

# Ventilation

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# Protect the Lungs of Young Children

- Lungs of young children are very sensitive
- Air pollution can damage lungs for a **lifetime**
- Exposure to air pollutants can cause asthma, which can last a **lifetime**
- Lung infections can damage lungs for a **lifetime**



# Basic Principles

1. Source Control
2. Ventilation
3. Air Cleaning



# Source Control

- Improving quality of indoor air is vital for human health
- Preferred strategy
- Increasing ventilation – higher energy costs



# Household Hazardous Chemicals

- Average US household uses 40 lbs of chemicals each year
- Average household stores more than 60 hazardous products
- Many of the products are loaded with fragrances and petroleum-distilled chemicals (Volatile Organic Compounds / VOCs)

Consider “Green Cleaning”



# Air Fresheners

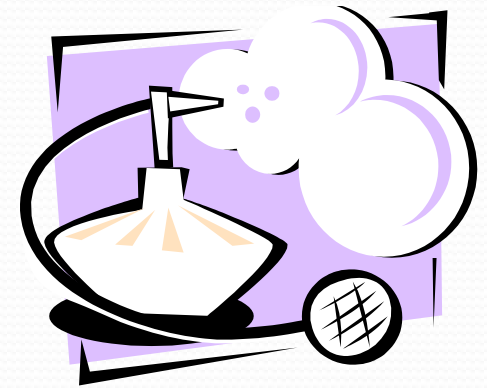


DO NOT “clean” the air  
They add more air pollutants



# Occupant Sources

- Physiological “equilibrium”
- Sweat/perspiration
- Perfume, cologne



# Basic Principles

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# Ventilation

- Higher energy costs
- Tension between weatherization and indoor air quality
- Heat Recovery Ventilators (HRV)



# Source Ventilation



Exhaust out of building



# Source Ventilation



Gas stoves release low CO and lots of moisture



Cooking releases moisture



Make sure range hood vents to outside

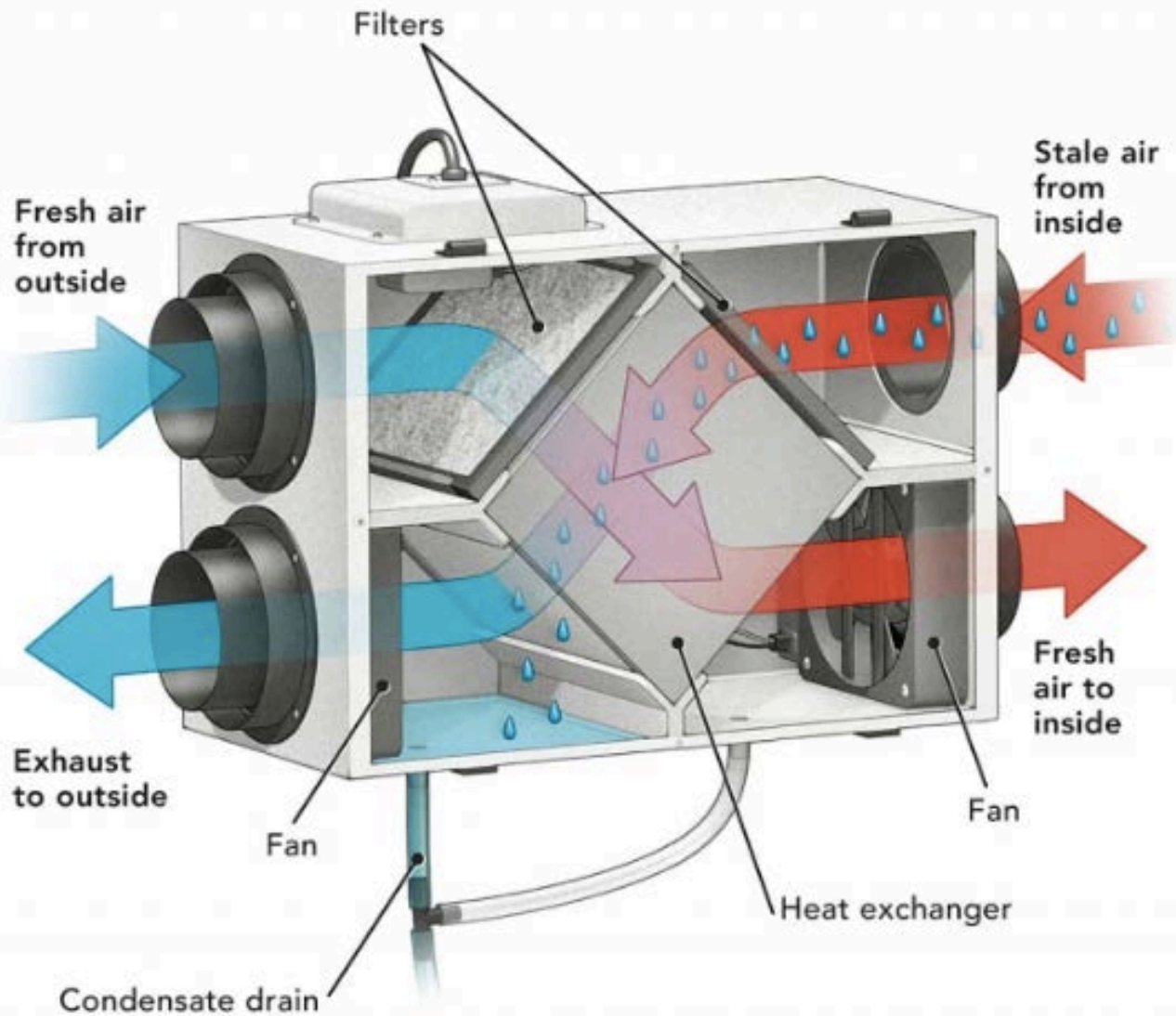


# Heat Recovery Ventilator



200 MAX





# Basic Principles

1. Source Control
2. Ventilation

## 3. Air Cleaning

Air cleaning is only recommended after proper source control and ventilation steps are taken



# More Information...

- <http://www.epa.gov/iaq>
- <http://www.epa.gov/indoorairplus/>
- <http://www.cdc.gov/healthyhomes/bytopic/airquality.html>
- <https://www.popularmechanics.com/home/interior-projects/how-to/a149/1275121/>

