U.S. Department of Energy - Energy Efficiency and Renewable Energy Energy Savers

Ventilation

When creating an energy-efficient, airtight home through <u>air sealing techniques</u>, it's very important to consider ventilation. Unless properly ventilated, an airtight home can seal in indoor air pollutants. Ventilation also helps <u>control moisture</u>—another important consideration for a healthy, energy-efficient home.

Purpose of Ventilation

Your home needs ventilation—the exchange of indoor air with outdoor air—to reduce indoor pollutants, moisture, and odors. Contaminants such as formaldehyde, volatile organic compounds, and radon can accumulate in poorly ventilated homes, causing health problems. Excess moisture in a home can generate high humidity levels. High humidity levels can lead to mold growth and structural damage to your home.

To ensure adequate ventilation, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) says that a home's living area should be ventilated at a rate of 0.35 air changes per hour or 15 cubic feet per person per minute, whichever is greater.

Ventilation Strategies

There are three basic ventilation strategies:

Natural ventilation

Uncontrolled air movement into a home through cracks, small holes, and vents, such as windows and doors. Not recommended for tightly sealed homes.

• Whole-house ventilation

Controlled air movement using one or more fans and duct systems.

Spot ventilation

Controlled air movement using localized exhaust fans to quickly remove pollutants and moisture at their source. Typically used in conjunction with one of the other strategies.

Learn More

Evaluation Tools

Ventilation/Airflow Software Tools
 DOE Building Energy Software Tools Directory

Financing & Incentives

• Find Federal Tax Credits for Energy Efficiency ENERGY STAR®

Professional Services

<u>Contractor Locator</u>
 Air Conditioning Contractors of America

Find a Contractor
 Plumbing-Heating-Cooling Contractors Association

Federal Government Resources

Ventilation for Homes
 U.S. Environmental Protection Agency

Reading List

• "Let's Talk about Moisture and Mold" (<u>PDF 459 KB</u>). (April 2002). *Quality Home*. Integrated Building and Construction Solutions.

Energy Savers Home | EERE Home | U.S. Department of Energy

1 of 2 8/12/2009 11:44 AM

Energy Savers: Ventilation

<u>Webmaster</u> | <u>Web Site Policies</u> | <u>Security & Privacy</u> | <u>USA.gov</u> Content Last Updated: February 24, 2009

Click anywhere in the top area of this page for an updated/expanded version of this article online at InspectAPedia.com

2 of 2