

# How To Build Or Remodel For A Mold Safe Home or Commercial Building

20 steps for preventive mold intrusion taken from April issue CONSPECT

1. Prior to blueprints - obtain advice and suggestions from a mold prevention consultant. "The key to mold control is moisture control".
2. Make sure the building lot and landscape grading are down and away from the building to keep rain and surface water from entering the building.
3. Install a thick, high quality moisture barrier (with no holes from negligent installation) beneath any concrete floor, slab or basement to stop wicking up from ground water into concrete, flooring materials and walls resting on wet concrete.
4. Add adequate amounts of top quality waterproofing compound into the concrete mix to transform the entire concrete floor into a effective water barrier. Also water proof basement walls and the building foundations.
5. Dry thoroughly (30 days) the concrete and masonry walls prior to adding wood building materials/components. Most of this water usually dries to the inside of the building if wood components are installed prior to complete drying.
6. Do not install plumbing supply lines into concrete slabs or flooring. Installed the best quality plumbing lines and hire a capable plumbing contractor. Concentrate all plumbing and sewer lines in as few areas as possible, with large, easy access panels for monitoring and maintenance of plumbing components.
7. Minimize the potential for water damage from frozen, broken pipes by installing water supply lines in attic, crawspaces, garage and exterior walls, protecting exposed outdoor facets and sealing gaps in exterior walls.
8. Use a hidden moisture meter to scan the ceilings, walls and floors of allPlumbing areas for water leaks prior to and during occupancy.
9. Use steel framing components instead of wood. Steel framing is a little more expensive than wood, but is very affordable long term considering steels water damage / mold prevention qualities, as well as fire resistance.
10. Alternatively, build walls out of poured concrete, cement blocks, or insulated concrete building components. Use adequate amounts of waterproofing compounds in both the concrete and in the cement stucco interior/exterior finishes.
11. If the owner / builder uses any wood products/components, drywall, ceiling tiles, pre-inspect such cellulose-base materials for mold growth and mold stains prior to their use. Remove the mold completely from the materials or return to the supplier and replace with mold free materials. Use a moisture meter to scan all wood surfaces for moisture content (should not exceed 17-20%).

12. Spray all cellulose-based building material surfaces with at least two wet sprayings of an EPA-registered fungicide, followed by at least one coating of an EPA-registered protective fungicidal coating and allow to dry after each application.

13. Install a high-quality rubber water barrier beneath the roof shingles or tiles to keep rain from entering the building, should there be degradation of, or damage to the shingles/tiles. Install gutters (with leaf screens) that lead to in-ground drainage pipes that take the water away from the home/building.

14. During construction, store all mold-vulnerable, on-site materials off the ground and beneath waterproof tarps or plastic sheeting to protect the materials against rain, and thus against mold growth.

15. During rain, as a precaution at the end of each construction day cover the entire building with waterproof tarps to keep the rain off the building until the roof has been shingled, the siding and windows have been installed.

16. Prevent construction defects that allow water entry into the home or building by carefully monitoring the day-to-day construction of the structure. An experienced construction owner, engineer, home inspector should do this important construction quality control monitoring. Construction defects are an important cause of mold infestation.

17. Design the heating/ventilation/air conditioning system to have its return air duct a built-in mass media (six inches or thicker), replaceable hepa filter, or a top-rated electronic air cleaner to remove continually air born spores from circulating air.

18. Install a programmable dehumidifier into the HVAC to reduce the indoor humidity to a mold -discouraging 30-40 %. Do not install a moisture increasing humidifier. Install a humidistat-controlled exhaust fan in the attic and any crawlspace area to help keep the humidity at low levels. Install exhaust fans that vent directly to the exterior from all bath room, laundry and kitchen areas.

19. Do not use wall-to-wall carpeting because carpeting and padding are great mold food and a great place for mold growth, viruses, bacteria, and dust mites to hide and multiply. Instead, for concrete floors, use ceramic tile set in cement containing a waterproofing compound. Use colored cement with waterproofing as the tile grout. For wood floors, install vinyl tile or linoleum. use washable rugs for comfort and beauty.

20. During construction and upon completion, prior to sale, renting and or occupancy, the building should be inspected and tested all-around for mold problems by a certified Mold Inspector or at least with a do-it-yourself mold test kit.