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Articles supporting microplastics released from cutting board:

1. Yadav, H., Khan, M. R. H., Quadir, M., Rusch, K. A., Mondal, P. P., Orr, M., Xu, E. G., & Iskander, S. M. (2023). Cutting Boards: An Overlooked Source of Microplastics in Human Food?. *Environmental science & technology*, 57(22), 8225–8235.  
<https://doi.org/10.1021/acs.est.3c00924>
2. Luo, Y., Chuah, C., Amin, M. A., Khoshyan, A., Gibson, C. T., Tang, Y., Naidu, R., & Fang, C. (2022). Assessment of microplastics and nanoplastics released from a chopping board using Raman imaging in combination with three algorithms. *Journal of hazardous materials*, 431, 128636. <https://doi.org/10.1016/j.jhazmat.2022.128636>
3. Habib, R. Z., Poulouse, V., Alsaidi, R., Al Kendi, R., Iftikhar, S. H., Mourad, A. I., Kittaneh, W. F., & Thiemann, T. (2022). Plastic cutting boards as a source of microplastics in meat. *Food additives & contaminants. Part A, Chemistry, analysis, control, exposure & risk assessment*, 39(3), 609–619.  
<https://doi.org/10.1080/19440049.2021.2017002>
4. Liu, Y., Cao, Y., Li, H., Liu, H., Bi, L., Chen, Q., & Peng, R. (2024). A systematic review of microplastics emissions in kitchens: Understanding the links with diseases in daily life. *Environment international*, 188, 108740. <https://doi.org/10.1016/j.envint.2024.108740>
5. Habib, R. Z., Kindi, R. A., Salem, F. A., Kittaneh, W. F., Poulouse, V., Iftikhar, S. H., Mourad, A.-H. I., & Thiemann, T. (2022). Microplastic Contamination of Chicken Meat and Fish through Plastic Cutting Boards. *International Journal of Environmental Research and Public Health*, 19(20), 13442. <https://doi.org/10.3390/ijerph192013442>
6. Cole, M., Gomiero, A., Jaén-Gil, A., Haave, M., & Lusher, A. (2024). Microplastic and PTFE contamination of food from cookware. *The Science of the total environment*, 929, 172577. <https://doi.org/10.1016/j.scitotenv.2024.172577>
7. Snekkevik, V. K., Cole, M., Gomiero, A., Haave, M., Khan, F. R., & Lusher, A. L. (2024). Beyond the food on your plate: Investigating sources of microplastic contamination in home kitchens. *Heliyon*, 10(15).

Articles supporting the toxic and harmful effects of microplastics on humans:

1. Wohlleben, W., Bossa, N., Mitrano, D. M., & Scott, K. (2024). Everything falls apart: How solids degrade and release nanomaterials, composite fragments, and microplastics. *NanoImpact*, 34, 100510.
2. Bao, Y. B., Wang, C. C., Peng, W. G., Nong, D. Q., & Xiang, P. (2024). *Huan jing ke xue = Huanjing kexue*, 45(2), 1173–1184. <https://doi.org/10.13227/j.hjkx.202303260>
3. Prata, J. C., da Costa, J. P., Lopes, I., Duarte, A. C., & Rocha-Santos, T. (2020). Environmental exposure to microplastics: An overview on possible human health effects. *The Science of the total environment*, 702, 134455. <https://doi.org/10.1016/j.scitotenv.2019.134455>
4. Kibria, G. (2024). Exposure routes of microplastics (MPs) to humans and possible risks of MPs to human health from food and the environment: a short review. *Journal of Food Safety and Hygiene*.
5. López de Las Hazas, M. C., Boughanem, H., & Dávalos, A. (2022). Untoward Effects of Micro- and Nanoplastics: An Expert Review of Their Biological Impact and Epigenetic Effects. *Advances in nutrition (Bethesda, Md.)*, 13(4), 1310–1323. <https://doi.org/10.1093/advances/nmab154>
6. Blackburn, K., & Green, D. (2022). The potential effects of microplastics on human health: What is known and what is unknown. *Ambio*, 51(3), 518–530. <https://doi.org/10.1007/s13280-021-01589-9>
7. María-Carmen López de las Hazas, Hatim Boughanem, Alberto Dávalos, Untoward Effects of Micro- and Nanoplastics: An Expert Review of Their Biological Impact and Epigenetic Effects, *Advances in Nutrition*, Volume 13, Issue 4, 2022, Pages 1310-1323, ISSN 2161-8313, <https://doi.org/10.1093/advances/nmab154>
8. Cheng, Y., Yang, Y., Bai, L., & Cui, J. (2024). Microplastics: an often-overlooked issue in the transition from chronic inflammation to cancer. *Journal of translational medicine*, 22(1), 959. <https://doi.org/10.1186/s12967-024-05731-5>
9. Bastyans, S., Jackson, S., & Fejer, G. (2022). Micro and nano-plastics, a threat to human health?. *Emerging topics in life sciences*, 6(4), 411–422. <https://doi.org/10.1042/ETLS20220024>
10. Hirt, N., Body-Malapel, M. Immunotoxicity and intestinal effects of nano- and microplastics: a review of the literature. *Part Fibre Toxicol* 17, 57 (2020). <https://doi.org/10.1186/s12989-020-00387-7>
11. Kannan, K., & Vimalkumar, K. (2021). A Review of Human Exposure to Microplastics and Insights Into Microplastics as Obesogens. *Frontiers in endocrinology*, 12, 724989. <https://doi.org/10.3389/fendo.2021.724989>
12. Park, E. J., Han, J. S., Park, E. J., Seong, E., Lee, G. H., Kim, D. W., Son, H. Y., Han, H. Y., & Lee, B. S. (2020). Repeated-oral dose toxicity of polyethylene microplastics and

the possible implications on reproduction and development of the next generation.

*Toxicology letters*, 324, 75–85. <https://doi.org/10.1016/j.toxlet.2020.01.008>

13. Sujithra, K., Jayanthi, K., Babu, M., & Ashok, K. (2023). Microplastics and its Harmful Effects on Humans: A Review. *International Journal of Zoological Investigations*.
14. Verla, A.W., Enyoh, C.E., Verla, E.N. *et al.* Microplastic–toxic chemical interaction: a review study on quantified levels, mechanism and implication. *SN Appl. Sci.* **1**, 1400 (2019). <https://doi.org/10.1007/s42452-019-1352-0>
15. Chartres, N., Cooper, C. B., Bland, G., Pelch, K. E., Gandhi, S. A., BakenRa, A., & Woodruff, T. J. (2024). Effects of Microplastic Exposure on Human Digestive, Reproductive, and Respiratory Health: A Rapid Systematic Review. *Environmental science & technology*, 58(52), 22843–22864. Advance online publication. <https://doi.org/10.1021/acs.est.3c09524>
16. Chang, X., Xue, Y., Li, J., Zou, L., & Tang, M. (2019). Potential health impact of environmental micro- and nanoplastics pollution. *Journal of Applied Toxicology*, 40, 15 - 4.
17. Gruber, E.S., Stadlbauer, V., Pichler, V. *et al.* To Waste or Not to Waste: Questioning Potential Health Risks of Micro- and Nanoplastics with a Focus on Their Ingestion and Potential Carcinogenicity. *Expo Health* **15**, 33–51 (2023). <https://doi.org/10.1007/s12403-022-00470-8>
18. González-Acedo, A., García-Recio, E., Illescas-Montes, R., Ramos-Torrecillas, J., Melguizo-Rodríguez, L., & Costela-Ruiz, V. J. (2021). Evidence from *in vitro* and *in vivo* studies on the potential health repercussions of micro- and nanoplastics. *Chemosphere*, 280, 130826. <https://doi.org/10.1016/j.chemosphere.2021.130826>
19. Rubio, L., Marcos, R., & Hernández, A. (2020). Potential adverse health effects of ingested micro- and nanoplastics on humans. Lessons learned from *in vivo* and *in vitro* mammalian models. *Journal of toxicology and environmental health. Part B, Critical reviews*, 23(2), 51–68. <https://doi.org/10.1080/10937404.2019.1700598>
20. Grechi Nicole, Franko Roksan, Rajaraman Roshini, Stöckl Jan B., Trapphoff Tom, Dieterle Stefan, Fröhlich Thomas, Noonan Michael J., de A. M. M. Ferraz Marcia (2023) Microplastics are present in women's and cows' follicular fluid and polystyrene microplastics compromise bovine oocyte function *in vitro*, *eLife*, 12:RP86791, <https://doi.org/10.7554/eLife.86791.1>
21. Chelin Jamie Hu, Marcus A Garcia, Alexander Nihart, Rui Liu, Lei Yin, Natalie Adolphi, Daniel F Gallego, Huining Kang, Matthew J Campen, Xiaozhong Yu, Microplastic presence in dog and human testis and its potential association with sperm count and weights of testis and epididymis, *Toxicological Sciences*, Volume 200, Issue 2, August 2024, Pages 235–240, <https://doi.org/10.1093/toxsci/kfae060>
22. Ziani, K., Ioniță-Mîndrican, C. B., Mititelu, M., Neacșu, S. M., Negrei, C., Moroșan, E., Drăgănescu, D., & Preda, O. T. (2023). Microplastics: A Real Global Threat for



Environment and Food Safety: A State of the Art Review. *Nutrients*, 15(3), 617.  
<https://doi.org/10.3390/nu15030617>

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<https://doi.org/10.21203/rs.3.rs-4345687/v1>

#### Articles illustrating the effects of microplastics on pregnant mothers and human fetuses:

1. Sharma, R. K., Kumari, U., & Kumar, S. (2024). Impact of Microplastics on Pregnancy and Fetal Development: A Systematic Review. *Cureus*, 16(5), e60712.  
<https://doi.org/10.7759/cureus.60712>
  - a. Microplastics can be detrimental to fetal development, with correlations found between microplastic exposure and diminished birthweight, gestational age, and fetal growth.
2. Zurub, R. E., Cariaco, Y., Wade, M. G., & Bainbridge, S. A. (2024). Microplastics exposure: implications for human fertility, pregnancy and child health. *Frontiers in endocrinology*, 14, 1330396. <https://doi.org/10.3389/fendo.2023.1330396>
3. Yang, D., Zhu, J., Zhou, X., Pan, D., Nan, S., Yin, R., Lei, Q., Ma, N., Zhu, H., Chen, J., Han, L., Ding, M., & Ding, Y. (2022). Polystyrene micro- and nano-particle coexposure injures fetal thalamus by inducing ROS-mediated cell apoptosis. *Environment international*, 166, 107362. <https://doi.org/10.1016/j.envint.2022.107362>
4. Paul, I., Mondal, P., Haldar, D., & Halder, G. (2024). Beyond the cradle - Amidst microplastics and the ongoing peril during pregnancy and neonatal stages: A holistic review. *Journal of hazardous materials*, 469, 133963.  
<https://doi.org/10.1016/j.jhazmat.2024.133963>
  - a. Microplastics present in the placenta, amniotic fluid, and meconium raise concerns about interference with embryonic development and postnatal health
5. Yang, J., Kamstra, J., Legler, J., & Aardema, H. (2023). The impact of microplastics on female reproduction and early life. *Animal reproduction*, 20(2), e20230037.  
<https://doi.org/10.1590/1984-3143-AR2023-0037>
6. Ragusa, A., Svelato, A., Santacroce, C., Catalano, P., Notarstefano, V., Carnevali, O., Papa, F., Rongioletti, M. C. A., Baiocco, F., Draghi, S., D'Amore, E., Rinaldo, D., Matta, M., & Giorgini, E. (2021). Plasticenta: First evidence of microplastics in human placenta. *Environment international*, 146, 106274. <https://doi.org/10.1016/j.envint.2020.106274>
7. Zhang, Y., Tian, L., Chen, J., Liu, X., Li, K., Liu, H., Lai, W., Shi, Y., Lin, B., & Xi, Z. (2024). Selective bioaccumulation of polystyrene nanoplastics in fetal rat brain and

damage to myelin development. *Ecotoxicology and environmental safety*, 278, 116393. <https://doi.org/10.1016/j.ecoenv.2024.116393>

8. Luo, T., Zhang, Y., Wang, C., Wang, X., Zhou, J., Shen, M., Zhao, Y., Fu, Z., & Jin, Y. (2019). Maternal exposure to different sizes of polystyrene microplastics during gestation causes metabolic disorders in their offspring. *Environmental pollution (Barking, Essex : 1987)*, 255(Pt 1), 113122. <https://doi.org/10.1016/j.envpol.2019.113122>
9. Hunt, K., Davies, A., Fraser, A., Burden, C., Howell, A., Buckley, K., Harding, S., & Bakhbakhi, D. (2024). Exposure to microplastics and human reproductive outcomes: A systematic review. *BJOG : an international journal of obstetrics and gynaecology*, 131(5), 675–683. <https://doi.org/10.1111/1471-0528.17756>
  - a. Microplastics have been detected in human placenta and fetal meconium, but their association with adverse fertility or pregnancy outcomes in humans is unknown
10. C M Cary, S B Fournier, S Adams, X Wang, E J Yurkow, P A Stapleton, Single pulmonary nanopolystyrene exposure in late-stage pregnancy dysregulates maternal and fetal cardiovascular function, *Toxicological Sciences*, Volume 199, Issue 1, May 2024, Pages 149–159, <https://doi.org/10.1093/toxsci/kfae019>
11. Fournier, S. B., D'Errico, J. N., Adler, D. S., Kollontzi, S., Goedken, M. J., Fabris, L., Yurkow, E. J., & Stapleton, P. A. (2020). Nanopolystyrene translocation and fetal deposition after acute lung exposure during late-stage pregnancy. *Particle and fibre toxicology*, 17(1), 55. <https://doi.org/10.1186/s12989-020-00385-9>
12. Dubey, I., Khan, S., & Kushwaha, S. (2022). Developmental and reproductive toxic effects of exposure to microplastics: A review of associated signaling pathways. *Frontiers in toxicology*, 4, 901798. <https://doi.org/10.3389/ftox.2022.901798>
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14. Ragusa, A., Matta, M., Cristiano, L., Matassa, R., Battaglione, E., Svelato, A., De Luca, C., D'Avino, S., Gulotta, A., Rongioletti, M. C. A., Catalano, P., Santacroce, C., Notarstefano, V., Carnevali, O., Giorgini, E., Vizza, E., Familiari, G., & Nottola, S. A. (2022). Deeply in Plasticenta: Presence of Microplastics in the Intracellular Compartment of Human Placentas. *International journal of environmental research and public health*, 19(18), 11593. <https://doi.org/10.3390/ijerph191811593>
15. Braun, T., Ehrlich, L., Henrich, W., Koepfel, S., Lomako, I., Schwabl, P., & Liebmann, B. (2021). Detection of Microplastic in Human Placenta and Meconium in a Clinical Setting. *Pharmaceutics*, 13(7), 921. <https://doi.org/10.3390/pharmaceutics13070921>
16. Basak, S., Das, M. K., & Duttaroy, A. K. (2020). Plastics derived endocrine-disrupting compounds and their effects on early development. *Birth defects research*, 112(17), 1308–1325. <https://doi.org/10.1002/bdr2.1741>
17. Duttaroy A. K. (2023). Influence of Maternal Diet and Environmental Factors on Fetal Development. *Nutrients*, 15(19), 4094. <https://doi.org/10.3390/nu15194094>

18. Zhang, Y., Wang, X., Zhao, Y., Zhao, J., Yu, T., Yao, Y., Zhao, R., Yu, R., Liu, J., & Su, J. (2023). Reproductive toxicity of microplastics in female mice and their offspring from induction of oxidative stress. *Environmental pollution (Barking, Essex : 1987)*, 327, 121482. <https://doi.org/10.1016/j.envpol.2023.121482>
19. Xue, J., Xu, Z., Hu, X., Lu, Y., Zhao, Y., & Zhang, H. (2024). Microplastics in maternal amniotic fluid and their associations with gestational age. *The Science of the total environment*, 920, 171044. <https://doi.org/10.1016/j.scitotenv.2024.171044>
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21. Szilagyi, J. T., Avula, V., & Fry, R. C. (2020). Perfluoroalkyl Substances (PFAS) and Their Effects on the Placenta, Pregnancy, and Child Development: a Potential Mechanistic Role for Placental Peroxisome Proliferator-Activated Receptors (PPARs). *Current environmental health reports*, 7(3), 222–230. <https://doi.org/10.1007/s40572-020-00279-0>
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24. Koren, O., Goodrich, J. K., Cullender, T. C., Spor, A., Laitinen, K., Bäckhed, H. K., Gonzalez, A., Werner, J. J., Angenent, L. T., Knight, R., Bäckhed, F., Isolauri, E., Salminen, S., & Ley, R. E. (2012). Host remodeling of the gut microbiome and metabolic changes during pregnancy. *Cell*, 150(3), 470–480. <https://doi.org/10.1016/j.cell.2012.07.008>
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26. Liu, S., Liu, X., Guo, J., Yang, R., Wang, H., Sun, Y., Chen, B., & Dong, R. (2023). The Association Between Microplastics and Microbiota in Placentas and Meconium: The First Evidence in Humans. *Environmental science & technology*, 57(46), 17774–17785. <https://doi.org/10.1021/acs.est.2c04706>
27. Geng, Y., Liu, Z., Hu, R., Huang, Y., Li, F., Ma, W., Wu, X., Dong, H., Song, K., Xu, X., Zhang, Z., & Song, Y. (2023). Toxicity of microplastics and nanoplastics: invisible killers of female fertility and offspring health. *Frontiers in Physiology*, 14.

Articles illustrating the accumulation and effects of microplastics on mice and zebrafish fetuses:

1. Hu, J., Qin, X., Zhang, J., Zhu, Y., Zeng, W., Lin, Y., & Liu, X. (2021). Polystyrene microplastics disturb maternal-fetal immune balance and cause reproductive toxicity in pregnant mice. *Reproductive toxicology (Elmsford, N.Y.)*, 106, 42–50. <https://doi.org/10.1016/j.reprotox.2021.10.002>
2. Katherine C Dibbon, Grace V Mercer, Alexandre S Maekawa, Jenna Hanrahan, Katherine L Steeves, Lauren C M Ringer, André J Simpson, Myrna J Simpson, Ahmet A Baschat, John C Kingdom, Christopher K Macgowan, John G Sled, Karl J Jobst, Lindsay S Cahill, Polystyrene micro- and nanoplastics cause placental dysfunction in mice, *Biology of Reproduction*, Volume 110, Issue 1, January 2024, Pages 211–218, <https://doi.org/10.1093/biolre/ioad126>
3. Huang, W., Mo, J., Li, J., & Wu, K. (2024). Exploring developmental toxicity of microplastics and nanoplastics (MNPS): Insights from investigations using zebrafish embryos. *The Science of the total environment*, 933, 173012. <https://doi.org/10.1016/j.scitotenv.2024.173012>
4. Cary, C. M., DeLoid, G. M., Yang, Z., Bitounis, D., Polunas, M., Goedken, M. J., Buckley, B., Cheatham, B., Stapleton, P. A., & Demokritou, P. (2023). Ingested Polystyrene Nanospheres Translocate to Placenta and Fetal Tissues in Pregnant Rats: Potential Health Implications. *Nanomaterials*, 13(4), 720. <https://doi.org/10.3390/nano13040720>
5. Sökmen, T. Ö., Sulukan, E., Türkoğlu, M., Baran, A., Özkaraça, M., & Ceyhan, S. B. (2020). Polystyrene nanoplastics (20 nm) are able to bioaccumulate and cause oxidative DNA damages in the brain tissue of zebrafish embryo (Danio rerio). *Neurotoxicology*, 77, 51–59. <https://doi.org/10.1016/j.neuro.2019.12.010>