

VALUE OF SOURCE CONTROL

KEEPING POLLUTANTS OUT OF YOUR HOME



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Indoor Air Quality Basics

- People in Alaska spend a lot of time indoors (90%)
- The condition of our indoor air has a huge impact on our health
 - “Sick Building Syndrome” is where occupants experience health or comfort related effects that seem to be linked to time spent in the home.
- **Susceptibility**
 - Respiratory issues, asthma, young children, elderly and people with heightened sensitivity

Respiratory Health

- Alaska Native children have some of the highest rates of respiratory illness ever documented

» Risk Factors

- Lack of in-home piped water services
- Household overcrowding
- Using a woodstove
- Poor air quality (indoor and outdoor)



Respiratory Rates

Children have faster respiratory rates than teens and adults:

- 0-12 months: 30-60 breaths per minute
- 1-2 years: 24-40 breaths per minute
- 3-5 years: 22-34 breaths per minute
- 6-12 years: 18-30 breaths per minute
- 13-17 years: 12-16 breaths per minute
- Adult: 12-20 breaths per minute



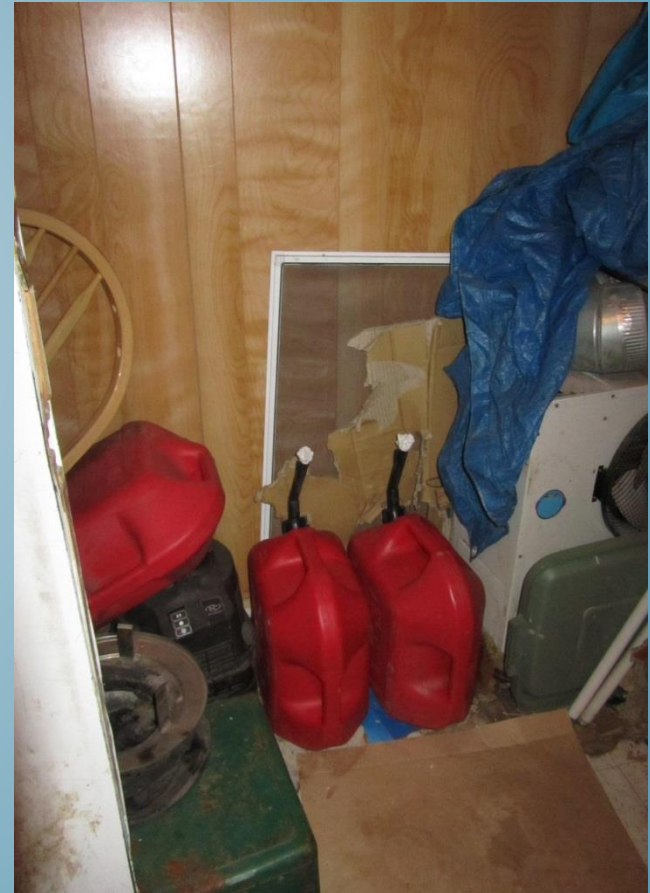
Thus, children below the age of 13 intake more air pollutants than an average adult.

7 Principles of a Healthy Home



Air We Breathe

Keep It Contaminant Free



Exposure

Exposures include:

- Wood smoke
- Mold/Biologics
 - Moisture
- Volatile organic compounds
- Environmental tobacco smoke
- Carbon monoxide
- Dust
- Lead



How To Keep Your Home Contaminant Free???

Behaviors include:

- **Keep Fuels, Chemicals, and smoking outdoors**
- **Remove Carhartts or Smoking Jackets in the arctic entry**
- **Burn only dry wood and kindling in the woodstove**
- **Use chemicals as labeled and only when necessary**
- **Ventilate, Ventilate, Ventilate**

Volatile Organic Compounds (VOC's)

VOC's are gases from solids or liquids that are emitted by a variety of chemicals. Examples are but not limited to:

- Paints, varnishes
- Cleaning and disinfectant products
 - Fuels
- Aerosol sprays
- Pesticides
- Building materials

Burning in a Woodstove

- What to Burn

- Dry Wood

- Wood split and dried for 6-12 months

- Kindling

- Wood scraps and occasionally small bits of newspaper



- What NOT to Burn

- Wet Wood

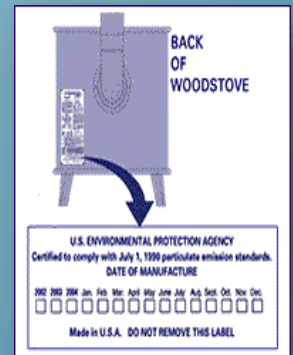
- Garbage

- Treated Lumber

- Saltwater Driftwood

- Glossy Paper

- Cardboard or Paper Wastes w/ Adhesives



Build-up of Creosote

Stove pipes need to be cleaned out at least once a year. Creosote can prevent smoke from escaping through the chimney and is highly combustible.

- **Restricted Air Supply**
 - Closing down the damper too soon after starting the fire
- **Burning Unseasoned Wood**
 - Too much energy is used driving the water out of the wood, the resulting smoke stays cooler
- **Cooler Chimney Temperatures**
 - We live in Alaska... not much getting around this one



Cleaning

- **Reduced exposure to:**
 - Mold and moisture issues
 - Transmittable diseases
 - Household injuries
 - Allergens & Asthma triggers
 - Pest droppings and urine
 - Pesticides and consumer chemicals
- **Reduced harborage for pests**

Pest-Free

- Can include:
 - Bed bugs
 - Rodents
 - Bats
 - Domestic animals



Keeping Your Home Pest-Free

- Seal entry points to the home
- Do not leave food out
- Be aware during AND after traveling
- Be diligent in your search by monitoring
- Regularly vacuum animal hair & clean up urine and waste
- Wash bedding to keep dust mites down
- Watch for leaks or other sources of water
- Be aware during AND after traveling
- Be diligent in your search by monitoring
- Store domestic animal food properly

Chemical Free



Chemicals can **increase** respiratory problems.

Green Cleaning

Harsh chemicals, especially without proper ventilation, can linger in the air and sit on surfaces. Therefore, affecting us by breathing in and absorbed by the skin.



Keeping Your Home Safe

- Safely store all cleaning products and medications
- Remove trip hazards
- Use tamper resistant outlets or outlet covers
- Store guns in a safe, with trigger locks, or out of the reach of children
- Replace batteries on smoke and carbon monoxide detectors



Keeping Your Home Dry

Damp houses provide a nurturing environment for:

- Mold
- Bacteria

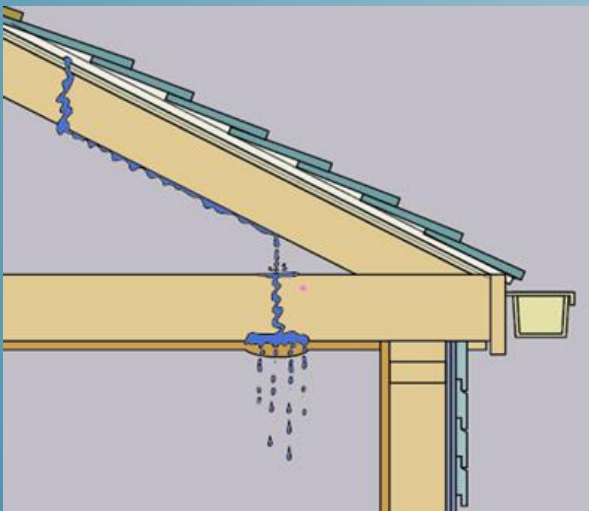
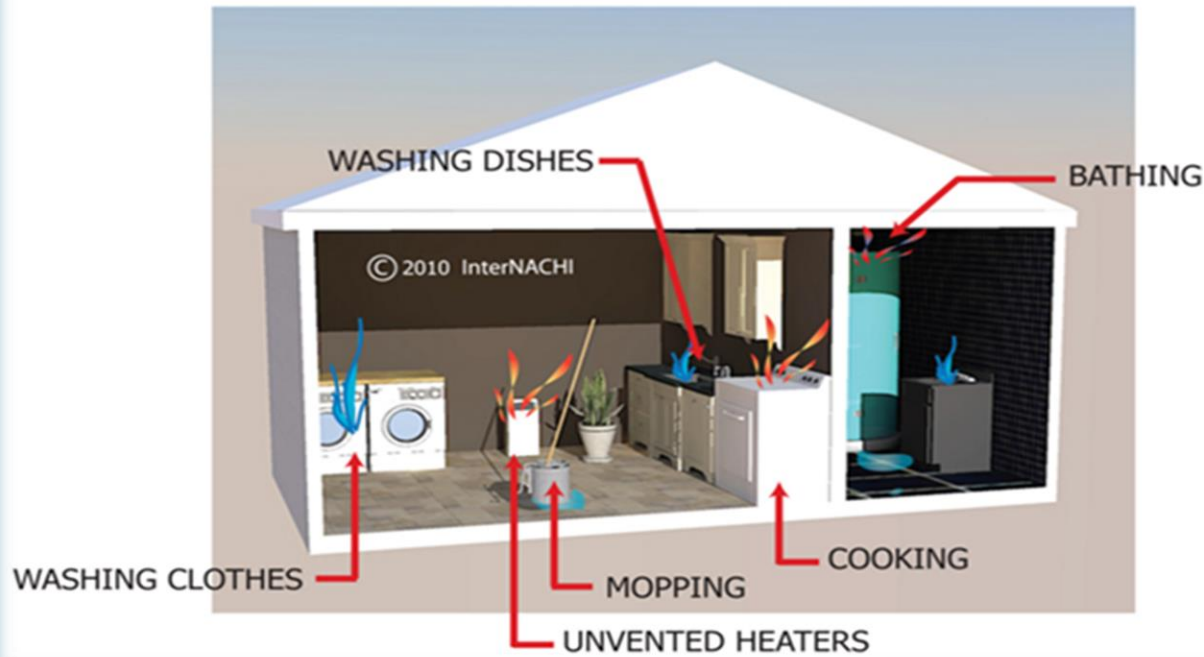


Health Effects:

- Most people are not effected by mold, however sensitive people have more reactions.
 - Allergic reactions like stuffiness, eye irritation, shortness of breath, irritation, wheezing and skin irritation, breathing issues

Structural Damage

MOISTURE PRODUCTION FROM DOMESTIC ACTIVITIES



Keeping Your Home Maintained

Poorly maintained homes are at risk for moisture & air quality problems.



How??

- Seal leaks
- Clean out chimney stacks
- Clean vent filters
- Fixing what you can



Ventilation

Why Ventilate?

- Pollutants can be found in concentrations 2-5 times higher indoors than outdoors
- Proper ventilation can reduce hazards of:
 - Volatile organic compounds
 - Radon
 - Moisture
 - Environmental tobacco smoke
 - Particulate matter
 - Allergens
 - Mold
 - Carbon monoxide

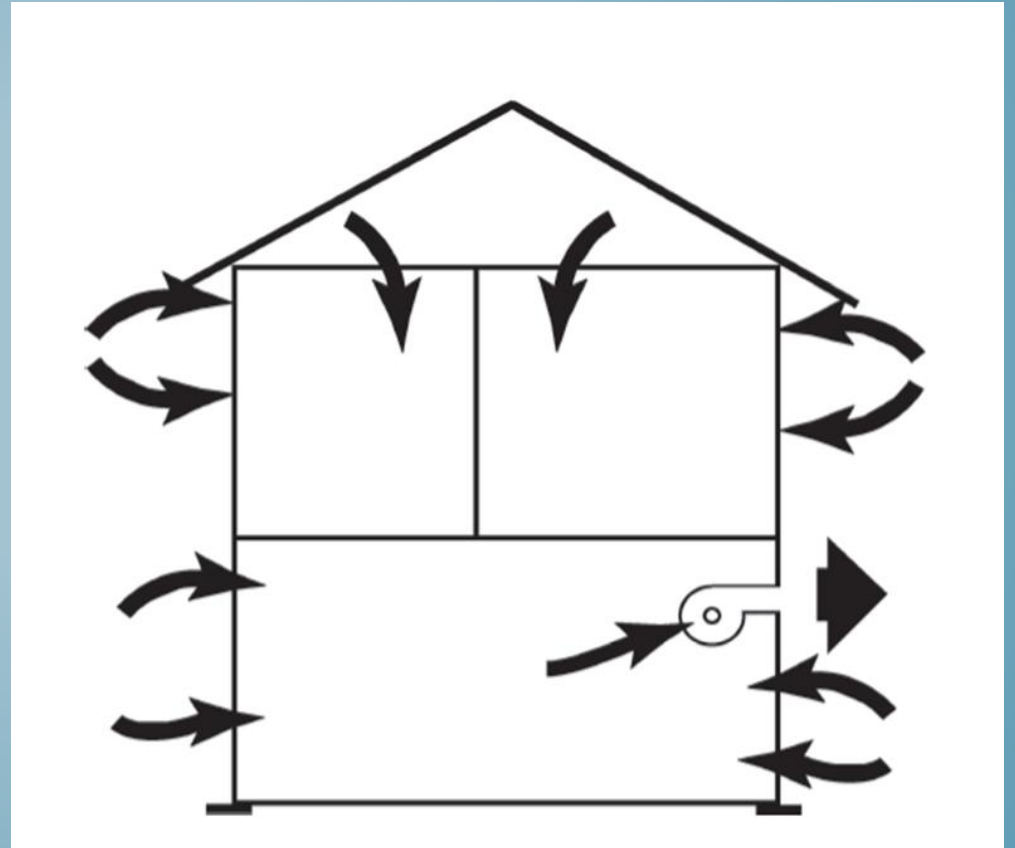
Increasing Ventilation



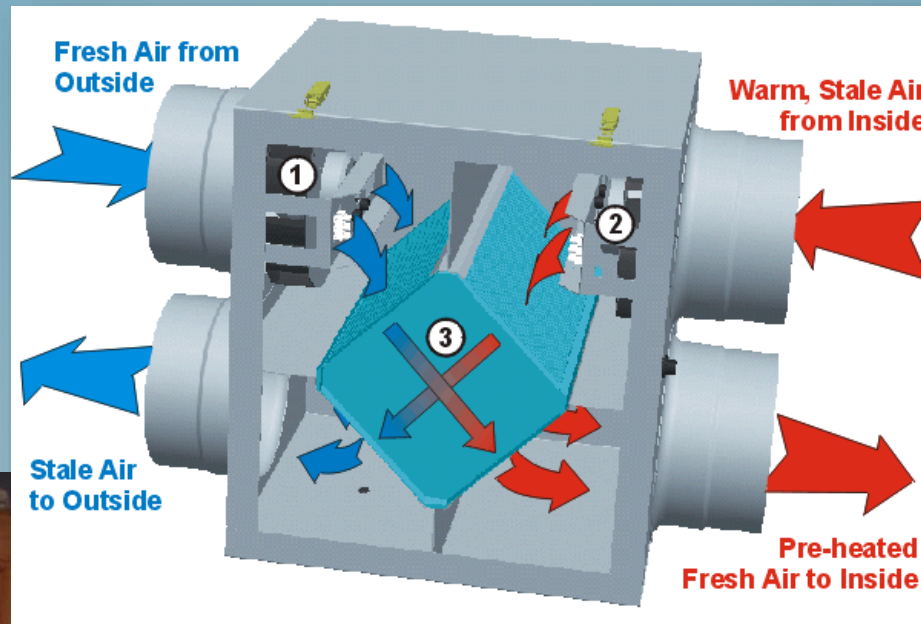
Increasing the fresh air supply in a home improves air quality

- Dilute
- Exhaust
- 4 ach, 15 for kitchen and bathroom
- Windows!

Passive Ventilation



Mechanical Ventilation



Cooking stove with range exhaust



Bathroom exhaust

How To Keep Your Home Ventilated



Opportunities Include:

- Keep Passive Vents Open
- Keep the HRV Turned ON
- Use the Bathroom/Range Exhausts
- Routinely Clean Filters
- Open doors or windows

Questions???



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