

# Thirdhand Smoke Resource Center



## How can I protect my child from thirdhand smoke in cars?

### The Short Answer

Thirdhand smoke is the chemicals left behind when someone smokes tobacco. Thirdhand smoke is unhealthy for people and pets. It can stick around for a long time in homes and cars. It gets into your body if you inhale, swallow, or touch the chemicals. Getting rid of it is really hard and can cost a lot of money.

Young children are at the greatest risk of thirdhand smoke exposure, and they need to be protected from exposure in all indoor environments – including inside cars. Here are some ways to protect your child from thirdhand smoke exposure in cars.

- Don't let anyone smoke or vape in your car.
- If your child rides with someone who smokes or vapes, be sure they do not smoke or vape when your child is in the car, and ask them to put the air conditioning in "outside air mode" to help bring fresh air into the car when your child rides with them.
- Wash your child's car seat after using it in a polluted car, and don't leave it in the car between rides.
- When buying a used car, ask if anyone has ever smoked in it.

### The Long Answer

Thirdhand smoke is the chemical residue from tobacco smoke. It is also called "tobacco smoke residue" or "stale tobacco smoke." The chemicals in thirdhand smoke are toxic to humans, especially children. It can linger for years in dust and on household surfaces. It can also become embedded in carpets, furniture, clothes, and building materials. It is difficult and expensive to remove.

Babies and young children are at the greatest risk of exposure to thirdhand smoke. They can be exposed to thirdhand smoke in any indoor environment – including inside cars. Cars are full of materials that collect tobacco smoke pollutants such as upholstery, ceiling liner, and floor mats. The polluted air is trapped inside when the car is parked. Children

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often spend significant amounts of time in a car. Here are some steps you can take to keep your child safe from thirdhand smoke in cars.

## **Make sure your child travels in 100% smokefree cars.**

- Don't allow any smoking or vaping in your car at any time, and don't let your child ride with anyone who allows smoking or vaping in their car.
- If you are buying a used car, be sure to ask about smoking by previous owners.
- Unfortunately, it is virtually impossible to remove thirdhand smoke once it is embedded in a car. Even aggressive cleaning will not remove the toxic chemicals hidden in upholstery or the ventilation system.

## **If you cannot avoid your child riding in a car that may contain thirdhand smoke, there are a few steps you can take to reduce your child's exposure:**

- When your child is in a car polluted with thirdhand smoke, turn on the air-conditioning using the "outside air mode." Make sure you do not simply recirculate the air in your car; this is sometimes the default setting in a car. By bringing outside air into the car using air-conditioning, you will reduce the concentration of thirdhand smoke pollutants in the air of the car.
- Do not leave the car seat in the car. Put your child's car seat in the car only when your child will be using it. The less time the car seat is in the car, the less time it will be exposed to toxic thirdhand smoke.
- Before you put the car seat in the car, put a clean towel under the car seat. The towel will act as a physical barrier between the car's upholstery, which contains thirdhand smoke pollutants, and the clean car seat.
- When you are finished using the car seat, remove it and the towel. Wipe the car seat with a solution of diluted vinegar and water and throw the towel into the laundry.
- As much as possible, limit the amount of time your child is in the car.
- Because children can absorb thirdhand smoke through their skin, it is a good idea to wash your child's hands and face after the car ride.

The best way to protect your child from thirdhand smoke exposure in a car is to (1) never ride in cars that have been smoked in, (2) never let anyone smoke in your car, and (3)

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always ask for a non-smoking rental car—if you smell tobacco odor in the rental car, ask for another.

Do you have more questions about the toxic legacy of tobacco smoke, how it affects human health, and what we can do about it? Learn more [here](#).

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## Sources:

Fortmann, A. L., R. A. Romero, M. Sklar, V. Pham, J. Zakarian, P. J. Quintana, D. Chatfield and G. E. Matt. Residual tobacco smoke in used cars: futile efforts and persistent pollutants. *Nicotine Tob Res* 2010; 12(10): 1029-1036.

Matt GE, Fortmann AL, Quintana PJ, Zakarian JM, Romero RA, Chatfield DA, Hoh E, Hovell MF. Towards smoke-free rental cars: an evaluation of voluntary smoking restrictions in California. *Tobacco control*. 2013 May 1;22(3):201-7.

Matt GE, Quintana PJ, Hovell MF, Chatfield D, Ma DS, Romero R, Uribe A. Residual tobacco smoke pollution in used cars for sale: air, dust, and surfaces. *Nicotine Tob Res*. 2008;10(9):1467-1475. doi: 10.1080/14622200802279898.

Mahabee-Gittens EM, Merianos AL, Stone L, Wullenweber CA, Quintana PJE, Hoh E, Dodder NG, Lopez-Galvez N, Matt GE. Hand nicotine as an independent marker of thirdhand smoke pollution in children's environments. *Science of The Total Environment*. 2022;849:157914. doi:10.1016/j.scitotenv.2022.157914.

Matt GE, Fortmann AL, Quintana PJ, et al. Towards smoke-free rental cars: an evaluation of voluntary smoking restrictions in California. *Tobacco control*. 2013;22(3):201-207.