

## 'How to Treat Moulds' by Dr Apelles Econs.

Moulds in damp houses are a common cause of asthma, but moulds may also cause many other symptoms. Moulds tend to be more prevalent in humid climates and humid parts of the house such as bathrooms. Among the more obvious symptoms are: Rhinitis or Sinus problems such as:

- Runny or Stuffy Nose
- Postnasal Drip
- Coughing and Sneezing
- Itchy Nose and Throat
- Itchy and Watery Eyes
- Swollen Sinuses

Also mould spores can be responsible for chronic fatigue, headache, some types of colitis, eczema and atypical aches and pains. Additionally, these symptoms can be due to immune problems where mould spores have an important role. *Stachybotris* for example, is known to have caused some deaths in the USA.

The danger comes mostly from the mould spores which are tiny, usually smaller than a pollen grain: millions of spores can be released from a small area of mould.

Moulds grow outdoors on wood, leaves, plants, soil etc, and indoors wherever it is damp. Water condenses out of warm moist air when it strikes a cold surface and condensation increases with poor ventilation. Adults give off about 2 pints of water vapour in 24 hours, in addition to that released by cooking, washing and drying clothes.

The most common moulds that cause problems are:-

### Outdoor

*Alternaria* (peak Aug/Sept, plants especially cereals, rotten wood, composts etc);

*Aspergillus* (hay, winter on dead leaves);

*Botrytis* (summer on soft fruit, autumn, vegetables);

*Cladosporium* (most frequent mould in air, highest July/August, dead and dying plants, soil etc);

*Penicillium* (all year, peak winter/spring, soil, forests, grassland);

*Sporobolomyces* – actually a yeast rather than a mould – (damp, warm, after light rain, near trees, lakes, & camping);

*Trichoderma* (soil, damp timber);

*Ustilago* (late summer, on cereals).

### Indoor

*Alternaria* (window frames);

*Aspergillus* (black; damp old houses);

*Candida* (thrush & some cases of athlete's foot);

*Cladosporium* (window frames, refrigerators, condensation);

*Mucor* (stored food, house dust);

*Penicillium* (blue/green; apples, citrus fruit, house dust);

*Serpula* (dry rot on wood – damp, poor ventilation);

*Sporobolomyces* (wines, mimics wine allergy);

*Trichoderma* (green; damp houses, unglazed ceramics).

Steps to take:

### House:

- Increase ventilation: open windows may be enough combined with extractor fans in bathroom and kitchen. Trickle vents allow draught-free air entry and can be combined with passive stack ventilation. Alternatively install individual room ventilators with heat exchangers.

- Look for structural problems; leaks from plumbing, rising damp, faulty or non-existent damp courses, bridging of the wall cavity, porous plaster, faulty water drainage from roofs, leaking roofs. It may be necessary to seek expert advice to identify the problem. Inorganic pre-treatment wood preservatives such as copper-chromium-arsenic systems are available and non-volatile. Allergic people should either avoid chemical damp proof courses or insist on the use of high quality solvents with a narrow cut and relatively high volatility so that the solvent disperses quickly; an electro-osmotic damp-proof course or hollow clay tubes are alternatives.
- Treatments of dry and wet rot with synthetic pesticides may also cause problems for years: treatments based on water-soluble borates are effective, and dry rot will become controlled if the house is made dry and well-ventilated, without using chemical treatments. If a house has been recently treated with chemicals moving may be the only real solution; choose a house that is not in a hollow, near water, or surrounded by trees.
- Keep rooms both warm and dry as far as possible: gas, calor gas and paraffin heaters actually create moisture, so at least make sure it can escape.
- Keep kitchen and bathroom doors closed when cooking, washing, bathing or showering to reduce the spread of water vapour through the house. Ventilate thoroughly, wiping down afterwards if necessary.
- Don't allow kettles and pans to boil for longer than necessary.
- Don't dry clothes indoors without adequate ventilation.
- Ventilate tumble-dryers to the outside.
- Consider fitting extractor fans in the steamiest areas; make sure that there are adequate inlets for the air and that there is free air movement.
- Cover the soil in house plant pots with sand, grit or pebbles and water from the bottom.
- Don't overfill cupboards and wardrobes (especially built-in ones) so that there is room for air to circulate; leave space at the back of the shelf: ventilators are a good idea. Be particularly careful about cupboards on outside walls.
- Cavity wall insulation may help to reduce condensation. Allergic people should avoid urea-formaldehyde foam or fibre-glass spun with formaldehyde as the fumes may be a problem. If you are having a house insulated a dry-fill system using blown-in mineral wool or expanded polystyrene beads or Climawool is likely to be safer. Before the work is done, ask the firm to leave an open box of the material in your home for a while to see if the fumes irritate you.
- Moulds tend to grow in unexpected places: be sure you check, in particular, the wall behind the shower, behind the refrigerator because of the evaporation of water, behind cupboards on outside walls (especially if the cupboard has a false back) and the carpet below any water pipes or tanks on which water vapour may condense. Check ventilation and hot air flues particularly carefully if you have them; any mould growing there gets circulated round the building.
- Dehumidifiers may help.

### **Dealing with mould**

You can use ordinary household bleach (sodium hypochlorite), diluted 1 to 4 in plain water to which you can if you wish add 1 part in 100 of benzalkonium chloride BP, or Gloquat C from chemists shops. Wipe off with plain water, and then repeat the bleach wash. Allow to dry for a week and repeat if there is any recurrence of mould growth, finally rinsing with borax.

Borax is also effective against moulds, and particularly useful if you are upset by bleach or other chemicals. Buy household borax from most High Street chemists and add ½ cup to washing and rinsing water: especially useful in the shower area and for shower curtains. It can be sprinkled along window bottoms to discourage mould growth.

### **Mould Cultures**

It is sometimes helpful to find out which moulds you have in your home. This can be done by exposing mould plates which have been specially prepared by a mycologist, or by collecting dust samples in special bottles, which can be sent to the Public Analyst's Laboratory. The sample should be collected from where the floor and skirting board join, using a clean, washed and dried toothbrush: enough to cover a new penny is ample. This can then be posted to the laboratory. In each case the samples must be sent in without delay, and results will take 3 to 6 weeks.

### **Outside:**

Arrange for someone else to keep your garden free of dead leaves and decaying wood or vegetation. Keep away from the compost heap, and the greenhouse unless you spray regularly with borax or other mould retardant: have the plant pots covered in sand and watered from the bottom. If necessary wear a mask. Avoid walks in woods, except when it is frosty, or wear a mask.

### **Occupational Exposures to Moulds**

Moulds on farms are an occupational health problem: expert advice can be obtained through ADAS (<http://www.adas.co.uk/>). In industry, the Health and Safety Executive can be approached.

### **Prophylaxis**

If you have done all this and symptoms provoked by moulds are still troublesome, one of the modern desensitising techniques, neutralisation or EPD, may help to protect you. These are available in a few clinics, private or NHS.

Dr Apelles Econ is available for appointments at Airedale (Yorkshire), Oxford & Thames Allergy Centres - 01932 820578 or visit the website <http://www.allergymedicaluk.com/>