

KUNI Radio Series “Unplugged”
Show #37: Indoor Air Quality

From the Center for Energy & Environmental Education at the University of Northern Iowa, this is Pat Higby with a series of programs on Iowa Public Radio KUNI to help you save energy.

Can your home be too tight? This is a question you may be asking after running the air conditioner for a long period of time. You may notice that odors linger, the air is stuffy, and mold or mildew grow on walls blocked by furniture. During the winter moisture may condense on windows. Unless you are opening doors and windows, there may be **no** fresh air entering your home, because most home heating and cooling units, including forced air heating systems, do **not** bring fresh air into the house.

Before the 1970’s homes were ventilated by air leakage. Fresh air was supplied from cracks around vent pipes, windows, and doors. In the winter this may still be the case for your weatherized home, because air infiltration is greater when the weather is cold and windy. Warm air rises, creating a “stack effect” that sends air out of the ceiling, and draws cool air in through the floor. This circulation stops in the summer, because the inside air is usually cooler than outside air. Wind-induced pressure is the primary factor in the summer, but on a still summer day, there won’t be much infiltration due to wind. As a result, your air may be cool , but not fresh. It is like the re-circulating air in your car when the vents are closed.

So, what should you do, leave your house leaky and drafty and pay more for heat and air conditioning? No, the best answer is to “build tight and ventilate right.” Your first step is to measure how much air moves in and out of your house with a blower door test. Check with your utility to see if they provide this service. In Cedar Falls a blower door test costs just twenty dollars. If your home really **is** too tight, you can add ventilation to your heating and cooling system. The best units provide energy recovery, and are called ERVs. They transfer heat and moisture between the exhausted and incoming air. These units cost more initially, but pay for themselves with energy savings.

While you are learning more about the different options available, consider installing a carbon monoxide detector. Detectors are important if you have a gas furnace, water heater, or stove, because they can give off carbon monoxide in homes where negative air pressure develops. The symptoms of carbon monoxide poisoning range from fatigue to flu-like symptoms that clear up after leaving home. Detectors cost between \$20 and \$50 and can give you peace of mind while you check your home’s ventilation systems.

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