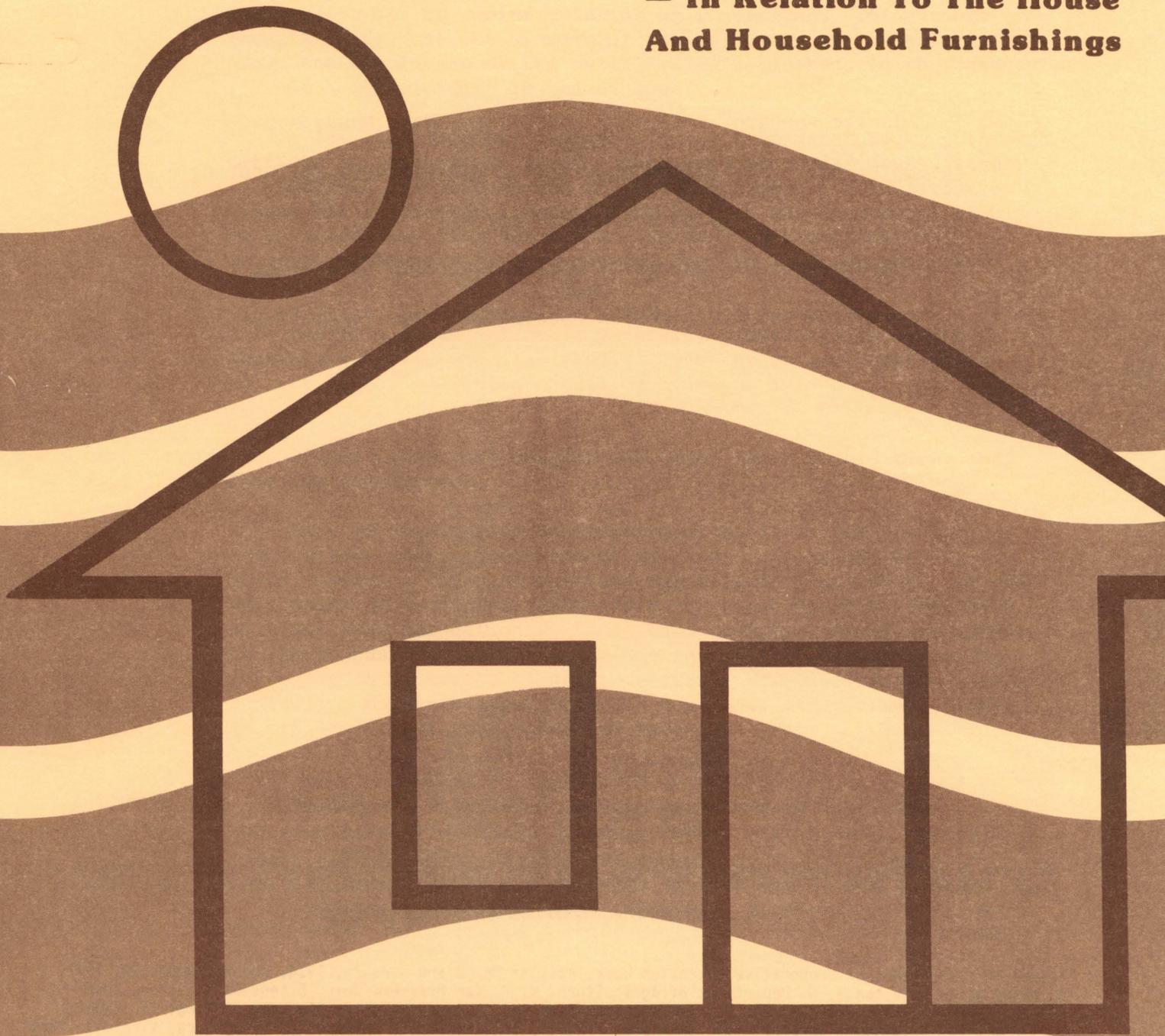


HOW TO PREVENT AND REMOVE MILDEW

— In Relation To The House
And Household Furnishings



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HOW TO PREVENT AND REMOVE MILDEW

In Relation to the House
and Household Furnishings

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TO PREVENT MILDEW

Get Rid of Dampness

The most successful approach to preventing mildew is to control moisture. Use one or more of the following measures: (1) remove the source of moisture, (2) ventilate the area adequately, (3) dry the air.

Basement

Dampness in the basement is often caused by condensation of warm, moist air on cooler interior wall surfaces. To overcome these effects, use one or more of the following measures: (1) improve the insulation of the walls, (2) provide heat in the basement, (3) use a dehumidifier in the basement.

A few basements are continually wet from water leaking through crevices in the wall or floor. Make sure that outside drainage is adequate. Be sure shrubs are not blocking air circulation around the foundation. Runoff from gutters and downspouts should be directed away from the house. Waterproof treatments for interior basement walls are rarely effective and are not recommended.

Use of a dehumidifier is generally preferable to extensive foundation, wall, and slab repair. Sump areas and pumps should be kept in top operating condition.

Crawl Space

Ground areas just outside the crawl space should slope away from the foundation.

Lack of an adequate moisture-vapor barrier over the soil in crawl spaces under houses causes dampness. To remedy this situation, spread a layer of moisture-vapor barrier material over the soil under the building. Ventilate the crawl space by providing at least four foundation vents located near the top of the corners of the foundation. Allow about one square foot of vent opening for every 150 square feet of floor area. More information about installing moisture-vapor barriers and ventilating crawl spaces is available from your Extension Agent.

Interior Walls and Interior

Inadequate insulation or improperly placed insulation in exterior sidewalls and in ceilings under attic spaces, generally causes damp surfaces on interior walls and ceiling. Dampness can also be caused by condensation of warm, moist air on walls which adjoin an unheated room. Dust will accumulate readily on these moist surfaces and provide more food for mildew. Information about providing adequate insulation is available from your Extension Agent.

Closets

Poorly ventilated closets may get damp and musty when humid conditions prevail. Try to improve the ventilation by opening the closet doors. Louvered closet doors also help the circulation of air. In addition, hang clothes loosely so that air can circulate around them. Be sure clothing is dry before putting it in the closet.

Kitchens,
Bathrooms,
Laundry
Areas

Cooking, laundering, and bathing may add two or more gallons of water to the house within one day unless ventilation is adequate. It is often necessary to use some type of exhaust fan in kitchen, bathrooms, and laundry areas to provide adequate ventilation. Use exhaust fans for as many short periods as possible in the winter to avoid removing heated indoor air while removing the dampness. Leave shower curtain hung loosely after bathing so it dries quickly. Rinse rubber bath mats thoroughly after use to remove any residue and hang over edge of tub to dry. Do not leave mat in tub. Most clothes dryers should be vented to the outside of the house to prevent adding moisture inside the house.

Exterior
House
Walls

Moisture, and therefore mildew, can be controlled to a degree by arranging landscaping so that natural breezes can flow past the house and dry the siding if it becomes wet from rain or dew. Keep shrubs away from the walls. Gutters and downspouts will help, as well as a moderate roof overhang. Give special attention to air movement patterns on northern exposures where sunlight cannot assist in drying.

When wood siding is stained or left to weather naturally, use a water-repellent (often combined with a wood preservative) finish. These products are available in hardware/paint stores.

The most mildew susceptible paints are latex flat paints, especially when linseed oil base primer is used. Acrylic latex paints are less mildew susceptible than flat latex. Linseed oil base paints are also very susceptible. The least susceptible paints are exterior enamels.

The paint pigment (color agent) also has an effect on mildew resistance. Zinc oxide pigments have a mild, inhibiting effect while titanium pigments have very little retarding effect.

For greater protection against mildew, use paints which are labeled "mildew resistant." Precaution: Surfaces painted with mildew resistant paint can be injurious if children suck or bite on them. Therefore, mildew resistant paints should be not used on interior surfaces, such as window sills, playpens, or toys.

Keep Things Clean

Keep any place where mildew is likely to grow as clean as possible. Soil on articles can supply sufficient food for mildew to start growing when moisture and temperature are right. Greasy films, such as those that form on kitchen and bathroom walls, also contain many nutrients for mildew organisms.

TO REMOVE MILDEW AND MILDEW ODOR

BEFORE CLEANING UP, ELIMINATE THE SOURCE OF
MOISTURE OR MILDEW WILL SOON BE BACK!

Getting Rid of Mildew Odor

Take special precautions to control mildew as soon as any musty odor is detected to prevent further, really objectionable and damaging mildew growth. Usually musty odor disappears if the area is dry.

Removing Mildew

Bathrooms

For mildewed bathtubs, showers, basins, tiled floors, and walls in bathrooms, scrub with a dilute solution of liquid chlorine bleach. This is the same type of bleach used for laundry and other household tasks. Use 1/2 to 1 cup of bleach to a gallon of water. An old toothbrush is handy for scrubbing mildewed grouting. Rinse with clean water and wipe as dry as possible. Caution: When cleaning, wear waterproof gloves to protect your skin.

Mildewed shower curtains should be thoroughly cleaned. Soaking the curtain in a solution of liquid chlorine bleach may be necessary to remove stains. When mildew damage is extensive, replacement of the shower curtain may be necessary.

Liquid sanitizing cleaning products containing quaternary ammonium compounds may also be used on most bathroom surfaces. Spray and aerosol products for cleaning and sanitizing bathroom areas are also available. Use as directed on the container.

Upholstered Articles, Mattresses, Carpets

For upholstered articles, mattresses, rugs and carpets, remove loose mold from outer coverings by brushing with a broom or brush. Do this outdoors, if possible, to prevent scattering mildew spores in the house.

Use a vacuum cleaner on the surface of the article to draw out more of the mold. Remember that the mold spores, which carry the odor, are being drawn into the bag of the vacuum cleaner. Empty or dispose of vacuum cleaner bag immediately.

If mildew remains on upholstered articles or mattresses, sponge lightly with a solution of detergent and warm water. If safe for the fiber, fabric, and finish, use a dilute solution of water and liquid chlorine bleach (one teaspoon to one quart of cool water), applying with a swab directly on mildew stain. Then dab repeatedly with clean, cool water and blot dry. Avoid excessive rubbing as it may damage the fabric. In working, get as little water on the surface as possible so the filling does not get wet. Keep in a dry, warm area until articles are fully dry.

Once mildew has occurred on rugs and carpets, it usually cannot be removed completely. However, the stain can be lightened by thorough cleaning either by do-it-yourself or professional methods.

Do everything possible to dry articles quickly--using an electric fan can speed drying. Sun and air articles if practical to stop the mold growth and remove odors.

Interior
Painted
Wood

Indoor wood surfaces covered with enamel or oil resin paint rarely mildew. Latex paints mildew more readily. Molds feed on the paint and cause a dirty looking discoloration. They may penetrate the paint deeply, even to the underlying wood.

To remove mildew, clean with a weak solution of liquid chlorine bleach and water. Rinse and thoroughly dry the area. If necessary, repaint with an enamel or oil resin paint.

Wood Floors,
Woodwork,
Finished
with Varnish
or Sealer

Thoroughly clean wood floors, woodwork, and other wooden surfaces finished with varnish or sealer with a cleaner designed for wood. Avoid using water or water-based cleaners on wood unless refinishing is to follow.

If mildew remains, wash area with a solution of liquid chlorine bleach and water. After thoroughly drying the area, sand and refinish the surface.

Wood
Furniture

Normally wood furniture is made with kiln dried lumber and has been properly finished so that it is not likely to be damaged by mildew. However, if soil is allowed to build up on the furniture, and there is a great deal of humidity and poor ventilation, mildew can be a problem.

Try removing mildew by wiping the surface with a solution of all-purpose detergent. Rinse well. Dry immediately by rubbing with a clean cloth.

If mold has grown into the wood under the finish, it may be necessary to scrub the damaged area with a dilute solution of household chlorine bleach (1 tablespoon of bleach to each one-half cup water). Rinse the wood well with clean water. Dry thoroughly and rub until completely dry with a wood cloth. If the mildew remains, wash with a solution of 4 to 6 tablespoons of trisodium phosphate and 1 cup of household bleach to each gallon of water.

Following this treatment, the furniture may need to be refinished. Information about refinishing furniture is available from your local Extension Agent.

When excessive mildew has occurred on valuable antique furniture, consulting several professional refinishers for suggestions is recommended.

Interior Walls

Walls may be covered with a variety of materials including paint, wood, paper, vinyl, and fabric. These surfaces are most susceptible to mildew because they provide the nutrients mildew need to grow on. Materials, such as plastics, fabrics made from man-made fibers, and fabrics treated with mildew-resistant finishes won't mildew easily, but soil on the surface can be a starting point for mold growth. Homemade paste made of flour used for paper and fabric wall coverings also can be a starter for mold growth especially when there is soil, humidity, and heat present. Commercial pastes for wall coverings usually contain mildew inhibitors. Caution: Don't eat wallpaper paste!

If painting over an area attacked by mildew, remove mildew first. It can quickly grow through any new layer of paint. Any paper or fabric wall covering--mildew resistant and non-treated--must be kept free from soil and dry as possible.

The faster you act, once you've seen the first touch of mildew, the greater your chances of successfully removing it. Most wall coverings rot or permanently stain if exposed to mildew for any length of time.

Wall surfaces can be cleaned with the following solution: 1/2 cup powdered household cleaner that contains trisodium phosphate (but no ammonia), 1/2 cup chlorine bleach, one gallon water. A milder solution of one cup chlorine bleach to a gallon of water can be used to eliminate musty odors on wall coverings. Caution: Use waterproof gloves with either solution. Use a clean cloth when cleaning walls, being careful to use only the amount of water needed to clean the surface. Rinse the surface thoroughly. Any trisodium phosphate film, if left on the surface, will provide food for future mildew growth.

Fresh air and sunlight is recommended after washing. Use of the air conditioner is helpful because it dehumidifies as it cools, keeping both moisture and heat at low levels. In muggy weather, use window fans to ventilate and dry the walls. If there is a large area involved, first drive the moisture out by turning the heat on for a short while, then cool as above.

In cleaning mildewed walls, some coverings may loosen and colors become bleached. In this case, you will need to repair, repaint, or refinish the wall.

Exterior
Walls/
Painted
Siding

To remove mildew from painted siding, follow these steps:

1. To kill mildew and clean the surface, use the following solution:

1/3 cup all-purpose laundry detergent
1 quart household chlorine bleach (must be fresh)
3 quarts warm water.

2. Scrub the surface with a soft brush. Wear gloves and eye protection; avoid splashing on shrubs and other plants.
3. Rinse well. (Note that this has cleaned the mildew but the the elements for mildew growth are still present.) Before new growth begins, repaint with a mildew resistant zinc-oxide, oil base paint or (in lower hazard areas) with a mildew resistant acrylic latex paint. Usually paint quality is directly related to price.

Concrete
Floors

Clean mildewed concrete floors with a dilute solution of liquid chlorine bleach. Use 1/2 to 1 quart of bleach to a gallon of water. Rinse with clear water and dry the area as quickly as possible.

Luggage

Dry and air mildewed luggage. Brush off as much loose mold as possible. Do this outdoors, if possible. To remove mildew from leather, wipe with a cloth wrung out of dilute alcohol (1 cup denatured or rubbing alcohol to 1 cup water). If mildew remains, clean with thick suds of a mild soap or detergent. Rinse. Dry thoroughly. Or clean with saddle soap.

Clean mildewed vinyl or fabric by sponging with a solution of mild soap or detergent. Rinse. Dry thoroughly.

CAUTION

READ ALL LABELS CAREFULLY BEFORE USING ANY CHEMICAL. AN INCREASING NUMBER OF CLEANERS CONTAIN A VARIETY OF CHEMICALS, MANY OF WHICH ARE DANGEROUS IF IMPROPERLY USED.

KEEP ALL CLEANERS TIGHTLY COVERED IN THE ORIGINAL CONTAINERS, OUT OF REACH OF CHILDREN. NEVER MIX CHEMICALS NOT SPECIFICALLY RECOMMENDED FOR USE TOGETHER. SOME CLEANERS ARE FLAMMABLE.