

RECOMMENDATIONS FOR IMPROVING THE INDOOR AIR QUALITY IN APARTMENTS AND HOMES

The quality of the indoor environment is controlled by several things:

- **The building:** its' condition and how well it is maintained
- **Ventilation:** how much fresh air is brought in every day
- **Cleaning habits:** how often and how thoroughly occupants clean
- **Lifestyle:** amount of clutter, cooking, pets, smoking in the space
- **Furnishings:** age condition and how clean they are

Our experience after investigating thousands of buildings is that most indoor air quality problems come from excessive amounts of mold or dust in the air. Molds will grow when building materials stay wet for over 48 hours. Molds and yeasts in a building can cause health problems for occupants, especially children or the elderly. The larger the area that is covered by mold and the longer the mold has been there, the greater the risk to the occupants. See attached articles for examples of how mold in homes can affect people.

House dust is a conglomeration of fine dirt particles, fibers, animal dander, human skin flakes, dust mites, their body parts and feces, parts from other insects, mold spores, soot, tire fragments and an innumerable amount of other particles. "House dust that is heavily contaminated with the fecal pellets of dust mites is one of the most strongly allergenic materials found indoors" (Indoor Air Pollution Control: Godish, 1990).

The building

Leaks in the building that are not repaired ASAP are the biggest cause of mold growth in buildings. The most common locations are roofs, windows, siding, toilets, showers, dishwashers, and other plumbing fixtures. Water leaks must be fixed before molds or dryrot can destroy the walls, carpets and furnishings. If leaks continue, mold or yeast can make health problems worse.

Building dust particle problems can be caused by insects, rodents, birds, loose or flaking lead paint or heating devices that are not maintained.

Ventilation

People breathe all day and the buildings they live in also need to breathe all day, every day. The Washington State Ventilation Code requires 15 cubic feet of air per minute per person, or .33 air changes per hour. This is to insure that pollutants generated inside the building are exhausted outdoors, and fresh air is supplied to the occupants to prevent pollutants building up to unhealthy levels in the residence. Relying on building air leaks to do this will not give adequate ventilation.

Bathroom and kitchen range hood fans should be vented directly to the outdoors in sealed (air tight) metal ducts. The bath fan should be controlled with a solid state speed controller set to run at 1/2 to 2/3 speed at all times. A one-hour crank timer turns the fan up to high speed for 1/2 hour after each shower. The range fan should be run every time cooking is done, and the bath fan should be run at high speed for 20 minutes after each shower.

If your apartment does not have fans, or has fans that are noisy or do not work, request that good fans be installed, and in the meantime keep the windows open. A window or two should be kept open a crack even in the winter. In the spring, summer and fall keep them open as much as possible.

Cleaning habits

How often and how thoroughly you clean will have a significant impact on the air quality of your home. Every home needs to be cleaned weekly. This should include damp dusting all horizontal surfaces, vacuuming carpets and washing bathroom and kitchen fixtures and floors. Open all the windows when you clean to flush the dust raised by the cleaning out of the house. All bed linen should be washed in water that is 130° F in the washing machine, or dry-cleaned.

Once or twice a year the entire house should be “spring” cleaned. Thorough “spring cleaning” should include damp wiping, allergy or HEPA vacuuming, and washing horizontal surfaces. All furnishings and appliances should be moved and cleaned under and behind. Furnishings should be steam cleaned with 180° F dry steam, vacuumed well and/or beat and aired out in the sun.

Lifestyle

It is very difficult to effectively clean a home that is full of hundreds of things covering all surfaces. It is easy and fast to clean uncluttered spaces. It is important to clean up food and water spills ASAP because damp floors with nutrients offer ideal conditions for molds and insects. Smoking and pets contribute many pollutants and allergens to the space. At a minimum, pets should be kept out of bedrooms.

Furnishings

Soft furniture and rugs that are very old can hold millions of fine dust particles that contain pet dander, dust mites, mold spores and other allergens that can have a negative impact on the air quality.

A FEW ADDITIONAL TIPS FOR HAVING A HEALTHIER HOME

1. REMOVE SHOES BEFORE ENTERING HOUSE

Studies have shown that house dust can be dramatically reduced by removing shoes at the front door, or by using a good quality wipe off mat.

2. REDUCE DUST MITE LEVELS IN BEDROOMS

There are several steps you can take to greatly reduce your exposure to dust mites, particularly in bedrooms.

- Remove wall-to-wall carpeting, especially if they are old or thick
- Replace pillows
- Install allergy control barrier cloths over pillows, mattress, box springs, and comforter
- Wash bedding weekly in 130°F water
- Keep humidity in bedroom below 60%. Dust mites cannot survive at humidity levels below 50%, so a humidity level between 40-50% is optimal for reducing dust mite levels
- Consider purchasing a humidity monitor to track indoor humidity levels.

3 NON-TOXIC PEST CONTROL

Do not use any toxic pesticide sprays or powders. Use only non-toxic pest control methods. If you or someone in this home is sensitive it may be necessary to limit the use of all chemicals in the home. The Washington Toxics Coalition ((206) 632-1545) can help you find healthy and effective alternatives to toxic household products.