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Attic Ventilation

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Attic ventilation is important both summer and winter. In summer, ventilation through the attic will keep your ceilings cooler. Your house will be more comfortable, particularly for sleeping at night. If you have an air conditioner, it will not have to work as hard.

In winter, ventilation is needed to prevent moisture or frost buildup inside your attic. The first step, however, is to find the places where humid indoor air may be seeping up to the attic. Visualize your house as a balloon that holds warmth and moisture, versus outside air which is cold and dry. A hole in the bubble will allow heat and moisture to escape. Since warm air rises, there is a tendency for moisture to be carried with it into the attic.

Some people say that you need to allow moisture to escape. This may be true, but do not let it go to the attic. There are much better ways to relieve excess humidity, such as with exhaust fans ducted through the roof or outside walls, and venting your clothes dryer to the outside. In no case should an appliance be vented into the attic. It also helps to control the sources of moisture, such as installing a shower enclosure and door, covering pans when cooking, and opening a window when washing floors.

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To find the leaks from occupied space to the attic, you must lift up attic insulation along the tops of all walls. Look for wires, pipes, holes, and cracks. Use a silicone adhesive or caulk to glue strips of poly across the tops of walls. Spray foam sealant can be used for filling large voids around pipes or missing pieces of framing. Think of this as "patching the bubble". The attic door should be weatherstripped and tightly latched.

Professional services are available to find and seal the leaks in your home. One method uses an infrared camera to see the hot spots in your attic—which indicate seepage of warm air. Another method uses a powerful fan mounted in your doorway. The air pressure from the fan exaggerates all leaks, and a smoke tracer pinpoints the leaks.

Once you have made a proper seal between the occupied space and the attic, less ventilation is needed for preventing moisture. A ratio of about 1 to 200 of vent area to attic area is the minimum. For example, an attic of 1000 square feet should have at least 5 square feet of vent area. Half of the vent area should be low on the roof and half should be high. The low vents serve as intakes and the high vents serve as outlets. The eave of the roof, through the soffit, is the best place for intake venting. The ridge is the best place for outlet vents.

If your roof is not shaded from summer sun, you may wish to install more roof vents or a power vent. The free flow of air through an attic in the summer is beneficial to prevent high temperature buildup. A ratio

of 1 to 100 of vent to attic size could be used if you have no shading in the summer.

For further information, look for "agricultural extension" under your county name in the phonebook. Your county office can send pamphlets with further information on attics and roofs.