

Preventing Common Springtime Allergies

Dehumidification to Reduce Dust Mites and Mold

The arrival of spring for much of North America means April showers and May's warmer temperatures. Unfortunately, moisture and warmth are two conditions that contribute to increases in both dust mites and mold. As you plan for ways to reduce your allergen exposure in spring and summer, keeping your home's relative humidity low should be one of your top priorities.

One important step is to add dehumidification to your allergen avoidance protocol if you haven't already done so.

Countless studies have shown the link between humidity and the prevalence of dust mite populations. The reason is simple: 70-75% of the weight of a house dust mite is water. They maintain this needed water level through the absorption of water vapor in the air. So high relative humidity is crucial to their survival. Some of the leading experts in the field of dust mites and their allergen wrote the following in a recent article:

"Maintaining RH [relative humidity] below 50% is one of the most common recommendations for reducing dust mites and their allergen levels in homes because ambient RH is the key factor that influences dust mite prevalence. Mites must obtain sufficient water from the air to survive. Laboratory studies have shown that adult mites die of dehydration in 5 to 11 days, depending on temperature (25°C-34°C), when continuously exposed to RHs of 40% or 50%." [Larry G. Arlian, PhD, Thomas A. E. Platts-Mills, MD, PhD. "The Biology of Dust Mites and the Remediation of Mite Allergens in Allergic Disease." *Journal of Allergy and Clinical Immunology*. March 2001]

Moisture in your home's air not only makes the environment more hospitable to dust mites, but to mold growth as well. Molds thrive in humidity at or above 50-55%. A musty smell in your basement or bathroom is likely a mold or mildew problem as a result of excess moisture from leaks or spills or from consistently high relative humidity in your home. Extra care should be taken to monitor your home's relative humidity especially if your region is prone to heat and moisture.

What Is Relative Humidity And How Can It Be Controlled?

Relative humidity is the measure of the amount of water in the air compared with the amount of water the air can hold at a specific temperature. For example, a 77° F room with 60% relative humidity means that at that point in time, the air is 60% water! An instrument called a hygrometer [or humidity gauge] is used to measure relative humidity in the home and is an important tool for monitoring your home's humidity levels all year long.

In any given home on a summer day, humidity levels from room to room can range from 50-100%! Air conditioning and electric dehumidifiers are the most effective ways to control indoor humidity levels. Air conditioning works because cool air cannot hold as much moisture as warm air. Most dehumidifiers use a fan or a blower to pull air in, where it then passes through a cooling coil and is chilled to its dew point. This process results in condensation on the coils, which then flows into a bucket. Some dehumidifiers allow for the collected water to be pumped through a hose and into a sink, bathtub or out a window. After passing through the coils, the moisture-reduced air is then heated back to room temperature and released into the room.

Questions to Ask When Looking For A Dehumidifier

There are several key questions you should ask when looking at the various models and options for home dehumidification:

- * What is the unit's water extraction capability?
- * Does it have an automatic shut-off when the tank is full?
- * Can the water be pumped to a sink or outside using a hose or tube?
- * What is the lowest temperature at which the unit can operate without freezing up?
- * Does it have a multi-speed fan?
- * What is the energy consumption?
- * How loud is it?