Clean Air, Healthy Homes

The Cold Climate Housing Research Center works throughout the traditional territories of the Indigenous Peoples of Alaska. Our research center is on the homeland of the Lower Tanana Dene Athabaskans. We thank and respect the First Alaskans for their ancestral and present land stewardship and place-based knowledge.
Indoor air quality self-assessment....

1. How many hours will you be outside today?

2. What is the air quality like in this room? How do you know?

3. How long do smoke and carbon monoxide detectors last?

4. What are three methods of improving indoor air?

5. How much does it cost to run an HRV in Alaska?

6. What is the link between air quality and moose?
Alaska State Housing Assessment

16,107 units need to be built to alleviate overcrowding in the state.

14,600 homes are rated 1-star, burdening households with high energy costs.

78,959 households in Alaska are housing cost-burdened.

55% of homes in Alaska are at higher risk for moisture and indoor air quality issues.
What is poor indoor air?

- Carbon monoxide
- Dust
- Carbon dioxide
- Radon
- Formaldehyde
- Mold
- Benzene
- Smoke
Clean air means better health.

Image courtesy of University of Alaska Fairbanks.
Clean air also reduces costs.
You can improve your indoor air quality!
How can people improve their IAQ?

You can improve your IAQ.

Ventilation

Habits

Source control

Resources
The first step is just being aware.

- How much sugar is in this?
- Did I exercise today?
- Is my ventilation system on?
It is Alaska State Law for homes to have smoke and CO alarms.

AS 18.70.095: Smoke detection devices shall be installed and maintained in all dwelling units in the state, and carbon monoxide detection devices shall be installed and maintained in all qualifying dwelling units in the state.
Smoking is the leading cause of preventable death in the U.S.
High humidity can lead to mold growth.
Optimal RH for buildings in cold climates is 30-50%.
Look at your windows.

Condensation and ice on windows means the RH in the house is too high.

If the air exchange in the home is not enough to reduce the humidity, there is likely a build-up of other pollutants.
You can also use air quality measurement devices.
It’s important to USE and maintain ventilation appliances.
Changing one habit at a time will improve indoor air!
Source control
Test for radon if you have not done so in your home.

Above images courtesy of University of Alaska Fairbanks.
Many common household items are sources of VOCs.
Pay attention to labels!

Greenguard Certification from UL Environment

Green Seal

The Safer Choice Label

CRI Green Label +PLUS

Indoor Air Quality Testing Program
carpertrug.org

CAUTION

May cause eye or skin irritation with direct contact. Avoid contact with skin, eyes and clothing. Wear protective footwear when applying to floor. Avoid breathing vapors. Use in well ventilated areas at all times. Floors are slippery when wet; keep all unauthorized persons away. Do not take internally. Wear rubber gloves when handling. Wash thoroughly with soap and water after handling. Keep out of reach of children.

Inhalation: Remove to fresh air. Seek medical attention if symptoms persist.

Ingestion: Call physician immediately.

Disposal: Dispose of product (concentrate or dilution) by any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose.

First Aid:

EYE CONTACT: Flush with water for 15 minutes. If irritation persists, seek medical attention.

SKIN CONTACT: Flush with water followed by washing with mild soap and water. Remove contaminated clothing and launder before reuse. Seek medical attention if irritation develops.

INTERNAL: Remove to fresh air. Seek medical attention if symptoms persist.

Ingestion: Call physician immediately.

Disposal: Dispose of product (concentrate or dilution) by any method in accordance with local, state and federal laws. Best method is to recycle or reuse for intended purpose.
Filter outdoor air.
Plants can help to filter the air.
Buildings need air exchange. Fresh air in, and stale air out.
An air leakage test can tell you the air exchange rate of your home.
Exhaust-only ventilation: bath fans and range hoods

Figure courtesy of ACHP Northern Comfort Manual
An HRV or ERV is a balanced ventilation system.
HRVs use heat from outgoing air to warm incoming fresh air.
How did you do?

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5. How much does it cost to run an HRV in Alaska?

6. What is the link between air quality and moose?
Thank you.

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