



Thirdhand Smoke

What is thirdhand smoke?

Thirdhand smoke is the residue of tobacco smoke that accumulates on surfaces, textiles, and people after smoking has occurred in a room. While the harms of secondhand smoke exposure are reduced once the smoke clears, thirdhand smoke lingers long after the secondhand smoke has dissipated – even years. Because thirdhand smoke does not simply go away once combustion has ended, nonsmokers' exposure to hazardous particles can occur long into the future.



The sticky residue of thirdhand smoke on a wall

Is thirdhand smoke harmful to your health?

Health officials warn that exposure to thirdhand smoke may contribute to smoking-attributable disease and death. When residual nicotine reacts to certain chemicals in the air it forms cancer-causing agents that continue to develop over time. The level of carcinogens found in thirdhand smoke has been found to be higher than the levels recommended by the EPA for exposure by children age 1-6. Also, when nicotine reacts with ozone in the air it forms “ultrafine” particles, which can transport harmful chemicals. A recent study has even found that exposure to thirdhand smoke can cause genetic damage to human cells.

Where can thirdhand smoke be found?

Thirdhand smoke is found in areas where smoking once occurred. It can accumulate on walls, floors, rugs, carpets, curtains, counters, appliances, pillows, blankets and beds; car upholstery; hotel rooms; and on skin, hair, and clothing. Residual nicotine has been found in ceiling tiles even 30 years after the last smoking occurred.

Who is most at risk for thirdhand smoke exposure?

Small children are at the highest risk for thirdhand smoke exposure. Infants and toddlers spend a lot of time on the floor and can ingest up to 0.25g of dust per day. When children sleep or play on surfaces with thirdhand smoke, they absorb the contaminants through their skin or breathe it in through the dust. Children living in smoking homes may also be exposed to thirdhand smoke via family members' clothing and skin. Increased respiratory symptoms have been measured in children exposed to thirdhand smoke at home.

What should be done to prevent exposure?

Make your home 100 percent smoke-free. Simply cleaning does not completely remove thirdhand smoke contaminants from a room. Tests have found measurable levels of nicotine in new residents of formerly-smoking homes and hotel rooms – even after the unit has been professionally cleaned and left unoccupied for months! In such properties, it may be necessary to replace carpeting, wall boards, counters, and furnishings to completely eliminate exposure to tobacco-specific toxins carcinogens. Additionally, new owners or renters of formerly-smoking homes should be given notice of the home's former smoking status.

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