

Written Comment for Public Hearing on Draft Environmental Impact Statement for CAFE and HDPUV Standards (NHTSA Fuel Efficiency Standards for Cars and Light Trucks)

Docket No. NHTSA–2022–0075 at <https://www.regulations.gov/docket/NHTSA-2022-0075/document>

October 13, 2023

I'm Roselie Bright, ScD, with a doctor of science in epidemiology with a specialty in environmental health, earned at Harvard. I had a career as a federal epidemiologist. I'm retired and speaking for myself.

Overall, I appreciate the hard work that went into the Draft Environmental Impact Statement.

I have several points that would improve the Final Environmental Impact Statement:

1. For most of the pollutants, the model relies on other federal reviews, the most recent one having been published in 2021. We all know that federal reports involve extensive approval time periods before publication. Therefore, there was probably at least a year of significant publications that weren't reviewed for this DEIS. There has been a steep rise in the number of emissions epidemiology publications in recent years. Therefore, I strongly suggest an update to the DEIS and the public health effects model using recent literature.
2. To do this properly, the reviewer teams need to include scientists trained in environmental epidemiology. Appendix G lists people with environmental masters degrees, none with a public health emphasis. Evaluation of environmental epidemiology requires at least masters level training specifically in public health science. Please obtain an environmental epidemiologist to update the review of recent literature and extract important inputs into the public health effects model. Doing so might clear up some of my confusion for a few specific points:
 - a. The effects of noise were dismissed because in some traffic situations, electric vehicles need to make artificial noise to alert pedestrians, even though overall, combustion engine vehicles are still much louder than electric vehicles. It is clear to me that as the combustion engine vehicles are replaced by electric vehicles, the overall noise produced by the fleet of vehicles will decrease. Where epidemiology comes into play is the fact that the most alarming studies of noise pollution are recent. At real-world traffic noise levels, they document the following adverse health impacts: increased blood pressure, heart disease, raised stress hormones, brain damage, cancer, and death [1-45].
 - b. The emission health impacts listing in Table IV-26 is extensive, but omits several adverse health impacts that have been documented recently: lung cancer mortality; asthma onset in both children and adults; poor pregnancy outcomes, poor physical growth, school absences, and reduced cognitive abilities (autism, academic performance, dementia) [46-91].
 - c. The list of specific pollutants leaves out platinum and palladium, which have been recently associated with asthma and promotion of inflammation [92-93].

3. NHSTA is required to conserve energy and is proposing less than the maximum conservation on the grounds of economic feasibility. The economics should be reconsidered in light of recent news of the exorbitant personal annual CEO compensations for the big three automobile manufacturers, 75 million dollars, combined [94]. I'm sure there is money for innovation that doesn't all need to be passed on to the consumer.

4. The CAFE model assumed that for electricity generation, the majority of sources would continue to be fossil fuel [Section 3.2.2.1].

- Please include in your analysis the impact of expanding home EV battery charging from home solar panels.
- I encourage the other federal agencies, and state and local governments, to accelerate their policies to replace fossil fuels with wind and solar for electricity generation. Doing so would make it even more clear that the CAFE and HDPUV standards should be maximally applied to encourage electric vehicle production.

5. Please do not let the fact that this document applies to a small fraction of total emissions deter you from regulating this sector as much as possible. All emissions count.

Thank you for this opportunity to comment.

References

1. Babisch W, Neuhauser H, Thamm M, Seiwert M. Blood pressure of 8-14 year old children in relation to traffic noise at home--results of the German Environmental Survey for Children (GerES IV). *Sci Total Environ*. 2009 Nov 1; 407(22): 5839-43. DOI: 10.1016/j.scitotenv.2009.08.016.
2. Babisch W, Beule B, Schust M, et al. Traffic noise and risk of myocardial infarction. *Epidemiology*. 2005 Jan; 16(1): 33-40. DOI: 10.1097/01.ede.0000147104.84424.24.
3. Babisch W, Fromme H, Beyer A, Ising H. Increased catecholamine levels in urine in subjects exposed to road traffic noise: the role of stress hormones in noise research. *Environ Int*. 2001 Jun; 26(7-8): 475-81. DOI: 10.1016/s0160-4120(01)00030-7.
4. Babisch W. Road Traffic Noise and Cardiovascular Risk. *Noise Health*. 2008; 10 (38): 27-33. DOI: 10.4103/1463-1741.39005.
5. Babisch W, Wölke G, Heinrich J, Straff W. Road traffic noise and hypertension--accounting for the location of rooms. *Environ Res*. 2014 Aug;133:380-7. DOI: 10.1016/j.envres.2014.05.007.
6. Babisch W. Updated exposure-response relationship between road traffic noise and coronary heart diseases: a meta-analysis. *Noise Health*. Jan-Feb 2014;16(68):1-9. DOI: 10.4103/1463-1741.127847.
7. Birk M, Ivina O, von Klot S, et al. Road traffic noise: self-reported noise annoyance versus GIS modelled road traffic noise exposure. *J Environ Monit*. 2011 Nov; 13(11): 3237-45. DOI: 10.1039/c1em10347d.
8. Bodin T, Albin M, Ardö J, et al. 2009. Road traffic noise and hypertension: Results from a cross-sectional public health survey in southern Sweden. *Environmental Health*. 2019; 8: 38. DOI: 10.1186/1476-069X-8-38.

9. Cai Y, Ramakrishnan R, Rahimi K. Long-term exposure to traffic noise and mortality: A systematic review and meta-analysis of epidemiological evidence between 2000 and 2020. *Environ Pollut*. 2021 Jan 15; 269: 116222. DOI: 10.1016/j.envpol.2020.116222.
10. Cantuaria ML, Waldorff FB, Wermuth L, et al. Residential exposure to transportation noise in Denmark and incidence of dementia: national cohort study. *BMJ*. 2021 Sep 8; 374:n1954. DOI: 10.1136/bmj.n1954.
11. Cole-Hunter T, So R, Amini H, et al. Long-term exposure to road traffic noise and all-cause and cause-specific mortality: a Danish Nurse Cohort study. *Sci Total Environ*. 2022 May 10; 820: 153057. DOI: 10.1016/j.scitotenv.2022.153057.
12. de Bont J, Márquez S, Fernández-Barrés S, et al. Urban environment and obesity and weight-related behaviours in primary school children. *Environ Int*. 2021 Oct; 155: 106700. DOI: 10.1016/j.envint.2021.106700.
13. de Kluizenaar Y, Janssen SA, van Lenthe FJ, et al. Long-term road traffic noise exposure is associated with an increase in morning tiredness. *Acoustical Society of America*. 2009; 126: 626-633. DOI: 10.1121/1.3158834.
14. Foraster M, Esnaola M, López-Vicente M, et al. Exposure to road traffic noise and cognitive development in schoolchildren in Barcelona, Spain: A population-based cohort study. *PLoS Med*. 2022 Jun 2; 19(6): e1004001. DOI: 10.1371/journal.pmed.1004001.
15. Fuks K, Moebus S, Hertel S, et al. Long-term urban particulate air pollution, traffic noise, and arterial blood pressure. *Environ Health Perspect*. 2011 Dec; 119(12): 1706-11. DOI: 10.1289/ehp.1103564.
16. Gui S-Y, Wu K-J, Sun Y, et al. Traffic noise and adiposity: a systematic review and meta-analysis of epidemiological studies. *Environ Sci Pollut Res Int*. 2022 Aug (online in 2022 Mar); 29(37): 55707-55727. DOI: 10.1007/s11356-022-19056-7.
17. Hoffmann B, Weinmayr G, Hennig F, et al. Air quality, stroke, and coronary events: results of the Heinz Nixdorf Recall Study from the Ruhr Region. *Dtsch Arztebl Int*. 2015 Mar 20; 112(12): 195-201. DOI: 10.3238/arztebl.2015.0195.
18. Kaelsch H, Hennig F, Moebus S, et al. Are air pollution and traffic noise independently associated with atherosclerosis: the Heinz Nixdorf Recall Study. *Eur Heart J*. 2014 Apr; 35(13): 853-60. DOI: 10.1093/eurheartj/eh426.
19. Lan Y, Roberts H, Kwan M-P, Helbich M. Transportation noise exposure and anxiety: A systematic review and meta-analysis. *Environ Res*. 2020 Dec; 191: 110118. DOI: 10.1016/j.envres.2020.110118.
20. Li A, Martino E, Mansour A, Bentley R. Environmental Noise Exposure and Mental Health: Evidence From a Population-Based Longitudinal Study. *Am J Prev Med*. Epub 2022 Apr 21;S0749-3797(22)00156-8 and Final 2022 Aug; 63(2): e39-e48. DOI: 10.1016/j.amepre.2022.02.020.
21. Lim Y-H, Jørgensen JT, So R, et al. Long-Term Exposure to Air Pollution, Road Traffic Noise, and Heart Failure Incidence: The Danish Nurse Cohort. *J Am Heart Assoc*. 2021 Oct 19; 10(20): e021436. DOI: 10.1161/JAHA.121.021436.

22. Lim Y-H, Jørgensen JT, So R, et al. Long-term exposure to road traffic noise and incident myocardial infarction: A Danish Nurse Cohort study. *Environ Epidemiol.* 2021 Apr 22;5(3):e148. DOI: 10.1097/EE9.000000000000148.
23. Liu C, et al. The associations between traffic-related air pollution and noise with blood pressure in children: results from the GINIplus and LISApplus studies. *Int J Hyg Environ Health.* Apr-May 2014;217(4-5):499-505. DOI: 10.1016/j.ijheh.2013.09.008.
24. Liu S, Fuertes E, Tiesler CMT et al. Long-term air pollution and road traffic noise exposure and COPD: the Danish Nurse Cohort. *Eur Respir J.* 2021 Dec 2; 58(6): 2004594. DOI: 10.1183/13993003.04594-2020.
25. Liu S, Lim Y-H, Pedersen M, et al. Long-term exposure to ambient air pollution and road traffic noise and asthma incidence in adults: The Danish Nurse cohort. *Environ Int.* 2021 Jul; 152: 106464. DOI: 10.1016/j.envint.2021.106464.
26. Mac Domhnaill CM, Douglas O, Lyons S, et al. Road traffic noise and cognitive function in older adults: a cross-sectional investigation of The Irish Longitudinal Study on Ageing. *BMC Public Health.* 2021 Oct 8; 21(1): 1814. DOI: 10.1186/s12889-021-11853-y.
27. Magnoni P, Murtas R, Russo AG. Residential exposure to traffic-borne pollution as a risk factor for acute cardiocerebrovascular events: a population-based retrospective cohort study in a highly urbanized area. *Int J Epidemiol.* 2021 Aug 30; 50(4): 1160-1171. DOI: 10.1093/ije/dyab068.
28. Okazaki Y, Ito L, Tokai A. Characterizing potential risk triggered by road traffic noise in comparison with typical air pollutants NO₂ and PM_{2.5}. *Environ Syst Decis.* 2021; 41(1): 147-162. DOI: 10.1007/s10669-021-09800-8.
29. Pitchika A, Hampel R, Wolf K, et al. Long-term associations of modeled and self-reported measures of exposure to air pollution and noise at residence on prevalent hypertension and blood pressure. *Sci Total Environ.* 2017 Sep 1; 593-594: 337-346. DOI: 10.1016/j.scitotenv.2017.03.156.
30. Sanok S, Berger M, Müller U, et al. Road traffic noise impacts sleep continuity in suburban residents: Exposure-response quantification of noise-induced awakenings from vehicle pass-bys at night. *Sci Total Environ.* 2022 Apr 15; 817: 152594. DOI: 10.1016/j.scitotenv.2021.152594.
31. Sørensen M, Poulsen AH, Kroman N, et al. Road and railway noise and risk for breast cancer: A nationwide study covering Denmark. *Environ Res.* 2021 Apr; 195: 110739. DOI: 10.1016/j.envres.2021.110739.
32. Stansfeld SA. Noise Effects on Health in the Context of Air Pollution Exposure. *Int J Environ Res Public Health.* 2015 Oct 14; 12(10): 12735-60. DOI: 10.3390/ijerph121012735.
33. Stansfeld S, Clark C. Health Effects of Noise Exposure in Children. *Curr Environ Health Rep.* 2015 Jun; 2(2): 171-8. DOI: 10.1007/s40572-015-0044-1.
34. Stansfeld S, Clark C, Smuk M, et al. Road traffic noise, noise sensitivity, noise annoyance, psychological and physical health and mortality. *Environ Health.* 2021 Mar 25; 20(1): 32. DOI: 10.1186/s12940-021-00720-3.

35. Tangermann L, Vienneau D, Hattendorf J, et al. The association of road traffic noise with problem behaviour in adolescents: A cohort study. *Environ Res.* 2022 May 1; 207: 112645. DOI: 10.1016/j.envres.2021.112645.
36. Thacher JD, Poulsen AH, Hvidtfeldt UA, et al. Long-Term Exposure to Transportation Noise and Risk for Type 2 Diabetes in a Nationwide Cohort Study from Denmark. *Environ Health Perspect.* 2021 Dec; 129(12): 127003. DOI: 10.1289/EHP9146.
37. Tiesler CMT, Birk M, Thiering E, et al. Exposure to road traffic noise and children's behavioural problems and sleep disturbance: results from the GINIplus and LISApplus studies. *Environ Res.* 2013 May; 123: 1-8. DOI: 10.1016/j.envres.2013.01.009.
38. van Kempen E, Babisch W. The quantitative relationship between road traffic noise and hypertension: a meta-analysis. *J Hypertens.* 2012 Jun; 30(6): 1075-86. DOI: 10.1097/HJH.0b013e328352ac54.
39. van Kempen EE, Kruize H, Boshuizen HC, et al. The association between noise exposure and blood pressure and ischemic heart disease: a meta-analysis. *Environmental Health Perspectives.* 2002. 110: 307-317. DOI: 10.1289/ehp.02110307.
40. Voss S, Schneider A, Huth C, et al. ENVINT-D-20-01309: Long-term exposure to air pollution, road traffic noise, residential greenness, and prevalent and incident metabolic syndrome: Results from the population-based KORA F4/FF4 cohort in Augsburg, Germany. *Environ Int.* 2021 Feb; 147: 106364. DOI: 10.1016/j.envint.2020.106364.
41. Wang T-C, Chang T-Y, Tyler RS, et al. Association between exposure to road traffic noise and hearing impairment: a case-control study. *J Environ Health Sci Eng.* 2021 Jul 20; 19(2): 1483-1489. DOI: 10.1007/s40201-021-00704-y.
42. Weyde KV, Prog NH, Oftedal B, et al. A Longitudinal Study of Road Traffic Noise and Body Mass Index Trajectories from Birth to 8 Years. *Epidemiology.* 2018 Sep; 29(5): 729-738. DOI: 10.1097/EDE.0000000000000868.
43. WHO (World Health Organization). 1999. Guidelines for Community Noise. Available at: www.who.int/docstore/peh/noise/guidelines2.html.
44. Yli-Tuomi T, Turunen AW, Tiittanen P, Lanki T. Exposure-Response Functions for the Effects of Traffic Noise on Self-Reported Annoyance and Sleep Disturbance in Finland: Effect of Exposure Estimation Method. *Int J Environ Res Public Health.* 2022 Jan 25; 19(3): 1314. DOI: 10.3390/ijerph19031314.
45. Choma EF, Evans JS, Gómez-Ibáñez JA, et al. Health benefits of decreases in on-road transportation emissions in the United States from 2008 to 2017. *PNAS*, online 2021 Dec 13, DOI: 10.1073/pnas.2107402118.
46. Luo Z et al. Impacts of vehicle emission on air quality and human health in China. *Science of the Total Environment.* 2022 Mar 20; Vol 813. DOI: 10.1016/j.scitotenv.2021.152655.
47. WHO-Europe. Health effects of transport-related air pollution. https://www.euro.who.int/__data/assets/pdf_file/0006/74715/E86650.pdf.

48. Kheirbek I, Haney J, Douglas S, et al. The contribution of motor vehicle emissions to ambient fine particulate matter public health impacts in New York City: a health burden assessment. *Environmental Health*. 2016; 15:89. DOI: 10.1186/s12940-016-0172-6.
49. McCubbin DR, Delucchi MA. The health costs of motor-vehicle-related air pollution. *Journal of Transport Economics and Policy*. 1999 Sep; 33 (3): 253-286. <https://www.jstor.org/stable/20053815>.
50. Anderson ML. As the Wind Blows: The Effects of Long-Term Exposure to Air Pollution on Mortality. *Journal of the European Economic Association*. 2020 Aug; 18(4): 1886-1927. DOI: 10.1093/jea/ jvz051.
51. Austin W, Heutel G, Kreisman D. School Bus Emissions, Student Health and Academic Performance. *Economics of Education Review*. 2019. <https://www.nber.org/papers/w25641>. DOI: 10.3386/w25641.
52. Beatty TKM, Shimshack JP. School buses, diesel emissions, and respiratory health. *Journal of Health Economics*. 2011; 30 (5): 987–999. DOI: 10.1016/j.jhealeco.2011.05.017.
53. Bell ML, McDermott A, Scott L, Zeger SL, et al. Ozone and short-term mortality in 95 US urban communities, 1987-2000. *Journal of the American Medical Association*. 2004; 292 (19): 2372–2378. DOI: 10.1001/jama.292.19.2372.
54. Bell ML, O’Neill MS, Cifuentes LA, et al. Challenges and recommendations for the study of socioeconomic factors and air pollution health effects. *Environmental Science and Policy*. 2005; 8 (5): 525–533. DOI: 10.1016/j.envsci.2005.06.003.
55. Benmarhnia T, Bharadwaj P, Romero M. Using Instrumental Variables under Partial Observability of Endogenous Variables for Assessing Effects of Air Pollution on Health. 2017. <https://mauricio-romero.com/pdfs/papers/partialiv.pdf>.
56. Bishop KC, Ketcham JD, Kuminoff NV. Hazed and confused: The effect of air pollution on dementia. Technical Report, NBER Working Paper No. 24970. 2018. <https://www.nber.org/papers/w24970>.
57. Case A, Fertig A, Paxson C. The lasting impact of childhood health and circumstance. *Journal of Health Economics*. 2005; 24 (2): 365–389. DOI: 10.1016/j.jhealeco.2004.09.008.
58. Currie J, Almond D, Neidell M. Air pollution and infant health: what can we learn from California’s recent experience? *The Quarterly Journal of Economics*. 2005; 120 (3): 1003–1030. <https://www.jstor.org/stable/25098761>.
59. Currie J, Almond D, Walker R. Traffic congestion and infant health: evidence from E-ZPass. *American Economic Journal: Applied Economics*. 2011; 3 (1): 65–90. <https://www.aeaweb.org/articles?id=10.1257/app.3.1.65>.
60. Currie J, Almond D, Hanushek E, et al. Does pollution increase school absences? *Review of Economics and Statistics*. 2009; 91 (4): 672–694. <https://ideas.repec.org/a/tpo/restat/v91y2009i4p682-694.html>.
61. Currie J, Almond D, Zivin JG, et al. What do we know about short-and long-term effects of early-life exposure to pollution? *Annu. Rev. Resour. Econ*. 2014; 6(1): 217–247. <http://www.nber.org/papers/w19571.pdf>.

62. Currie J, Neidell M, Schmieder JF. Air pollution and infant health: Lessons from New Jersey. *Journal of Health Economics*. 2009; 28 (3): 688–703. DOI: 10.1016/j.jhealeco.2009.02.001.
63. Di Q, Dai L, Wang Y, et al. Association of short-term exposure to air pollution with mortality in older adults. *Journal of the American Medical Association*. 2017; 318 (24): 2446–2456. DOI: 10.1001/jama.2017.17923.
64. Dominici F, Greenstone M, Sunstein CR. Science and regulation. Particulate matter matters. *Science*. 2014; 344 (6181): 257–259. DOI: 10.1126/science.1247348.
65. Gauderman WJ, Avol E, Lurmann F, et al. Childhood asthma and exposure to traffic and nitrogen dioxide. *Epidemiology*. 2005; 16 (6): 737–743. DOI: 10.1097/01.ede.0000181308.51440.75.
66. Gauderman WJ, Vora H, McConnell R, et al. Effect of exposure to traffic on lung development from 10 to 18 years of age: a cohort study. *Lancet*. 2007 Feb 17; 369(9561):571-7. DOI: 10.1016/S0140-6736(07)60037-3.
67. Gent JF, Triche EW, Holford TR, et al. Association of low-level ozone and fine particles with respiratory symptoms in children with asthma. *Journal of the American Medical Association*. 2003; 290 (14): 1859–1867. DOI: 10.1001/jama.290.14.1859.
68. Hoek G, Krishnan RM, Beelen R, et al. Long-term air pollution exposure and cardio-respiratory mortality: a review. *Environmental Health*. 2013; 12 (43). DOI: 10.1186/1476-069X-12-43.
69. Hyder A, Lee HJ, Ebisu K, et al. PM2.5 exposure and birth outcomes: use of satellite- and monitor-based data. *Epidemiology*. 2014; 25 (1): 58. DOI: 10.1097/EDE.0000000000000027.
70. Isen A, Rossin-Slater M, Walker, WR. Every breath you take—every dollar you’ll make: the long-term consequences of the Clean Air Act of 1970. *Journal of Political Economy*. 2017; 125 (3): 848–902. <https://www.journals.uchicago.edu/doi/abs/10.1086/691465>.
71. Jerrett M, Burnett RT, Pope CA, et al. Long-term ozone exposure and mortality. *New England Journal of Medicine*. 2009; 360 (11): 1085–1095. DOI: 10.1056/NEJMoa0803894.
72. Jerrett M, Shankardass K, Berhane K, et al. Traffic-related air pollution and asthma onset in children: a prospective cohort study with individual exposure measurement. *Environ Health Prospect*. 2008 Oct; 116(10):1433-8. DOI: 10.1289/ehp.10968.
73. Knittel CR, Miller DL, and Sanders NJ. Caution, drivers! Children present: traffic, pollution, and infant health. *Review of Economics and Statistics*. 2016; 98 (2): 350–366. <http://hdl.handle.net/1721.1/113913>.
74. Lleras-Muney A. The needs of the army using compulsory relocation in the military to estimate the effect of air pollutants on children’s health. *Journal of Human Resources*. 2010; 45 (3): 549–590. <https://www.jstor.org/stable/25703469>.
75. Mar TF, Koenig JQ. Relationship between visits to emergency departments for asthma and ozone exposure in greater Seattle, Washington. *Annals of Allergy, Asthma, and Immunology*. 2009; 103 (6): 474–479. DOI: 10.1016/S1081-1206(10)60263-3.

76. Marcus M. On the road to recovery: Gasoline content regulations and child health. *Journal of Health Economics*. 2017; 54: 98–123. DOI: 10.1016/j.jhealeco.2017.04.003.
77. McConnell R, Berhane K, Yao L, et al. Traffic, susceptibility, and childhood asthma. *Environ Health Prospect*. 2006 May; 114(5):766-72. DOI: 10.1289/ehp.8594.
78. McConnell R, Islam T, Shankardass K, et al. Childhood incident asthma and traffic-related air pollution at home and school. *Environ Health Perspect* 2010 Jul; 118(7): 1021-6. DOI: 10.1289/ehp.0901232.
79. Medina-Ramon M, Zanobetti A, Schwartz J. The effect of ozone and PM10 on hospital admissions for pneumonia and chronic obstructive pulmonary disease: a national multicity study. *American Journal of Epidemiology*. 2006; 163 (6): 579–588. DOI: 10.1093/aje/kwj078.
80. Neidell MJ. Air pollution, health, and socio-economic status: the effect of outdoor air quality on childhood asthma. *Journal of Health Economics*. 2004; 23 (6): 1209–1236. DOI: 10.1016/j.jhealteco.2004.05.002.
81. Peters A, Von Klot S, Heier, M, et al. Exposure to traffic and the onset of myocardial infarction. *New England Journal of Medicine*. 2004; 351 (17): 1721–1730. DOI: 10.1056/NEJMoa040203.
82. Ponce NA, Hoggatt KJ, Wilhelm M, Ritz B. Preterm birth: the interaction of traffic-related air pollution with economic hardship in Los Angeles neighborhoods. *American Journal of Epidemiology*. 2005; 162 (2): 140–148. DOI: 10.1093/aje/kwi173.
83. Schwartz J. Air pollution and daily mortality: a review and meta analysis. *Environmental Research*. 1994; 64 (1): 36–52. DOI: 10.1006/enrs.1994.1005.
84. Simeonova E, Currie J, Nilsson P, Walker R. Congestion pricing, air pollution and children’s health. Technical Report, NBER Working Paper No. 24410 2018.
85. Stieb DM, Chen L, Eshoul M, Judek S. Ambient air pollution, birth weight and preterm birth: a systematic review and meta-analysis. *Environmental Research*. 2012; 117: 100–111. doi: 10.1016/j.envres.2012.05.007.
86. Triche EW, Gent JF, Holford TR, et al. Low-level ozone exposure and respiratory symptoms in infants. *Environ Health Prospect*. 2006 Jun; 114(6):911-6. DOI: 10.1289/ehp.8559.
87. Volk HE, Lurmann F, Penfold B, et al. Traffic-related air pollution, particulate matter, and autism. *JAMA Psychiatry*. 2013; 70 (1): 71–77. DOI: 10.1001/jamapsychiatry.2013.266.
88. Vrijheid M, Casas M, Gascon M, et al. Environmental pollutants and child health—a review of recent concerns. *International Journal of Hygiene and Environmental Health*. 2016; 219 (4-5): 331–342. DOI: 10.1016/j.ijheh.2016.05.001.
89. Zawacki M, Baker K, Phillips S, et al. Mobile source contribution to ambient ozone and particulate matter in 2025. *Atmospheric Environment*. 2018; 188: 129–141. DOI: 10.1016/j.atmosenv.2018.04.057.
90. Alexander D, Schwandt H. The impact of car pollution on infant and child health: evidence from emissions cheating. Federal Reserve Bank of Chicago. 2019. WP 2019-04. DOI: 10.21033/wp-2019-04.
91. Schwartz J, Bind M-A, Koutrakis P. Estimating causal effects of local air pollution on daily deaths: effect of low levels. *Environ Health Prospect*. 2017 Jan; 125 (1): 23-29. DOI: 10.1289/EHP232.

92. Fromell K, Johansson U, Abadgar S, et al. The effect of airborne Palladium nanoparticles on human lung cells, endothelium and blood – A combinatory approach using three *in vitro* models. *Toxicology In Vitro*. 2023 Jun; 89: 105586. DOI: 10.1016/j.tiv.2023.105586.
93. Aarzo, Nidhi, Samim M. Palladium nanoparticles as emerging pollutants from motor vehicles: An in-depth review on distribution, uptake and toxicological effects in occupational and living environment. *Science of the Total Environment*. 2022 Jun 1; 823: 153787. DOI: 10.1016/j.scitotenv.2022.153787.
94. Lawrence ED, LaReau JL. As UAW, Detroit 3 fight over wages, here's a look at autoworker pay, CEO compensation. *USA Today*. 2023 Sep 25. <https://www.usatoday.com/story/money/cars/2023/09/20/uaw-ceo-salary-levels-strike-issue/70915285007/>.