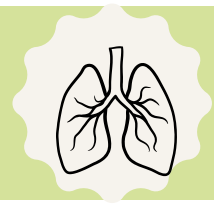
These measures align with KHIA's mission to:

- Improve indoor air quality in real-world environments
- Reduce exposure to pollutants for building users

WHY IS THIS IMPORTANT FOR YOU



Canteen staff are consistently exposed to cooking emissions, especially during busy periods.



Good ventilation reduces fine particles and harmful gases, supporting respiratory health.



Improving extraction systems and air exchange helps avoid unpleasant odours and excess humidity, creating a more comfortable workplace.



Over time, better air quality contributes to lower absenteeism, higher wellbeing, and better performance.