

# THIRDHAND

SMOKE Resource Center

## How can I remove thirdhand smoke from my home?

Unfortunately, it is very difficult to remove thirdhand smoke from walls and the many other surfaces and materials it can affect. Thirdhand smoke does not just sit on top of a painted surface where it could potentially be wiped off, but it also penetrates into the materials that are underneath the paint. In fact, thirdhand smoke can become embedded in the sheetrock, gypsum board, and drywall.

Research is being done to determine the best ways to remove thirdhand smoke. Evidence is limited but growing. What we know at this point is:

- Vigorous household cleaning techniques may reduce accumulated thirdhand smoke on surfaces and in dust. The long-term effectiveness of these cleaning methods are currently not well understood and depend on the depth of thirdhand pollutants.
- Some types of paint may trap thirdhand smoke pollutants on a wall, but painting cannot and does not remove them. The short-term and long-term effectiveness of this approach is not well understood.
- Painting may reduce the odor of stale tobacco smoke, and some paints may do this more effectively than others.
- Reports of thirdhand smoke residue bleeding through new coats of paint suggest that painting is unlikely to be a permanent solution to thirdhand smoke.
- Reducing the odor of thirdhand smoke does not protect from exposure to it. Our sense of smell is a warning: odor can be how we sense chemical compounds in our environment. However, some very dangerous chemicals are odorless, or even have a pleasant smell, while other chemicals, that are not harmful, have very unpleasant odors.
- Some approaches to “killing odors” involves tricking our senses by covering up an unpleasant smell with a pleasant fragrance. Of course, this strategy does not remove any thirdhand smoke pollutants and may make an environment even more irritating because new compounds are added to the air.
- Other approaches to “killing odors” involve creating chemical reactions that change an odorant into an odorless compound, as can be done with an ozone machine for example. Tragically, some of the odorless secondary compounds from thirdhand smoke can be more toxic than the original compounds.
- In heavily polluted indoor environments, the only effective way to remove thirdhand smoke is to remove and replace the contaminated materials, including carpets, furniture, sheetrock/drywall, and ceiling tiles.



## Sources

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