Tobacco in Australia
Facts & Issues

Relevant news and research
4.4 Measuring exposure to secondhand smoke

Last updated December 2024

Research:

Blanco-Ferreiro, A, Teijeiro, A, Varela-Lema, L, Rey-Brandariz, J, Candal-Pedreira, C, Martin-Gisbert, L et al. (2024). Assessment of exposure to secondhand tobacco smoke in Spain: A scoping review. *Tob Induc Dis, 22*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39398343

Zecic, A, Vazdar, B, Sliskovic, L, & Sutlovic, D. (2024). Urine levels of nicotine and its metabolites in young population exposed to second-hand smoke in nightclubs: a pilot study. *Arh Hig Rada Toksikol, 75*(3), 211-216. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39369327

Kataoka, H, Miyata, S, & Ehara, K. (2024). Simultaneous Determination of Tobacco Smoke Exposure and Stress Biomarkers in Saliva Using In-Tube SPME and LC-MS/MS for the Analysis of the Association between Passive Smoking and Stress. *Molecules, 29*(17). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39275005

Tamada, Y, Takeuchi, K, & Tabuchi, T. (2024). Secondhand tobacco exposure assessed using urinary cotinine among 10-year-old children in Japan: An 11-year repeated cross-sectional study. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39297512

Szumska, M, Mroczek, P, Tyrpien-Golder, K, Pastuszka, B, & Janoszka, B. (2024). Determination of Cotinine, 3'-Hydroxycotinine and Nicotine 1'-Oxide in Urine of Passive and Active Young Smokers by LC-Orbitrap-MS/MS Technique. *Molecules, 29*(15). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39125048

Titus, AR, Shelley, D, & Thorpe, LE. (2024). Variability in self-reported and biomarker-derived tobacco smoke exposure patterns among individuals who do not smoke by poverty income ratio in the USA. *Tob Control*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/39004510

Lee, HS, Lee, YJ, Cho, JH, & Park, DS. (2024). Analysis of patient health questionnaire-9 (PHQ-9) based depression prevalence according to a discordance between quantitative urinary cotinine levels and self-report of second-hand smoke exposure among adults: A cross-sectional study. *Heliyon, 10*(11), e32125. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38882351

Bommele, J, Cremers, H, Den Hollander, W, Troelstra, S, Geuke, G, Dam, W et al. (2024). Secondhand smoke exposure in public outdoor spaces in the Netherlands: The stronger the smell, the more exposure to nicotine. *Tob Induc Dis, 22*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38765694

Zorawik, A, Hajdusianek, W, Kusnerz, A, Markiewicz-Gorka, I, Jaremkow, A, Martynowicz, H et al (2024). Relation Between Exposure to Tobacco Smoke Assessed by Serum Cotinine Concentration and Questionnaire Method, and Serum Renalase Concentration-the Importance of the Coexistence of Arterial Hypertension and Other Cardiovascular Diseases. *Cardiovasc Toxicol*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38748312

Lopez-Medina, DC, Candal-Pedreira, C, Rey-Brandariz, J, Guerra-Tort, C, Garcia, G, Martin-Gisbert, L et al. (2024). Evolution and characteristics of studies estimating attributable mortality to second-hand smoke: a systematic review. *Eur J Public Health*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38531674

Kunno, J, Pimviriyakul, P, Luangwilai, T, Sematong, S, Supawattanabodee, B, Kuratong, S, & Robson, MG. (2024). Effect of children secondhand smoke exposure associated with GABA concentration: Influence from parents who are extremely heavy smokers in urban households. *Sci Total Environ, 918*, 170720. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38325467

Rubinstein, BJ, Vazifedan, T, & Baldassari, CM. (2024). Secondhand Smoke Exposure Measured in Urinary Cotinine Levels and Severity of Pediatric Sleep Apnea. *JAMA Otolaryngol Head Neck Surg*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38329735

Zhu, N., Zhu, J., Lin, S., Yu, H., & Cao, C. (2024). Correlation analysis between smoke exposure and serum neurofilament light chain in adults: a cross-sectional study. *BMC Public Health, 24*(1), 353. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38308244

Kim, S, & Lee, K. (2023). PM2.5 concentrations of outdoor tobacco smoke at different distances from the smoking source: Is there an optimal distance for a designated smoking area? *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38048330

Berman, T, Rorman, E, Groisman, L, Keinan-Boker, L, Shimony, T, & Barnett-Itzhaki, Z. (2023). Association between parental smoking and child exposure to environmental tobacco smoke in Israel. *Isr J Health Policy Res, 12*(1), 37. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38115120

Freeman, S, Leone, F, Mathew, AR, & Hitsman, B. (2023). The Need for More Robust Clinical Prevention Approaches to Secondhand Smoke Exposure: Beyond Smoke-Free. *Chest, 164*(5), 1084-1086.Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37945191

Mansouri, B, Azadi, NA, Sharafi, K, & Nakhaee, S. (2023). The effects of active and passive smoking on selected trace element levels in human milk. *Sci Rep, 13*(1), 20756. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/38007512

Afsin, DE, Gul, E, & Kerget, B. (2023). Evaluation of Exhaled Carbon Monoxide Levels in Individuals Exposed to Passive Tobacco Smoke in Indoor and Outdoor Environments: How Far Can We Getaway Under the Same Roof? *Cureus, 15*(9), e45026. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37829977

O'Sharkey, K, Xu, Y, Cabison, J, Rosales, M, Chavez, T, Johnson, M et al. (2023). A Comparison of Measured Airborne and Self-Reported Secondhand Smoke Exposure in the MADRES Pregnancy Cohort Study. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37846518

Matt, GE, Merianos, AL, Stone, L, Wullenweber, C, Quintana, PJE, Hoh, E et al. (2023). Changes and stability of hand nicotine levels in children of smokers: Associations with urinary biomarkers, reported child tobacco smoke exposure, and home smoking bans. *Environ Int, 181*, 108239.Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37852151

Wang, Z, Lei, L, & Shi, P. (2023). Smoking behavior detection algorithm based on YOLOv8-MNC. *Front Comput Neurosci, 17*, 1243779. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37692461

Gallart-Mateu, D, Dualde, P, Coscolla, C, Soriano, JM, Garrigues, S, & de la Guardia, M. (2023). Biomarkers of exposure in urine of active smokers, non-smokers, and vapers. *Anal Bioanal Chem*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37743413

Mulla, SA, Bedia, AS, Nimmagadda, HK, Bedia, S, & Patil, AH. (2023). Evaluation of Salivary Alkaline Phosphatase Levels in Passive Smokers of Different Age Groups. *Cureus, 15*(7), e41336. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37546068

Park, MB. (2023). Comparison of secondhand smoking exposure between self-report and creatinine-corrected urine cotinine: Result from Korean NHANES 2009-2018. *J Formos Med Assoc*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37586974

Wang, R, Hall, JM, Salloum, RG, Kates, F, Cogle, CR, Bruijnzeel, AW et al. (2023). Prevalence of Underreported Nicotine Exposure Among US Non-Smoking Adults: A Comparison of Self-Reported Exposure and Serum Cotinine Levels from NHANES 2013-2020. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/37647621

Tynan, MA, Cohen, MA, & Harris, JR. (2023). What happens in Vegas, stays in your lungs: an assessment of fine particulate matter in casinos that prohibit and allow smoking in Las Vegas, Nevada, USA. *Tob Control*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36822833

Merianos, AL, Mahabee-Gittens, EM, Stone, TM, Jandarov, RA, Wang, L, Bhandari, D et al. (2023). Distinguishing Exposure to Secondhand and Thirdhand Tobacco Smoke among U.S. Children Using Machine Learning: NHANES 2013-2016. *Environ Sci Technol*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36705578

Henderson, E, Rodriguez Guerrero, LA, Continente, X, Fernandez, E, Tigova, O, Cortes-Francisco, N et al. (2022). Measurement of airborne nicotine, as a marker of secondhand smoke exposure, in homes

with residents who smoke in 9 European countries. *Environ Res, 219*, 115118. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36566961

Lin, Y, Zhu, Y, Qiu, X, Lu, X, Yin, F, Tseng, CH, & Araujo, JA. (2022). Passive smoking and urinary oxidative biomarkers: A pilot study of healthy travelers from Los Angeles to Beijing. *Int J Hyg Environ Health, 246*, 114048. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36308780

Hahn, D, Schmied-Tobies, M, Rucic, E, Pluym, N, Scherer, M, Debiak, M et al. (2022). Urinary cotinine and exposure to passive smoke in children and adolescents in Germany - Human biomonitoring results of the German Environmental Survey 2014-2017 (GerES V). *Environ Res*, 114320. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36100102

Rahmani, R, Nakhaee, S, Sharafi, K, Rezaei, Z, Mansouri, B, & Amirabadizadeh, A. (2022). Association of environmental tobacco smoke (ETS) with lead and cadmium concentrations in biological samples of children and women: systematic review and meta-analysis. *Rev Environ Health*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/36117323

Mei, X, Chen, G, Zhong, Q, Li, YL, & Li, JL. (2022). Secondhand smoke exposure among never-smoking adolescents in Wuhan, China. *Sci Rep, 12*(1), 14209. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35988001

Bitan, M, Steinberg, DM, Wilson, SR, Kalkbrenner, AE, Lanphear, B, Hovell, MF et al (2022). Association between objective measures and parent-reported measures of child tobacco smoke exposure: A secondary data analysis of four trials. *Tob Induc Dis, 20*, 62. . Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35854878

Bozkurt, HB, Yayla, M, Binnetoglu, D & Evran, M. (2022). The Association of Passive Smoking and Serum Urotensin-II Levels in Children. *An Acad Bras Cienc, 94*(2), e20201488. . Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35830081

Chen, H, Na, J, An, H, Jin, M, Jia, X, Yan, L et al. (2022). Passive Smoking Is Associated with Multiple Heavy Metal Concentrations among Housewives in Shanxi Province, China. *Int J Environ Res Public Health, 19*(14). . Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35886457

Zulkifli, A, Rani, NLA, Abdul Mutalib, RNS, Dobson, R, Ibrahim, TAE, Abd Latif, NH et al. (2022). Measuring secondhand smoke in homes in Malaysia: A feasibility study comparing indoor fine particulate (PM2.5) concentrations following an educational feedback intervention to create smoke-free homes during the COVID-19 pandemic. *Tob Induc Dis, 20*, 64. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35865971

Xie, R, Xu, Y, Chen, G, & Zhang, S. (2022). Experimental study on the effect of the split-type air-conditioner on the transmission of smoking pollutants in a room. *J Air Waste Manag Assoc*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35862623

Zhong, Q, Li, Y, Mei, X, Li, J, & Huang, Y. (2022). Assessment of passive human exposure to tobacco smoke by environmental and biological monitoring in different public places in Wuhan, central China. *Int J Hyg Environ Health, 244*, 114008. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35870316

Caron, K.T, Zhu, W, Bernert, JT, Wang, L, Blount, BC, Dortch, K. et al. (2022). Geometric Mean Serum Cotinine Concentrations Confirm a Continued Decline in Secondhand Smoke Exposure among U.S. Nonsmokers-NHANES 2003 to 2018. *Int J Environ Res Public Health, 19*(10). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35627398

Mourino, N, Ruano-Ravina, A, Varela Lema, L, Fernandez, E, Lopez, MJ, Santiago-Perez, MI. Et al. (2022). Serum cotinine cut-points for secondhand smoke exposure assessment in children under 5 years: A systemic review. *PLoS One, 17*(5), e0267319. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35511766

Go, MD, Al-Delaimy, WK, Schilling, D, Vuylsteke, B, Mehess, S, Spindel, ER, & McEvoy, CT. (2021). Hair and nail nicotine levels of mothers and their infants as valid biomarkers of exposure to intrauterine tobacco smoke. *Tob Induc Dis, 19*, 100. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35035343

Ma, H, Reimold, AE, & Ribisl, KM. (2022). Trends in Cigarette Marketing Expenditures, 1975-2019: An Analysis of Federal Trade Commission Cigarette Reports. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/35010818

Kataoka, H, Kaji, S, & Moai, M. (2021). Risk Assessment of Passive Smoking Based on Analysis of Hair Nicotine and Cotinine as Exposure Biomarkers by In-Tube Solid-Phase Microextraction Coupled On-Line to LC-MS/MS. *Molecules, 26*(23). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34885941

Mahabee-Gittens, EM, Matt, GE, Ding, L, & Merianos, AL. (2021). Comparison of Levels of Three Tobacco Smoke Exposure Biomarkers in Children of Smokers. *Int J Environ Res Public Health, 18*(22). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34831559

Ma, C, Heiland, EG, Li, Z, Zhao, M, Liang, Y, & Xi, B. (2021). Global trends in the prevalence of secondhand smoke exposure among adolescents aged 12-16 years from 1999 to 2018: an analysis of repeated cross-sectional surveys. *Lancet Glob Health*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34571047

Mahabee-Gittens, EM, Matt, GE, Jandarov, RJ, & Merianos, AL. (2021). Hand Nicotine and Cotinine In Children Exposed to Cigars: A Pilot Study. *Tob Regul Sci, 7*(3), 170-176. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34423080

Tsai, J, Homa, DM, Neff, LJ, Sosnoff, CS, Wang, L, Blount, BC et al. (2021). Trends in Secondhand Smoke Exposure, 2011-2018: Impact and Implications of Expanding Serum Cotinine Range. *Am J Prev Med, 61*(3), e109-e117. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34419235

Kim, J, Shim, IK, Won, SR, Ryu, J, Lee, J, & Chung, HM. (2021). Characterization of urinary cotinine concentrations among non-smoking adults in smoking and smoke-free homes in the Korean national environmental health survey (KoNEHS) cycle 3 (2015-2017). *BMC Public Health, 21*(1), 1324. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34229648

Lim, KH, Ghazali, SM, Lim, HL, Cheong, YL, Kee, CC, Heng, PP et al. (2021). Prevalence and factors related to secondhand smoke exposure among secondary school-going adolescents in Malaysia: Findings from Malaysia Global Health School Survey 2012 and 2017. *Tob Induc Dis, 19*, 50. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34177412

Mourino, N, Perez-Rios, M, Santiago-Perez, MI, Lanphear, B, Yolton, K, & Braun, JM. (2021). Secondhand tobacco smoke exposure among children under 5 years old: questionnaires versus cotinine biomarkers: a cohort study. *BMJ Open, 11*(6), e044829. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34183339

Parks, J, McLean, KE, McCandless, L, de Souza, RJ, Brook, JR, Scott, J et al . (2021). Assessing secondhand and thirdhand tobacco smoke exposure in Canadian infants using questionnaires, biomarkers, and machine learning. *J Expo Sci Environ Epidemiol*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34175887

Vital, N., Antunes, S., Louro, H., Vaz, F., Simoes, T., Penque, D., & Silva, M. J. (2021). Environmental Tobacco Smoke in Occupational Settings: Effect and Susceptibility Biomarkers in Workers From Lisbon Restaurants and Bars. *Front Public Health, 9*, 674142. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34150711

DeAtley, T, Colby, SM, Clark, MA, Sokolovsky, A, Denlinger-Apte, RL, Cioe, PA et al (2021). Psychometric Analysis of a Microenvironment Secondhand Smoke Exposure Questionnaire. *Int J Environ Res Public Health, 18*(7). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33916810

Stallings, C, Zhu, Y, Grijalva, CG, Edwards, K, Self, WH, & Williams, DJ. (2021). Prevalence and Quantification of Secondhand Smoke Exposure Among Hospitalized Children <6 Years of Age. *Hosp Pediatr*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/34035126

Choi, JW, Fujii, T, & Fujii, N. (2021). Association of a Tobacco-specific Nitrosamine Carcinogen with Urinary Cotinine, Urinary Sodium Excretion, and Total Energy Intake in Adolescents and Children. *Curr Med Sci, 41*(2), 270-278. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33877542

Ezegbe, C, Magnussen, CG, Neil, AL, Buscot, MJ, Dwyer, T, Venn, A, & Gall, S. (2021). Reliability and Validity of a Life Course Passive Smoke Exposure Questionnaire in an Australian Cohort From Childhood to Adulthood. *Journal of Preventive Medicine and Public Health. Yebang Uihakhoe Chi, 54*(2), 153-159. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33845536

Park, MB & Ranabhat, C.L. (2021). Effect of parental smoking on their children's urine cotinine level in Korea: A population-based study. *PloS One, 16*(4), e0248013. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33857161

Szukalska, M, Merritt, TA, Lorenc, W, Sroczynska, K, Miechowicz, I, Komorowicz, I et al. (2021). Toxic metals in human milk in relation to tobacco smoke exposure. *Environmental Research, 197*, 111090. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33798522

You, HS, Lee, JW, Kim, YS, Kim, Y, Lee, HC, Hwang, JY et al (2021). Association between Second-hand Smoke Exposure and Urinary NNAL Level in Korean Adolescents. *Journal of Korean Medical Science, 36*(13), e82. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33821591

Kim, Y, & Lee, K. (2021). Determination of Outdoor Tobacco Smoke Exposure at Outdoor Smoking Facilities. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33740053

Jeong, SH, Jang, BN, Kang, SH, Joo, JH, & Park, EC. (2021). Association between parents' smoking status and tobacco exposure in school-age children: assessment using major urine biomarkers. *Sci Rep, 11*(1), 4536. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33633242

Levesque, J, & Mischki, T. (2021). Exposure to tobacco smoke among Canadian nonsmokers based on questionnaire and biomonitoring data. *Health Rep, 32*(2), 16-26. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33595225

Adesina, OA, Nwogu, AS, & Sonibare, JA. (2021). Indoor levels of polycyclic aromatic hydrocarbons (PAHs) from environment tobacco smoke of public bars. *Ecotoxicol Environ Saf, 208*, 111604. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33396124

Gillum, RF. (2021). Frequency of Attendance at Religious Services and Exposure to Environmental Tobacco Smoke. *J Relig Health*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33389437

Henderson, E, Lugo, A, Liu, X, Continente, X, Fernandez, E, Lopez, MJ, & Gallus, S. (2021). Secondhand smoke presence in outdoor areas in 12 European countries. *Environ Res*, 110806. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33515582

Jain, RB. (2021). Comparative analysis of the concentrations of serum cotinine and hydroxycotinine for US children, adolescents, and adults: impact of exposure to environmental tobacco smoke at home and other indoor environments. *Environ Sci Pollut Res Int*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33403628

Leventer-Roberts, M, Grinshpun, A, Kohn, E, Andra, SS, Arora, M, Berkovitch, M et al (2021). Environmental tobacco smoke exposure among children by urinary biomarkers and parent report. *Acad Pediatr*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33434701

Wilson, KM, Moss, A, Lowary, M, Gambino, J, Klein, JD, Kerby, GS et al (2021). Smoking Behaviors Among Tobacco-Using Parents of Hospitalized Children and Association With Child Cotinine Level. *Hosp Pediatr, 11*(1), 17-24. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33272923

Ksinan, AJ, Sheng, Y, Do, EK, Schechter, JC, Zhang, JJ, Maguire, RL et al (2020). Identifying the best questions for rapid screening of secondhand smoke exposure among children. *Nicotine Tob Res*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33249470

Brakema, EA van Gemert, FA, Williams, S, Sooronbaev, T, Emilov, B, Mademilov, M et al (2020). Implementing a context-driven awareness programme addressing household air pollution and tobacco: a FRESH AIR study. *NPJ Prim Care Respir Med, 30*(1), 42. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33024125

Brakema, EA, van Gemert, FA, Williams, S, Sooronbaev, T, Emilov, B, Mademilov, M et al (2020). Publisher Correction: Implementing a context-driven awareness programme addressing household air pollution and tobacco: a FRESH AIR study. *NPJ Prim Care Respir Med, 30*(1), 49. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33082358

Zusman, M, Gassett, AJ, Kirwa, K, Barr, RG, Cooper, CB, Han, MK et al (2020). "Modeling Residential Indoor Concentrations of PM2.5 , NO2 , NOx , and secondhand smoke in the Subpopulations and Intermediate Outcome Measures in COPD (SPIROMICS) Air Study". *Indoor Air*. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/33037695

Antonucci, A, Vitali, M, Martellucci, S, Mattei, V, & Protano, C. (2020). A Cross-Sectional Study on Benzene Exposure in Pediatric Age and Parental Smoking Habits at Home. *Int J Environ Res Public Health, 17*(15). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/32751222

Kassem, NOF, Peterson, LA, Liles, S, Kassem, NO, Zaki, FK, Lui, KJ et al. (2020). Urinary metabolites of furan in waterpipe tobacco smokers compared to non-smokers in home settings in the US. *Toxicol Lett, 333*, 202-210. Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/32814080

St Claire, AW, Friedrichsen, S, Boyle, RG, Kingsbury, J, Parks, MJ, & Helgertz, S. (2020). Location and duration of secondhand smoke exposure among Minnesota Nonsmokers, 2018. *Prev Med Rep, 19*, 101130. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32528822

de Granda-Orive, JI, Solano-Reina, S, & Jimenez-Ruiz, CA. (2020). Is Smoking Outside an Enclosed Space Enough to Prevent Second and Third-Hand Exposure? *Arch Bronconeumol*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32444158

Fu, Z, Jiang, H, Xu, Z, Li, H, Wu, N, & Yin, P. (2020). Objective secondhand smoke exposure in chronic obstructive pulmonary disease patients without active smoking: the U.S. National Health and Nutrition Examination Survey (NHANES) 2007-2012. *Ann Transl Med, 8*(7), 445. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32395489

Dobson, R, O'Donnell, R, Tigova, O, Fu, M, Enriquez, M, Fernandez, E et al (2020). Measuring for change: A multi-centre pre-post trial of an air quality feedback intervention to promote smoke-free homes. *Environ Int, 140*, 105738. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32371305

Feliu, A, Fu, M, Russo, M, Martinez, C, Sureda, X, Lopez, MJ et al (2020). Exposure to second-hand tobacco smoke in waterpipe cafes in Barcelona, Spain: An assessment of airborne nicotine and PM2.5. *Environ Res, 184*, 109347. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32179267

Gunay, F, Cullas Ilarslan, NE, Bakar-Ates, F, Deniz, K, Kadioglu, YK, Kiran, S et al. (2020). Evaluation of hair cotinine and toxic metal levels in children who were exposed to tobacco smoke. *Pediatr Pulmonol*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/32068966

Dobson, R, Rosen, LJ, & Semple, S. (2019). Monitoring secondhand tobacco smoke remotely in real-time: A simple low-cost approach. *Tob Induc Dis, 17*, 18. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31582929

Karatela, S, Coomarasamy, C, Paterson, J, & Ward, NI. (2019). Household Smoking Status and Heavy Metal Concentrations in Toenails of Children. *Int J Environ Res Public Health, 16*(20). Available from: https://www.ncbi.nlm.nih.gov/pubmed/31614844

Zhang, T, Chillrud, SN, Yang, Q, Pitiranggon, M, Ross, J, Perera, F et al. (2019). Characterizing peak exposure of secondhand smoke using a real-time PM2.5 monitor. *Indoor Air*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31610044

Klein, JD, Chamberlin, ME, Kress, EA, Geraci, MW, Rosenblatt, S, Boykan, R et al. (2019). Asking the right questions about secondhand smoke. *Nicotine Tob Res*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31407779

Mahabee-Gittens, EM, Merianos, AL, Gordon, JS, Stone, L, Semenova, O, & Matt, GE. (2019). Electronic Health Record Classification of Tobacco Smoke Exposure and Cotinine Levels in Hospitalized Pediatric Patients. *Hosp Pediatr*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/31451583

Cheng, CY, Huang, SS, Yang, CM, Tang, KT, & Yao, DJ. (2019). Detection of Cigarette Smoke Using a Surface-Acoustic-Wave Gas Sensor with Non-Polymer-Based Oxidized Hollow Mesoporous Carbon Nanospheres. Micromachines (Basel), 10(4). Available from: https://www.ncbi.nlm.nih.gov/pubmed/31022928

Quintana, PJE, Hoh, E, Dodder, NG, Matt, GE, Zakarian, JM, Anderson, KA et al. Nicotine levels in silicone wristband samplers worn by children exposed to secondhand smoke and electronic cigarette vapor are highly correlated with child's urinary cotinine. J Expo Sci Environ Epidemiol, 2019. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30728487

Toledo, J, Ruiz-Diez, V, Bertke, M, Suryo Wasisto, H, Peiner, E, & Sanchez-Rojas, JL. Piezoelectric MEMS Resonators for Cigarette Particle Detection. Micromachines (Basel), 2019.10(2). Available from: https://www.ncbi.nlm.nih.gov/pubmed/30795635

Gurtner, M, Gage, R, Thomson, G, Jaine, R, Stanley, J, Smith, M et al. Are children smoke-free at home? Using wearable cameras to study children's exposure to smoking and smoking paraphernalia in private spaces. *Child Care Health Dev, Nov 2018*. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30548456

Gomez Lueso, M, Mitova, MI, Mottier, N, Schaller, M, Rotach, M, & Goujon-Ginglinger, C G. Development and validation of a method for quantification of two tobacco-specific nitrosamines in indoor air. J Chromatogr A, 2018. 1580, 90-99. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30391037

Myers, V, Shiloh, S, Rosen, L. Parental perceptions of children's exposure to tobacco smoke: development and validation of a new measure. BMC Public Health. 2018 Aug 20;18(1):1031. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30126404

Groner, JA, Rule, AM, McGrath-Morrow, SA, Collaco, JM, Moss, A, Tanski, SE, McMillen, R, Whitmore, RM, Klein, J D, Winickoff, JP, Wilson, K. Assessing pediatric tobacco exposure using parent report: comparison with hair nicotine. J Expo Sci Environ Epidemiol,Jul 2018. Available from: https://www.ncbi.nlm.nih.gov/pubmed/30013229

Dobson, R, Semple, S. "How do you know those particles are from cigarettes?": An algorithm to help differentiate second-hand tobacco smoke from background sources of household fine particulate matter. Environ Res. 2018 Jun 18;166:344-347. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29929126

Drago, G, Perrino, C, Canepari, S, Ruggieri, S, L'Abbate, L, Longo, V, Colombo, P, Frasca, D, Balzan, M, Cuttitta, G, Scaccianoce, G, Piva, G et al. Relationship between domestic smoking and metals and rare earth elements concentration in indoor PM2.5. Environ Res. 2018 Apr 16;165:71-80. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29674239

Gavarkovs, AG, Risica, PM, Parker, DR, Jennings, E, Mello, J, Phipps, M. Self-Reported Environmental Tobacco Smoke Exposure and Avoidance Compared with Cotinine Confirmed Tobacco Smoke Exposure among Pregnant Women and Their Infants. Int J Environ Res Public Health. 2018 Apr 27;15(5). Available from: https://www.ncbi.nlm.nih.gov/pubmed/29702552

Arechavala, T, Continente, X, Perez-Rios, M, Fernandez, E, Cortes-Francisco, N, Schiaffino, A, Centrich, F, Munoz, G, Lopez, MJ. Validity of self-reported indicators to assess secondhand smoke exposure in the home. Environ Res. 2018 Mar 19;164:340-345. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29567419

Wang, C, Collins, DB, Hems, RF, Borduas-Dedekind, N, Antinolo, M, Abbatt, JPD. Exploring Conditions for Ultrafine Particle Formation from Oxidation of Cigarette Smoke in Indoor Environments. Environ Sci Technol. 2018. Mar 30, 2018. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29601184

Susanto, AD, Putri, PD, Hudoyo, A, Taufik, FF, Nurwidya, F, Andarini, S. Urinary Cotinine Level in Indonesian Children Exposed to Domestic Cigarette Smoke. J Nat Sci Biol Med. 2018 Jan-Jun;9(1):77-81. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29456398

Skinner, AL, Stone, CJ, Doughty, H, Munafo, MR. StopWatch: The preliminary evaluation of a smartwatch-based system for passive detection of cigarette smoking. Nicotine Tob Res, 2018. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29373720

Martinez-Sanchez, JM, Gonzalez-Marron, A, Martin-Sanchez, JC, Sureda, X, Fu, M, Perez-Ortuno, R, Lidon-Moyano, C, Galan, I, Pascual, JA, Fernandez, E. Validity of self-reported intensity of exposure to second-hand smoke at home against environmental and personal markers. Gac Sanit. 2017 Nov 2. pii: S0213-9111(17)30215-7. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29102505

Beal, SJ, Dorn, LD, Berga, SL. Examining the Validity of Self-reported Primary and Secondary Exposure to Cigarette Smoke in Adolescent Girls: The Utility of Salivary Cotinine as a Biomarker. Subst Use Misuse. 2017 Oct 23:1-8. Available from: https://www.ncbi.nlm.nih.gov/pubmed/29058521
Kungskulniti, N, Charoenca, N, Mock, J, Hamann, SL. Secondhand smoke point-source exposures assessed by particulate matter at two popular public beaches in Thailand. J Public Health (Oxf). 2017 Sep 11:1-6. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28977624

Arechavala, T, Continente, X, Perez-Rios, M, Schiaffino, A, Fernandez, E, Cortes-Francisco, N, Centrich, F, Munoz, G , Lopez, MJ. Second-hand smoke exposure in homes with children: assessment of airborne nicotine in the living room and children's bedroom. Tob Control, 2017. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28822971

Li, L, Ho, SSH, Chow, JC, Watson, JG, Lee, FSC, Cui, L, Gao, Y, Dai, W, Ho, KF, Huang, Y, Cao, J. Characterization and health risk assessment of PM2.5-bound organics inside and outside of Chinese smoking lounges. Chemosphere. 2017 Aug 4;186:438-445. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28806671

Tsuji, M, Kanda, H, Hayakawa, T, Mori, Y, Ito, T, Hidaka, T, Kakamu, T, Kumagai, T, Osaki, Y, Kawazoe, M, Sato, S, Fukushima, T. Nicotine cut-off value in human hair as a tool to distinguish active from passive smokers: A cross-sectional study in Japanese men. Cancer Biomark. 2017 Jul 19;20(1):41-48. Available from: https://www.ncbi.nlm.nih.gov/pubmed/28759953

Bronstein, A. B., Gascon, J. L., Eugenio Gonzalez, C. I. and Barrientos-Gutierrez, T. Environmental Tobacco Exposure and Urinary Cotinine Levels in Smoking and Non-smoking Adolescents. Nicotine Tob Res, 2017. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28582526

Klepeis, NE, Bellettiere, J, Hughes, SC, Nguyen, B, Berardi, V, Liles, S, Obayashi, S, Hofstetter, CR, Blumberg, E, Hovell, MF. Fine particles in homes of predominantly low-income families with children and smokers: Key physical and behavioral determinants to inform indoor-air-quality interventions.

PLoS One. 2017 May 17;12(5):e0177718. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28545099

Kim, H, Lee, K, An, J, Won, S. Determination of Secondhand Smoke Leakage from the Smoking Room of an Internet Café. J Air Waste Manag Assoc, Jun 2017. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28609195

Lewis, JB, Hirschi, KM, Arroyo, JA, Bikman, BT, Kooyman, DL, Reynolds, PR. Plausible Roles for RAGE in Conditions Exacerbated by Direct and Indirect (Secondhand) Smoke Exposure. Int J Mol Sci. 2017 Mar 17;18(3). Available from: http://www.ncbi.nlm.nih.gov/pubmed/28304347

Benowitz, NL, Jain, S, Dempsey, DA, Nardone, N, St Helen, G, Jacob, P, 3rd. Urine Cotinine Screening Detect Nearly Ubiquitous Tobacco Smoke Exposure in Urban Adolescents. Nicotine Tob Res, Dec 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28031377

Fischer, F, Kraemer, A. Secondhand smoke exposure at home among middle and high school students in the United States - does the type of tobacco product matter? BMC Public Health. 2017 Jan 19;17(1):98. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28103827

Li, Z, Zhang, J, Huo, W, Zhu, Y, Xie, J, Lu, Q, Wang, B. Using nicotine in scalp hair to assess maternal passive exposure to tobacco smoke. Environ Pollut. 2017 Mar;222:276-282. Available from: http://www.ncbi.nlm.nih.gov/pubmed/28040338

Wang, Y, Yang, M, Huang, Z, Tian, L, Niu, L, Xiao, S. Urinary cotinine concentrations in preschool children showed positive associations with smoking fathers. Acta Paediatr, Oct 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27748973

Ruprecht, AA, De Marco, C, Pozzi, P, Mazza, R, Munarini, E, Di Paco, A, Paredi, P, Invernizzi, G, Boffi, R. Outdoor second-hand cigarette smoke significantly affects air quality. Eur Respir J. 2016 May 26. pii: ERJ-00064-2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27230450

Campo, L, Polledri, E, Bechtold, P, Gatti, G, Ranzi, A, Lauriola, P, Goldoni, CA, Bertazzi, PA, Fustinoni, S. Environ Res. 2016 Apr 6;148:154-163. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27060750

Huntington-Moskos, L et al. The peer and family smoking index: a valid measure of secondhand smoke exposure in adolescents. J Adolesc Health, 2016. Feb 5, 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26856961

Lustre, BL et al. Assessment of tobacco smoke exposure in the pediatric emergency department. Prev Med, 2016. Jan 12, 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26794047

Perez-Ortuno, R, Martinez-Sanchez, JM, Fu, M, Fernandez, E, Pascual, JA. Sci Rep. 2016 Apr 26;6:25043. Available from: http://www.ncbi.nlm.nih.gov/pubmed/27112239

Huntington-Moskos, L et al. The peer and family smoking index: a valid measure of secondhand smoke exposure in adolescents. J Adolesc Health, 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26856961

Lustre, BL et al. Assessment of tobacco smoke exposure in the pediatric emergency department. Prev Med, 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26794047

da Silveira Fleck, A. Monitoring an outdoor smoking area by means of PM measurement and vegetal biomonitoring. Environ Sci Pollut Res Int, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26662301

Rosen, L et al. Feasibility of measuring tobacco smoke air pollution in homes: report from a pilot study. Int J Environ Res Public Health, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26633440

Kaleta, D et al. Residential exposure to environmental tobacco smoke, and its associates: Findings from the Global Adult Tobacco Survey in Poland. International Journal of Occupational Medicine and Environmental Health, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26190731

Rosen, LJ et al. Parental receptivity to child biomarker testing for tobacco smoke exposure: A qualitative study. Patient Education and Counselling, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26160037

Burke, RC et al. Utilizing geographic information systems and spatial video to analyze patterns of secondhand smoke exposure on college campuses. Journal of American College Health. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25832564

Lee, J et al. Influence of maternal environmental tobacco smoke exposure assessed by hair nicotine levels on birth weight. Asian Pacific Journal of Cancer Prevention, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25854401

Cunningham, A et al. A longitudinal study of smokers' exposure to cigarette smoke and the effects of spontaneous product switching. Regulatory Toxicology and Pharmacology, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25777840

Ino, T, Kurosawa, K. Secondhand smoke screening for schoolchildren in Japan. Pediatrics international, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25808130

Raoof, SA et al. A systematic review of secondhand smoke exposure in a car: Attributable changes in atmospheric and biological markers. Chronic Respiratory Disease, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25758677

Homa, DM et al. Vital signs: disparities in nonsmokers' exposure to secondhand smoke - United States, 1999-2012. MMWR. Morbidity and Mortality Weekly Report, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25654612

Wei B, Blount BC, Xia B, and Wang L. Assessing exposure to tobacco-specific carcinogen NNK using its urinary metabolite NNAL measured in US population: 2011-2012. J Expo Sci Environ Epidemiol, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25564369

Liu R, Dix-Cooper L, and Hammond SK. Modeling flight attendants' exposure to secondhand smoke in commercial aircraft: historical trends from 1955 to 1989. J Occup Environ Hyg, 2015; 12(3):145-55. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25587876

Pritsos CA and Muthumalage T. The impact of commonly used air filters in eliminating the exposure to secondhand smoke constituents. Environ Sci Process Impacts, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25586051

King BA, Patel R, and Babb SD. Prevalence of smokefree home rules - United States, 1992-1993 and 2010-2011. MMWR Morb Mortal Wkly Rep, 2014; 63(35):765-9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25188494

Vardavas CI, Karabela M, Agaku IT, Matsunaga Y, Myridakis A, et al. Secondhand smoke exposure within semi-open air cafes and tobacco specific 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) concentrations among nonsmoking employees. Int J Occup Med Environ Health, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25218107

Vardavas CI, Karabela M, Agaku IT, Matsunaga Y, Myridakis A, et al. Secondhand smoke exposure within semi-open air cafes and tobacco specific 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanol (NNAL) concentrations among nonsmoking employees. Int J Occup Med Environ Health, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25218107

Wise J. Living with a smoker is equivalent to living in a heavily polluted city, say researchers. BMJ, 2014; 349:g6318. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25335479

Second-hand smoke in the home exceeds air safety limits for non-smokers. Nurs Stand, 2014; 29(13):17. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25424083

Bono R, Tassinari R, Bellisario V, Gilli G, Pazzi M, et al. Urban air and tobacco smoke as conditions that increase the risk of oxidative stress and respiratory response in youth. Environ Res, 2014; 137C:141-146. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25531819

Chambers C, Sung HY, and Max W. Home Exposure to Secondhand Smoke among People Living in Multiunit Housing and Single Family Housing: a Study of California Adults, 2003-2012. J Urban Health, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25466438

Lindsay RP, Tsoh JY, Sung HY, and Max W. Secondhand smoke exposure and serum cotinine levels among current smokers in the USA. Tob Control, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25398561

O'Donnell MP. Why do we allow smokers to assault the people we love? Secondhand smoke, benzene, myelodysplastic syndrome, immunosuppression, and the americans with disabilities act. Am J Health Promot, 2014; 29(2):v-viii. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25361464

Orton S, Jones LL, Cooper S, Lewis S, and Coleman T. Predictors of Children's Secondhand Smoke Exposure at Home: A Systematic Review and Narrative Synthesis of the Evidence. PLoS One, 2014; 9(11):e112690. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25397875

St Helen G, Jacob P, 3rd, Peng M, Dempsey DA, Hammond SK, et al. Intake of toxic and carcinogenic volatile organic compounds from secondhand smoke in motor vehicles. Cancer Epidemiol Biomarkers Prev, 2014; 23(12):2774-82. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25398951

Ulbricht S, Unger F, Gross S, Nauck M, Meyer C, et al. Factors Associated with Secondhand Smoke Exposure Prevalence and Secondhand Smoke Level of Children Living with Parental Smokers: A Cross

Sectional Study. J Community Health, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25352414

Veeranki SP, Mamudu HM, Zheng S, John RM, Cao Y, et al. Secondhand Smoke Exposure Among Never-Smoking Youth in 168 Countries. J Adolesc Health, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25529618

Cho H, Lee K, Hwang Y, Richardson P, Bratset H, et al. Outdoor tobacco smoke exposure at the perimeter of a tobacco-free university. J Air Waste Manag Assoc, 2014; 64(8):863-6. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25185388

Al Mulla A, Fanous N, Seidenberg AB, and Rees VW. Secondhand smoke emission levels in waterpipe cafes in Doha, Qatar. Tob Control, 2014. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25352562

Wang Y, Yang M, Tian L, Huang Z, Chen F, et al. Relationship between Caregivers' Smoking at Home and Urinary Levels of Cotinine in Children. Int J Environ Res Public Health, 2014; 11(12):12499-513. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25469922

Kim, NH, Choi, H, Kim, NR, Shim, JS, Kim, HC. Secondhand smoke exposure and mental health problems in Korean adults. Epidemiol Health, 2016 Mar 14;38:e2016009.Available from: http://www.ncbi.nlm.nih.gov/pubmed/26988086

Travers, MJ, Nayak, NS, Annigeri, VB, Billava, NN. Indoor air quality due to secondhand smoke: Signals from selected hospitality locations in rural and urban areas of Bangalore and Dharwad districts in Karnataka, India. Indian J Cancer. 2015 Oct-Dec;52(4):708-13. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26960527

Xu, Z et al. Tobacco use and exposure to second-hand smoke among urban residents: a community-based investigation. Int J Environ Res Public Health, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26295250

Lewinson, T, Bryant, LO. "There's no-fresh air there": narratives of smoke exposure among residents of extended-stay hotels. Health & social work, May 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26027415

Wasel, J et al. Brand cigarillos: low price but high particulate matter levels-is their favorable taxation in the European Union justified? Int J Environ Res Public Health, 2015. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26258782

Weitzman, M, Yusufali, AH, Bali, F, Vilcassim, MJ, Gandhi, S, Peltier, R, Nadas, A, Sherman, S, Lee, L, Hong, Z, Shearston, J, Park, SH, Gordon, T. Effects of hookah smoking on indoor air quality in homes. Tob Control, Oct 2016. Available from: https://www.ncbi.nlm.nih.gov/pubmed/27798320

Liu, J et al. Impairment of endothelial function by little cigar secondhand smoke. Tob Regul Sci, 2016. Available from: http://www.ncbi.nlm.nih.gov/pubmed/26753171

News reports:

Watson, J. Passive smoking almost eradicated. The Times, 2018. Sept 4, 2018. Available from https://www.thetimes.co.uk/article/passive-smoking-almost-eradicated-lqmd0w2vf

Arnold, Stuart. Even an open window won't protect children from smoke in cars, say North-East researchers. The Northern Echo, 2015. Oct 1, 2015. Available from: http://www.thenorthernecho.co.uk/news/13794898.Ban_on_smoking_in_cars_with_children_present_comes_into_force___as_North_East_researchers_reveal_extent_of_youngsters__exposure_to_dangerous_chemicals/

No authors listed. Shocking new figures reveal the extent of damage to children smoking in cars causes. Western Daily Press, 2015. Oct 1, 2015. Available from: http://www.westerndailypress.co.uk/Shocking-new-figures-reveal-extent-damage/story-27903049-detail/story.html

No authors listed. Croydon North MP 'proud' as ban on smoking in cars with children comes into force. Croydon Advertiser, 2015. Oct 1, 2015. Available from: http://www.croydonadvertiser.co.uk/Croydon-North-MP-proud-ban-smoking-cars-children/story-27903921-detail/story.html

Griffiths, Sarah. Forget people, PLANTS are passive smokers too: Shrubs absorb nicotine from cigarette fumes and soil, study finds. Daily Mail, 2015. Apr 9, 2015. Available from: http://www.dailymail.co.uk/sciencetech/article-3030645/Forget-people-PLANTS-passive-smokers-Shrubs-absorb-nicotine-cigarette-fumes-soil-study-finds.html

Liss, Susan M. New CDC report shows big drop in secondhand smoke exposure among Americans, but 58 million still exposed – Every state and community should be smoke-free. Campaign for Tobacco-Free Kids, 2015. Feb 3, 2015. Available from: http://www.tobaccofreekids.org/press_releases/post/2015_02_03_cdc

No authors listed. As many as two-fifths of never-smoking teens are exposed to secondhand smoke worldwide. Brightsurf.com, 2015. Jan 13, 2015. Available from: http://www.brightsurf.com/news/headlines/104984/As_many_as_two-fifths_of_never-smoking_teens_are_exposed_to_secondhand_smoke_worldwide_.html

Whiteman, Honor. Smoking is damaging your pet's health, researchers warn. Medical News Today, 2016. Jan 4, 2016. Available from: http://www.medicalnewstoday.com/articles/304605.php?tw