cte REPORT

California Homebuyers Want Protection From Tobacco Smoke Residue

What to Know About Disclosure of Tobacco Smoke Residue in California Home Sales

May 2025

PREPARED BY

cte | Policy Research Center for Tobacco and the Environment

San Diego State University
Center for Tobacco and the Environment
9245 Sky Park Court, Suite 225
San Diego, CA 92123

AUTHORS

Georg Matt, PhD
Lydia Greiner, DrPH
Savannah Yurcek, BSPH
Gunnar Wooldridge, BA
Kailey Quezada, BS
Thomas Novotny, MD

TABLE OF CONTENTS

California Homebuyers Want Protection From Tobacco Smoke Residue

1 Table of Contents
A guide to what documents are included in the report.

2 Executive Summary
Includes an explanation of tobacco smoke residue, the issue, and evidence for policymakers to consider.

3 Polluted Home Infographic
Infographic story overview of how homes become polluted with tobacco smoke residue.

4 Overview & Talking Points
One-page infographic with an overview of the results and talking points.

5 CA Residents Survey Results
Infographic overview of the results of a prior 2021 survey of California residents about disclosure.

6 Disclosure Requirements
An overview of required disclosure documents in CA and how they leave buyers unprotected.

7 Agent Survey Results
Real estate agent perceptions and opinions on tobacco smoke residue and required disclosure.

8 Appraiser Survey Results
Home appraiser perceptions and opinions on tobacco smoke residue and required disclosure.

9 References & Resources

Policy Research Center for Tobacco and the Environment

Published May 2025. The Policy Research Center is a partnership between SAY San Diego and San Diego State University, funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

EXECUTIVE SUMMARY

What Policymakers Need to Know About Disclosure in Real Estate Transactions

What is Tobacco Smoke Residue?

Tobacco smoke residue is the mixture of chemicals left behind on clothes, skin, furniture, walls, and other surfaces after someone smokes.[5,10,18] It is also known as "thirdhand smoke". People can be exposed to this residue through their skin, by breathing polluted air, and by ingesting contaminated objects.[17,24]

The chemical residue can linger indoors for years after smoking has stopped.[13] It embeds in and re-emits from carpets, furniture, fixtures, and HVAC systems, as well as from structural elements and building materials, including floors, walls, doors, cabinets, and insulation. Existing professional cleaning methods cannot remove deeply embedded residue, and **remediation may require complete renovation**.[14,25]

The mixture of pollutants in tobacco smoke residue is **toxic to humans**, especially children, containing **more than 25 chemicals listed in California's Proposition 65**.[11,23] In human studies, exposure has been shown to cause DNA damage, increase cancer risk, impair cell repair, and worsen lung function.[8,16,21] In animal studies, tobacco smoke residue was found to slow wound healing, increase "bad" cholesterol, impair liver function, and cause lung inflammation and hyperactivity.[3,4,6,9,27]

Tobacco Smoke Residue in Home Sales

Seller disclosure of tobacco smoke residue in a home is not required in CA.

Tobacco smoke residue decreases home value and hurts the real estate market.[7]

Tobacco smoke residue is not included in the CA Residential Environmental Hazards Guide.

Evidence for Policymakers to Consider

Support for Disclosure of Tobacco Smoke Residue

96% **of CA residents** want to know if the home they are about to buy contains tobacco smoke residue.[26]

91% **of CA real estate agents** support requiring disclosure of tobacco smoke residue in home sales.

53% **of CA appraisers** support including evidence of tobacco smoke residue in appraisal reports.

100% **of Seller Property Questionnaires**, used by members of the California Association of REALTORS, include smoking and vaping history.

Need for Education on Tobacco Smoke Residue

73% **of CA real estate agents** support adding tobacco smoke residue to the CA Residential Environmental Hazards Guide.

45% **of CA real estate agents** incorrectly believed tobacco smoke residue is already included in the CA Residential Environmental Hazards Guide.

86% **of CA residents** agree tobacco smoke residue contains dangerous chemicals.

73% **of CA real estate agents** agree tobacco smoke residue contains dangerous chemicals.

88% **of CA appraisers** agree tobacco smoke residue contains dangerous chemicals.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

How a Home Becomes Polluted by Commercial Tobacco

A New Home is Built

This house was just built and has never been smoked or vaped in. It's just waiting for the right family to move in.

Someone Smokes or Vapes in the Home

The new owners allow smoking or vaping in or just outside the home. Chemical residue begins to stick to the walls, floors, and furniture.

Toxic Chemical Residue Accumulates

Over time, chemical residue (also called thirdhand smoke or aerosol) builds up in the home. Visitors notice a stale tobacco smell. It's difficult to remove and dangerous for humans and pets.

The Home Goes Back On the Market

Before putting their house on the market, the owners paint the walls and clean the carpets. This temporarily masks stains and odors, but the chemical residue remains.

Bad News for the New Owners...

They don't smoke or vape, but the chemical residue seeps back out of the walls. The stale odor returns, exposing the new owners to toxic chemicals. Removing chemical residue from smoking or vaping requires costly renovations.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

Californians Want to Know if Their Future Home Is Polluted by Thirdhand Smoke

Tobacco smoke residue, or **"thirdhand smoke,"** is the toxic chemical residue left behind long after smoking stops.

Over 25 California Proposition 65 chemicals, known to cause cancer or reproductive harm, have been identified in thirdhand smoke.

In California, thirdhand smoke is not legally required to be disclosed, and buyers are not required to receive any education as they do with other environmental hazards.

96%

of **California residents** want to know if the home they are about to buy contains tobacco smoke residue.[26]

91%

of **California real estate agents** surveyed support requiring disclosure of thirdhand smoke in home sales.

73%

of **California real estate agents** surveyed support adding thirdhand smoke to the *California Residential Environmental Hazards Guide*.

53%

of **California home appraisers** surveyed support including evidence of thirdhand smoke as part of standard appraisal reports.

Diane*, Real CA Homeowner

"I recently purchased a home and unbeknownst to me the previous owner smoked in the house since 1993. I am unable to reside in the house. I immediately feel nauseous and get headaches...

It appears the seller covered up the smell by painting over everything that could be painted, using air freshener, air purifiers and airing out the house prior to my viewing...

I have had a contractor and another smoke remediation expert out and both believe that so much damage has been done that the only way to get rid of it is by tearing everything out and start rebuilding."

*Name has been changed for privacy.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

YOUR HOME, YOUR RIGHT TO KNOW ABOUT THIRDHAND SMOKE

A survey of 1,820 California residents aged 18 to 81 from 41 different counties was conducted between February and March of 2021. The survey found that 96% of respondents want to know that there may be thirdhand smoke in their homes.

"I SHOULD BE TOLD IF THERE IS TOXIC TOBACCO SMOKE RESIDUE IN A HOME I AM BUYING OR RENTING."

OVER 90% OF CALIFORNIANS FROM EVERY REGION AGREE

97% OF PEOPLE WHO DON'T SMOKE **AGREE**

92% OF PEOPLE WHO SMOKE **AGREE**

95% OF PEOPLE WHO VAPE **AGREE**

87% OF PEOPLE WHO SMOKE & VAPE **AGREE**

CALIFORNIANS AGREE REGARDLESS OF FIRST LANGUAGE, AGE, OR EMPLOYMENT

96% ENGLISH
98% SPANISH
100% CHINESE
SPEAKERS AGREE

97% PEOPLE <40
90% PEOPLE 40+
YEARS OLD AGREE

96% EMPLOYED
96% NOT EMPLOYED
PEOPLE AGREE

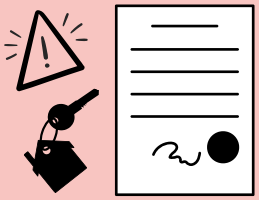
Published May 2021. Funded by the Tobacco-Related Disease Research Program #28PT-0078H and T32PT6244.

Required Disclosure Documents Leave California Home Buyers Unprotected and Uninformed About Toxic Tobacco Smoke Residue

Background

Smoking indoors leads to the buildup of **tobacco smoke residue**, toxic chemical residue that lingers in building materials and on surfaces for years after smoking has stopped.

A 2021 survey of 1,800 California residents showed that **96% of Californians want to know** if there is tobacco smoke residue in a home they are buying or renting.



Unlike other environmental hazards, there is currently **no legal requirement for sellers to disclose** toxic tobacco smoke residue or for buyers to receive education about it.

Current Disclosure Requirements

Current as of March 2025

In California home sales, sellers are required by law to disclose substances that pose a hazard to human health and home buyers must recieve information about the hazards. Real estate agents must also perform a visual inspection of the home and note their findings.

Tobacco smoke residue is known to contain over 25 chemicals listed under California's Proposition 65 and can require costly renovation to remove. However, it is not currently listed as a residential environmental hazard in California, and disclosure is not legally required in home sales.

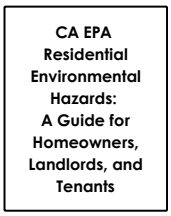
Current Hazards List

- Asbestos
- Carbon Monoxide
- Formaldehyde
- Hazardous Waste
- Lead
- Mold
- Radon

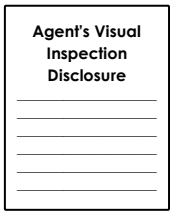
Tobacco Smoke Residue is Left Out

Official State Documents

The **CA Transfer Disclosure Statement** asks the seller about legally required disclosures including residential environmental hazards.[1]



The **CA Hazards Guide** satisfies the requirement to provide buyers information about hazards. If provided, no additional information is required.[2]

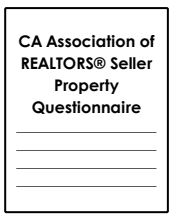


The **Agent's Visual Inspection Disclosure** is an open-ended form completed during an agent's limited visual inspection of the property.

Tobacco smoke residue is **not listed as an environmental hazard in CA,** so it is not included in either of these documents.

Each agent decides what to include. Agents are **not allowed** to determine if environmental hazards are present.

C.A.R. Document



The **Seller Property Questionnaire** is filled out by the seller if their agent is a member of the CA Association of REALTORS®. C.A.R. requires all members to use the SPQ. It is not required by CA law.

The SPQ is the **only document that asks about the smoking and vaping history** of a property.

Conclusion

Tobacco smoke residue is hazardous to humans, especially children, and Californians overwhelmingly agree they would **want to know** if it is present in a home.

Other toxic substances such as lead and radon must be disclosed in the Transfer Disclosure Statement, and education about the dangers of their presence in the home is required, whether by the CA Hazards Guide or other educational materials.

In CA today, legally required disclosure documents **fail to inform** potential buyers and homeowners about toxic tobacco smoke residue.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

California Real Estate Agents Support Seller Disclosure of Tobacco Smoke Residue

The Policy Research Center for Tobacco and the Environment asked California real estate agents to weigh in on whether sellers should be required to disclose toxic tobacco smoke residue in official transfer documents.

Background

Smoking indoors leads to the buildup of **tobacco smoke residue**, toxic chemical residue that lingers in building materials and on surfaces for years after smoking has stopped.

96%

A 2021 survey of 1,800 California residents showed that **96% of Californians want to know** if there is tobacco smoke residue in a home they are buying or renting.

Unlike other environmental hazards, there is currently **no legal requirement for sellers to disclose** toxic tobacco smoke residue or for buyers to receive education about it.

Methods

In 2024, The Policy Research Center for Tobacco and the Environment used an online survey to ask a select group of 11 real estate agents who sell residential real estate their opinion of disclosure of tobacco smoke residue in real estate transactions.

Results

73% agreed tobacco smoke residue is in the dust of homes where people have smoked.

73% agreed tobacco smoke residue contains **dangerous chemicals.**

91% agreed signs of tobacco use in a home **reduce its value.**

55% thought the CA Transfer Disclosure Statement **already required** disclosure of tobacco smoke residue.

45% thought tobacco smoke residue was **already listed** in the CA Residential Environmental Hazards Guide.

But, only 18% always discuss with sellers whether smoking occurred in the home.

91%

support requiring disclosure of tobacco smoking on a property when the property is transferred.

Overall, real estate agents overwhelmingly **support mandatory disclosure and education** about tobacco smoke residue. Many believed these policies had already been implemented.

73%

support adding tobacco smoke residue to the CA Residential Environmental Hazards Guide.

The real estate agents surveyed **did not** believe that the housing market would be negatively impacted.

91%

of the real estate agents believed disclosure would have a **positive or no impact** on CA home sales.

Conclusion

Adding tobacco smoke residue to the CA Transfer Disclosure Statement and the CA Residential Environmental Hazards Guide is supported by the real estate agents surveyed. Almost half incorrectly believed tobacco smoke residue is already included.

Additionally, real estate agents who are members of the CA Association of REALTORS® are already required to use the **Seller Property Questionnaire** which asks about smoking and vaping history on a property.

Requiring disclosure and education could be an important step toward **improving education and awareness** for sellers, buyers, and industry professionals.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

California Home Appraisers Support Including Tobacco Smoke Damage in Appraisal Reports

The Policy Research Center for Tobacco and the Environment asked California appraisers to weigh in on whether sellers should be required to disclose toxic tobacco smoke residue and if appraisers include it in their reports.

Background

Smoking indoors leads to the buildup of **tobacco smoke residue**, toxic chemical residue that lingers in building materials and on surfaces for years after smoking has stopped.

96%

A 2021 survey of 1,800 California residents showed that **96% of Californians want to know** if there is tobacco smoke residue in a home they are buying or renting.

Unlike other environmental hazards, there is currently **no legal requirement for sellers to disclose** toxic tobacco smoke residue or for buyers to receive education about it.

Home appraisals do not currently account for the lost value and costly renovations that can result from tobacco smoke residue.

What do Appraisers Do?

An appraiser's role is to assess a home's value, which determines the amount of money a buyer will be able to borrow to purchase the home.

When determining the appraised value of a home, appraisers consider the purchase price of similar homes that have recently been sold and basic features such as the location, land, size, amenities, age, and overall condition.

Methods

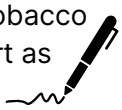
In 2024, the Policy Research Center for Tobacco and the Environment asked 17 California home appraisers, ranging from 32 to 79 years old who primarily appraise single-family homes, a series of questions in an online survey.

Results

While 88% agreed tobacco smoke residue can be absorbed by building materials → **and 88%** agreed tobacco smoke residue contains **dangerous chemicals,** → **only 35% always** include tobacco smoke damage in their appraisal report, **and 24% never** include it.

A majority did **support including evidence of tobacco smoke damage** in appraisal reports.

53% of appraisers answered **"Definitely Yes"** or **"Yes"** when asked if they support including evidence of tobacco smoke damage in the appraisal report as part of standard industry practice.

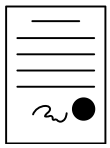


Participant

Real California Appraiser

"I am unaware if smoke residues harm people or animals if the house has been repainted and cleaned up. I would like to know or be educated on that information as I would disclose it in the appraisal."

On average, participants believed tobacco smoke damage could **lower the value of a home by 11% to 18%**



29% support requiring seller disclosure of tobacco smoke residue in homes.

47% or almost half, were undecided on requiring disclosure.

Conclusion

Overall, the beliefs and attitudes of appraisers surveyed were sometimes **inconsistent** and point to an **need for education** about toxic tobacco smoke residue in homes.

A majority of appraisers surveyed support including signs of tobacco smoke residue as part of standard appraisal reports, which could be an important step toward informing consumers and real estate professionals about tobacco smoke residue.

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

References and Resources

1. California Civil Code Article 1.5 § 1102-1102.19. Retrieved from: https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?division=2.&chapter=2.&part=4.&lawCode=CIV&title=4.&article=1.5.
2. California Civil Code § 2079.7. Retrieved from: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=CIV§ionNum=2079.7.
3. Graham, E. A., Croninger, A. B., & Wynder, E. L. (1957). Experimental production of carcinoma with cigarette tar. IV. Successful experiments with rabbits. Cancer Res, 17(11), 1058-1066.
4. Hang, B., Wang, P., Zhao, Y., Sarker, A., Chenna, A., Xia, Y., Snijders, A. M., & Mao, J. H. (2017). Adverse Health Effects of Thirdhand Smoke: From Cell to Animal Models. Int J Mol Sci, 18(5). https://doi.org/10.3390/ijms18050932
5. Jacob, P., 3rd, Benowitz, N. L., Destaillats, H., Gundel, L., Hang, B., Martins-Green, M., Matt, G. E., Quintana, P. J., Samet, J. M., Schick, S. F., Talbot, P., Aquilina, N. J., Hovell, M. F., Mao, J. H., & Whitehead, T. P. (2017). Thirdhand Smoke: New Evidence, Challenges, and Future Directions. Chem Res Toxicol, 30(1), 270-294. https://doi.org/10.1021/acs.chemrestox.6b00343
6. Jiang, C., Chen, L., Ye, C., Schick, S. F., Jacob, P., Zhuang, Y., Inman, J. L., Chen, C., Gundel, L. A., Chang, H., Snijders, A. M., Zou, X., Mao, J.-H., Hang, B., & Wang, P. (2024). Thirdhand smoke exposure promotes gastric tumor development in mouse and human. Environment International, 191, 108986. https://doi.org/https://doi.org/10.1016/j.envint.2024.108986
7. Klassen, A. C., Lee, N., Lopez, J. P., Bernardin, C., Coffman, R., & Tefferi, M. (2020). Realtors as Partners in Tobacco Control: Results from a Pennsylvania Survey. Tobacco Regulatory Science, 6(6), 392-404. https://www.researchgate.net/profile/Ann-Klassen/publication/347516798_Realtors_as_Partners_in_Tobacco_Control_Results_from_a_Pennsylvania_Survey/links/662d5b1008aa54017ac88f83/Realtors-as-Partners-in-Tobacco-Control-Results-from-a-Pennsylvania-Survey.pdf
8. Mahabee-Gittens, E. M., Merianos, A. L., Jandarov, R. A., Quintana, P. J. E., Hoh, E., & Matt, G. E. (2021). Differential associations of hand nicotine and urinary cotinine with children's exposure to tobacco smoke and clinical outcomes. Environ Res, 202, 111722. https://doi.org/10.1016/j.envres.2021.111722
9. Martins-Green, M., Adhami, N., Frankos, M., Valdez, M., Goodwin, B., Lyubovitsky, J., Dhall, S., Garcia, M., Egiebor, I., Martinez, B., Green, H. W., Havel, C., Yu, L., Liles, S., Matt, G., Destaillats, H., Sleiman, M., Gundel, L. A., Benowitz, N.,...Curras-Collazo, M. (2014). Cigarette smoke toxins deposited on surfaces: implications for human health. PLoS One, 9(1), e86391. https://doi.org/10.1371/journal.pone.0086391
10. Matt, G. E., Greiner, L., Record, R. A., Wipfli, H., Long, J., Dodder, N. G., ... Benowitz, N. L. (2023). Policy-relevant differences between secondhand and thirdhand smoke: Strengthening protections from involuntary exposure to tobacco smoke pollutants. Tobacco Control. https://doi.org/https://doi.org/10.1136/tc-2023-057971
11. Matt, G. E., Quintana, P. J., Destaillats, H., Gundel, L. A., Sleiman, M., Singer, B. C., Jacob, P., Benowitz, N., Winickoff, J. P., Rehan, V., Talbot, P., Schick, S., Samet, J., Wang, Y., Hang, B., Martins-Green, M., Pankow, J. F., & Hovell, M. F. (2011). Thirdhand tobacco smoke: emerging evidence and arguments for a multidisciplinary research agenda. Environ Health Perspect, 119(9), 1218-1226. https://doi.org/10.1289/ehp.1103500
12. Matt, G. E., Quintana, P. J., Zakarian, J. M., Fortmann, A. L., Chatfield, D. A., Hoh, E., Uribe, A. M., & Hovell, M. F. (2011). When smokers move out and non-smokers move in: residential thirdhand smoke pollution and exposure. Tob Control, 20(1), e1. https://doi.org/10.1136/tc.2010.037382
13. Matt, G. E., Quintana, P. J. E., Hoh, E., Zakarian, J. M., Dodder, N. G., Record, R. A., Hovell, M. F., Mahabee-Gittens, E. M., Padilla, S., Markman, L., Watanabe, K., & Novotny, T. E. (2020). Persistent tobacco smoke residue in multiunit housing: Legacy of permissive indoor smoking policies and challenges in the implementation of smoking bans. Prev Med Rep, 18, 101088. https://doi.org/10.1016/j.pmedr.2020.101088
14. Matt, G. E., Quintana, P. J. E., Hoh, E., Zakarian, J. M., Dodder, N. G., Record, R. A., Hovell, M. F., Mahabee-Gittens, E. M., Padilla, S., Markman, L., Watanabe, K., & Novotny, T. E. (2021). Remediating Thirdhand Smoke Pollution in Multiunit Housing: Temporary Reductions and the Challenges of Persistent Reservoirs. Nicotine Tob Res, 23(2), 364-372. https://doi.org/10.1093/ntr/ntaa151
15. Policy Research Center for Tobacco and the Environment. (2024). How a Home Becomes Polluted by Tobacco. Retrieved from: https://policycte.sdsu.edu/wp-content/uploads/sites/95/2025/02/Copy-of-Tobacco-Polluted-Home-Infographic-11.25.2024-2.pdf
16. Pozuelos, G. L., Kagda, M. S., Schick, S., Girke, T., Volz, D. C., & Talbot, P. (2019). Experimental Acute Exposure to Thirdhand Smoke and Changes in the Human Nasal Epithelial Transcriptome: A Randomized Clinical Trial. JAMA Netw Open, 2(6), e196362. https://doi.org/10.1001/jamanetworkopen.2019.6362
17. Pratt, K., Hilty, A., Jacob, P., & Schick, S. F. (2023). Respiratory Exposure to Thirdhand Cigarette Smoke Increases Concentrations of Urinary Metabolites of Nicotine. Nicotine Tob Res, 25(8), 1424-1430. https://doi.org/10.1093/ntr/ntad002
18. Rabin, R. C., (January 2, 2009). A New Cigarette Hazard: 'Thirdhand Smoke'. The New York Times Magazine, The 9th Annual Year in Ideas, 66-67. https://www.nytimes.com/2009/01/03/health/research/03smoke.html
19. Record, R. A., Greiner, L. H., Wipfli, H., Strickland, J., Owens, J., Pugel, J., & Matt, G. E. (2023). Evaluation of a Social Media Campaign Designed to Increase Awareness of Thirdhand Smoke among California Adults. Health Commun, 38(3), 437-446. https://doi.org/10.1080/10410236.2021.1954760
20. Roffo, A. H. (1939). Krebserzeugendes Benzpyren, gewonnen aus Tabakteer. Zeitschrift für Krebsforschung, 49(5), 588-597. https://doi.org/10.1007/BF01620960
21. Sakamaki-Ching, S., Schick, S., Grigorean, G., Li, J., & Talbot, P. (2022). Dermal thirdhand smoke exposure induces oxidative damage, initiates skin inflammatory markers, and adversely alters the human plasma proteome. EBioMedicine, 84, 104256. https://doi.org/10.1016/j.ebiom.2022.104256
22. Sleiman, M., Destaillats, H., Smith, J. D., Liu, C.-L., Ahmed, M., Wilson, K. R., & Gundel, L. A. (2010). Secondary organic aerosol formation from ozone-initiated reactions with nicotine and secondhand tobacco smoke. Atmospheric Environment, 44(34), 4191-4198. https://doi.org/https://doi.org/10.1016/j.atmosenv.2010.07.023
23. State of California, Environmental Protection Agency. (2022). Chemicals Known to the State of California to Cause Cancer of Reproductive Toxicity. Office of Environmental Health Hazard Assessment. https://oehha.ca.gov/proposition-65/proposition-65-list
24. Tang, X., Benowitz, N., Gundel, L., Hang, B., Havel, C. M., Hoh, E., Jacob Iii, P., Mao, J. H., Martins-Green, M., Matt, G. E., Quintana, P. J. E., Russell, M. L., Sarker, A., Schick, S. F., Snijders, A. M., & Destaillats, H. (2022). Thirdhand Exposures to Tobacco-Specific Nitrosamines through Inhalation, Dust Ingestion, Dermal Uptake, and Epidermal Chemistry. Environ Sci Technol, 56(17), 12506-12516. https://doi.org/10.1021/acs.est.2c02559
25. This Old House. Understanding Thirdhand Smoke. Home Safety Videos. Retrieved from: https://www.thisoldhouse.com/homesafety/21249597/understanding-thirdhand-smoke
26. Thirdhand Smoke Resource Center. (2021). Your Home, Your Right to Know About Thirdhand Smoke. Retrieved from: https://thirdhandsmoke.org/wp-content/uploads/2023/01/YourHomeYourRight_Disclosure-Infographic.pdf (PAGE 5)
27. Thorpe, A. E., Donovan, C., Kim, R. Y., Vindin, H. J., Zakarya, R., Miyai, H., Chan, Y. L., van Reyk, D., Chen, H., & Oliver, B. G. (2023). Third-Hand Exposure to E-Cigarette Vapour Induces Pulmonary Effects in Mice. Toxics, 11(9). https://doi.org/10.3390/toxics11090749

Published May 2025. Funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

We acknowledge the significant contributions of the Community Advisory Board and Community Partners, and thank the real estate agents and home appraisers who generously volunteered their time to participate in this project.

Additionally, we are grateful to the community members and tobacco prevention professionals who provided valuable feedback on the contents of this report in the consumer testing phase.

Scan to Read CTE Reports

policyCTE.sdsu.edu

Published May 2025. The Policy Research Center is a partnership between SAY San Diego and San Diego State University, funded by the Tobacco-Related Disease Research Program #T33PC6863 and #T32PT6244.

The California Tobacco-Related Disease Research Program had no role in the design and conduct of the studies presented in this report; the collection, management, analysis, or interpretation of the data; or the preparation, review or approval of the report.

The content of this report is solely the responsibility of the authors and does not necessarily represent the official views of the California Tobacco-Related Disease Research Program.

cte | Policy Research Center for Tobacco and the Environment

SDSU | San Diego State University