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## Eliminate Humidity to Preserve Hardwood Floors

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Most sports flooring manufacturers are happy to tell you that hardwood floors are easy to take care of. It's true, they are. Just a regular dust and damp mopping, occasional resurfacing, try not to drag anything across it that would scratch it, and your floor should look great for years. However, there is one battle that you may face that can do major damage to your floor, and you may not even notice it at first.

Your floor's greatest enemy is moisture, and not just water, but humidity. Most of you know that you should clean a floor with a damp mop instead of one that is wringing wet and that you should mop up spills from water bottles or water leaks from above as quickly as possible. But we are going to discuss the effect of changes in relative humidity on your floor.

Even for those of you in the West, where the outdoor humidity is lower than other places in the country, this applies to you too. In a closed room without adequate ventilation and 30-40 people sweating through a high-energy aerobic workout, the humidity of a room can rise pretty quickly, no matter where you live. Most flooring contractors can tell you that they've encountered their share of humidity problems throughout the West and yet had other facilities in the Deep South that have had no humidity problems.

Maintaining the proper relative humidity in these areas can be a pretty precise science. The balance needs to be just right. Too much is a problem but so is too little. This has a lot to do with your HVAC (heating, ventilation and air conditioning) system. Maintaining the relative humidity within recommended ranges will prevent a lot of problems down the line.

Wood is a natural product and, as such, reacts to its environment. If you notice that the boards are swelling on the edges (referred to as "cupping"), then too much moisture is getting into the wood. If this continues, it can cause whole sections of the floor to start to buckle and lift up from the subfloor. It can also cause floor boards to begin to split and develop black streaks, especially at the ends of the boards. Conversely, when a floor has too little moisture, the wood shrinks and begins to separate. You will notice progressively larger gaps between the boards. Typically, you will see cupping in the middle of a hot summer, where the air conditioning has been on most of the time, for several days, and you will start to see gapping in the middle of winter when the heat has been on for most of the day.

Most manufacturers recommend that you maintain the humidity in your room between 35 percent and 50 to 55 percent consistently throughout the year and that the maximum fluctuation between seasons be no more than 15 percent relative humidity. Check with your manufacturer for their guidelines, particularly since this may affect your warranty should there be any problems with your flooring in the future.

Manufacturers are aware that some fluctuation in humidity is unavoidable and that is why they always leave an expansion gap on at least two sides of the floor, so that the floor can expand out some after installation. As the relative humidity of the room rises, the floor may absorb enough moisture to expand, closing that expansion gap, any more growth, and the floor buckles. It seems illogical that a floor could expand that much, but imagine each board in your floor growing just 1/64th of an inch, and you'll see that all adds up pretty quickly.

But it is still ultimately your responsibility to make sure the humidity is under control. How do you do that? A humidity meter can be purchased very inexpensively and be put in the corner of the room and monitored from time to time. If you find that things get too humid in the room, either have your HVAC contractor install a dehumidifier into your system, or even just get a portable dehumidifier and bring it in. On the other hand, if there is too little humidity in the room, a humidifier may need to be brought in, again either from your HVAC system or a portable unit. The problem with portable units is that they are not as powerful and must be attended to. However, if you are in a facility where the HVAC is shut down at nights or over weekends, these portable units may be the only things that stand between you and costly repair.

This is not meant to scare you. Wood floors really are quite tolerant of changes in humidity over the change in seasons, or even within a single day. It's just important that this fluctuation not be allowed to go totally unabated. Just some simple monitoring and control should help you to keep your hardwood flooring performing well and looking great for years to come.

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