

Tobacco in Australia

Facts & Issues

Relevant news and research

4.6 Mechanisms of disease

Last updated June 2024

Research:

Neves, S, Pacheco, S, Vaz, F, James, P, Simoes, T, & Penque, D. (2024). Occupational second-hand smoke exposure: a comparative shotgun proteomics study on nasal epithelia from healthy restaurant workers. *Environ Toxicol Pharmacol*, 104459. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38685369>

Wang, Q, Goracci, C, Sundar, IK, & Rahman, I. (2024). Environmental tobacco smoke exposure exaggerates bleomycin-induced collagen overexpression during pulmonary fibrogenesis. *J Inflamm (Lond)*, 21(1), 9. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38509574>

Mochizuki, A, Shiraishi, K, Honda, T, Higashiyama, RI, Sunami, K, Matsuda, M et al. (2024). Passive smoking-induced mutagenesis as a promoter of lung carcinogenesis. *J Thorac Oncol*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38382595>

Munther, S, Awn, BH, & Yassin, HN. (2023). The Impact of Passive Smoking on Salivary Glutathione Peroxidase and Selenium in Relation to Dental Caries Severity among Five Years Old Children. *Indian J Dent Res*, 34(3), 270-273. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38197345>

Ma, G, Tian, Y, Zi, J, Hu, Y, Li, H, Zeng, Y et al. (2024). Systemic inflammation mediates the association between environmental tobacco smoke and depressive symptoms: A cross-sectional study of NHANES 2009-2018. *J Affect Disord*, 348, 152-159. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38158048>

Robin, H, Trudeau, C, Robbins, A, Chung, E, Rahman, E, Gangmark-Strickland, O et al. (2024). A Potential Role for the Receptor for Advanced Glycation End-Products (RAGE) in the Development of Secondhand Smoke-Induced Chronic Sinusitis. *Curr Issues Mol Biol*, 46(1), 729-740. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38248349>

tobaccoinaustralia.org.au

Tobacco in Australia

Facts & Issues

Curtis, KL, Homer, KM, Wendt, RA, Stapley, BM, Clark, ET, Harward, K et al. (2023). Inflammatory Cytokine Elaboration Following Secondhand Smoke (SHS) Exposure Is Mediated in Part by RAGE Signaling. *Int J Mol Sci*, 24(21). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37958629>

Mahabee-Gittens, EM, Matt, GE, Mazzella, MJ, Doucette, JT, Ratnani, P, & Merianos, AL. (2023). Inflammatory marker levels in children with tobacco smoke exposure. *Cytokine*, 173, 156448. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37980882>

Wang, Q, Goracci, C, Sundar, IK, & Rahman, I. (2023). Environmental tobacco smoke exposure exaggerates bleomycin- induced collagen overexpression during pulmonary fibrogenesis. *Res Sq*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37886473>

Nakanishi, K, Ishibashi, C, Ide, S, Yamamoto, R, Nishida, M, Nagatomo, I et al. (2023). Association of secondhand smoke exposure and health-related lifestyle behaviors among male university employees in Japan. *Sci Rep*, 13(1), 13848. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37696832>

Raber, J, Stagaman, K, Kasschau, KD, Davenport, C, Lopes, L, Nguyen, D et al (2023). Behavioral and Cognitive Performance Following Exposure to Second-Hand Smoke (SHS) from Tobacco Products Associated with Oxidative-Stress-Induced DNA Damage and Repair and Disruption of the Gut Microbiome. *Genes (Basel)*, 14(9). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37761842>

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>

Stabile, AM, Pistilli, A, Bartolini, D, Angelucci, E, Dell'Omo, M, Di Sante, G, & Rende, M. (2022). Short-Term Effects of Side-Stream Smoke on Nerve Growth Factor and Its Receptors TrKA and p75(NTR) in a Group of Non-Smokers. *Int J Environ Res Public Health*, 19(16). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/36011952>

Mahabee-Gittens, EM, Matt, GE, & Merianos, AL. (2022). High Levels of the Carcinogenic Tobacco-Specific Nitrosamine NNAL and Associated Findings in Children of Smokers: A Case Series. *Biomark Insights*, 17, 11772719221118868. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/35982916>

Stabile, AM, Pistilli, A, Bartolini, D, Angelucci, E, Dell'Omo, M, Di Sante, G, & Rende, M. (2022). Short-Term Effects of Side-Stream Smoke on Nerve Growth Factor and Its Receptors TrKA and p75(NTR) in

Tobacco in Australia

Facts & Issues

a Group of Non-Smokers. *Int J Environ Res Public Health*, 19(16). Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/36011952>

Sirocko, KT, Angstmann, H, Papenmeier, S, Wagner, C, Spohn, M, Indenbirken, D et al. (2022). Early-life exposure to tobacco smoke alters airway signaling pathways and later mortality in *D. melanogaster*. *Environ Pollut*, 309, 119696. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/35780997>

Holahan, CJ, Holahan, CK, Lim, S, Powers, DA, & North, RJ. (2021). Living with a Smoker and Physical Inactivity across Eight Years in High-Risk Medical Patients. *Behav Med*, 1-14. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/33780324>

Torres, S, Samino, S, Rafols, P, Martins-Green, M, Correig, X, & Ramirez, N. (2020). Unravelling the metabolic alterations of liver damage induced by thirdhand smoke. *Environ Int*, 146, 106242. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/33197790>

Yamashita, R, Komaki, Y, Yang, G, & Ibuki, Y. (2020). Cell line-dependent difference in glutathione levels affects the cigarette sidestream smoke-induced inhibition of nucleotide excision repair. *Mutat Res*, 858-860, 503273. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/33198939>

No authors listed. Gene Expression Changes in an Early Stage of Intervertebral Disc Degeneration Induced by Passive Cigarette Smoking: Erratum. (2019). *Spine (Phila Pa 1976)*, 44(10), E632. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31046003>

Xiao, C, Wu, M, Liu, J, Gu, J, Jiao, X, Lu, D et al. Acute tobacco smoke exposure exacerbates the inflammatory response to corneal wounds in mice via the sympathetic nervous system. *Commun Biol*, 2019. 2, 33. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30701198>

Yang, G, Ibuki, Y. Cigarette sidestream smoke delays nucleotide excision repair - inhibited accumulation of repair proteins at DNA lesions. *Carcinogenesis*, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29045565>

Balachova, T, Zander, R, Bonner, B, Isurina, G, Kyler, K, Tsvetkova, L, Volkova, E. Smoking and alcohol use among women in Russia: Dual risk for prenatal exposure. *J Ethn Subst Abuse*, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28678641>

Makadia, LD, Roper, PJ, Andrews, JO, Tingen, MS. Tobacco Use and Smoke Exposure in Children: New Trends, Harm, and Strategies to Improve Health Outcomes. *Curr Allergy Asthma Rep*. 2017 Aug;17(8):55. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28741144>

tobaccoinaustralia.org.au

Tobacco in Australia

Facts & Issues

Huang, L, Tian, FY, Fan, L, He, YH, Peng, D, Xie, C, Tao, L, Yuan, SX, Jia, DQ, Chen, WQ. Appetite during the second and third trimesters mediates the impact of prenatal environmental tobacco smoke exposure on symmetric full-term low birth weight. J Matern Fetal Neonatal Med, Sep 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30198354>

Krishnamurthy, AV, Chinnakali, P, Dorairajan, G, Sundaram, SP, Sarveswaran, G, Sivakumar, M, Krishnamoorthy, K, Dayalane, H, Sinouvassan, V. Tobacco use, exposure to second-hand smoke among pregnant women and their association with birth weight: A retrospective cohort study. J Family Med Prim Care. 2018 Jul-Aug;7(4):728-733. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30234045>

Dessi, A, Corona, L, Pintus, R, Fanos, V. Exposure to tobacco smoke and low birth weight: from epidemiology to metabolomics. Expert Rev Proteomics, Jul 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30052087>

News reports:

tobaccoinaustralia.org.au