

Tobacco in Australia

Facts & Issues

Relevant news and research

6.2 Pharmacokinetics

Last updated October 2024

Research:

Cao, Y, Liu, X, Hu, Z, Li, J, Chen, X, Xiong, Y et al. (2024). Assessing nicotine pharmacokinetics of new generation tobacco products and conventional cigarettes: a systematic review and meta-analysis. *Nicotine Tob Res*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/39162577>

Liu, Y, Cheng, G, Cao, J, Zhang, J, Luo, C, & Huang, L. (2024). The "double-edged sword effect" of nicotine. *Fitoterapia*, 177, 106102. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/38945494>

Guo, L, Mao, J, Zhang, Q, Fan, W, Wang, D, Li, Z et al. (2023). Pharmacokinetic and pharmacodynamic studies of nicotine in rat brain: a simultaneous investigation of nicotine metabolites and the release of neurotransmitters in vivo. *Front Chem*, 11, 1275478. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37937208>

Cooper, RK, Jr, Mahoney, MC, Tiffany, ST, Colder, CR, Tyndale, RF, & Hawk, LW, Jr. (2023). Relationships Between the Nicotine Metabolite Ratio (NMR) and Laboratory Assessments of Smoking Reinforcement and Craving Among Adults in a Smoking Cessation Trial. *Nicotine Tob Res*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/37996099>

Perez-Paramo, YX, Watson, CJW, Chen, G, Thomas, CE, Adams-Haduch, J, Wang, R et al. (2022). Impact of genetic variants in the nicotine metabolism pathway on nicotine metabolite levels in smokers. *Cancer Epidemiol Biomarkers Prev*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/36252563>

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Hughes, J, Sykes, G, Hughes, K, O'Reilly, M, Goodwin, J, Sutton, C, & Karim, K. (2021). From gateways to multilinear connections: A qualitative longitudinal investigation of the relationships between vaping and smoking among adolescent users. *Int J Drug Policy*, 97, 103341. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/34229192>

Martinelli, T, Candel, M, de Vries, H, Talhout, R, Knapen, V, van Schayck, CP, & Nagelhout, GE. (2021). Exploring the gateway hypothesis of e-cigarettes and tobacco: a prospective replication study among adolescents in the Netherlands and Flanders. *Tob Control*. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/34226262>

Roberts, W, Marotta, PL, Verplaetse, TL, Peltier, MR, Burke, C, Ramchandani, VA, & McKee, SA. (2020). A prospective study of the association between rate of nicotine metabolism and alcohol use in tobacco users in the United States. *Drug Alcohol Depend*, 216, 108210. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/32805549>

Benowitz, NL, Helen, GS, Nardone, N, Cox, LS, & Jacob, P. (2019). Urine Metabolites for Estimating Daily Intake of Nicotine from Cigarette Smoking. *Nicotine Tob Res*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30852610>

Maynard OM, McClernon FJ, Oliver JA, and Munafo MR. Using neuroscience to inform Tobacco Control policy. *Nicotine Tob Res*, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29590482>

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<https://www.ncbi.nlm.nih.gov/pubmed/18305452>

Dempsey DA and Benowitz NL. Risks and benefits of nicotine to aid smoking cessation in pregnancy. *Drug Safety*, 2001; 24(4):277–322. Available from:

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News reports:

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