What does it mean when we smell stale tobacco smoke?

We typically smell stale tobacco smoke when we are in an indoor space where someone has smoked or when we are near a person who has recently smoked. Toxic residue from the tobacco smoke, known as thirdhand smoke, builds up over time, becoming embedded in objects such as carpets, furniture, walls, clothes, skin, or hair.

When we smell stale tobacco smoke, it means that thirdhand smoke pollutants have been released into the air from the places they accumulated. As we breathe in the polluted air, the smell of stale tobacco warns us that thirdhand smoke is present—with each breath we are inhaling thirdhand smoke pollutants into our bodies. This mixture of thirdhand smoke pollutants contains chemicals that can irritate the throat and lungs, cause inflammation, harm normal cell functioning, damage DNA, and are known or suspected to cause cancer in humans.

But, even when we cannot smell tobacco smoke, thirdhand smoke can be present. Our sense of smell is a good warning system, but we are able to smell an odor only when the chemical gets above the threshold level where odor is noticeable. Below the threshold level we cannot smell it, but that doesn't mean it isn't there. And some of the chemicals in thirdhand smoke are odorless; we cannot smell them no matter what their level. So, even when we cannot smell the odor of stale tobacco smoke, we can still be exposed to thirdhand smoke.

Sources


Updated: October 2020