

CHAPTER 8. REFERENCES

- Abd El-Moneam NM, Shreadah MA, El-Assar SA, et al. 2017. Protective role of antioxidants capacity of *Hyrtios aff. Erectus* sponge extract against mixture of persistent organic pollutants (POPs)-induced hepatic toxicity in mice liver: biomarkers and ultrastructural study. *Environ Sci Pollut Res Int* 24(27):22061-22072. <https://doi.org/10.1007/s11356-017-9805-8>.
- Abolhassani M, Asadikaram G, Paydar P, et al. 2019. Organochlorine and organophosphorous pesticides may induce colorectal cancer; A case-control study. *Ecotoxicol Environ Saf* 178:168-177. <https://doi.org/10.1016/j.ecoenv.2019.04.030>.
- Abou Ghayda R, Sergejev O, Burns JS, et al. 2020. Peripubertal serum concentrations of organochlorine pesticides and semen parameters in Russian young men. *Environ Int* 144:106085. <https://doi.org/10.1016/j.envint.2020.106085>.
- Adamski JC, Pugh AL. 1996. Occurrence of pesticides in ground water of the Ozark Plateaus Province. *Water Res Bull* 31:97-105.
- Agrahari A, Singh A, Srivastava A, et al. 2019. Overexpression of cerebral cytochrome P450s in prenatally exposed offspring modify the toxicity of lindane in rechallenged offspring. *Toxicol Appl Pharmacol* 371:20-37. <https://doi.org/10.1016/j.taap.2019.03.022>.
- Ahamed M, Anand M, Kumar A, et al. 2006. Childhood aplastic anaemia in Lucknow, India: incidence, organochlorines in the blood and review of case reports following exposure to pesticides. *Clin Biochem* 39(7):762-766. <https://doi.org/10.1016/j.clinbiochem.2006.03.021>.
- Ahdaya SM, Monroe RJ, Guthrie FE. 1981. Absorption and distribution of intubated insecticides in fasted mice. *Pestic Biochem Physiol* 16:38-46.
- Ahmed FE, Hart RW, Lewis NJ. 1977. Pesticide induced DNA damage and its repair in cultured human cells. *Mutat Res* 42:161-174.
- Ahmed RS, Suke SG, Seth V, et al. 2008. Protective effects of dietary ginger (*Zingiber officinales* Rosc.) on lindane-induced oxidative stress in rats. *Phytother Res* 22(7):902-906. <https://doi.org/10.1002/ptr.2412>.
- Akhlaq M, Gupta AK, Yunus M. 2006. Effect of lindane pretreatment on the onset of acetaminophen induced hepatic damage in the rat. *Chem Environ Res* 15(1-2):93-102.
- Akkina J, Reif J, Keefe T, et al. 2004. Age at natural menopause and exposure to organochlorine pesticides in Hispanic women. *J Toxicol Environ Health A* 67(18):1407-1422. <https://doi.org/10.1080/15287390490483845>.
- Aks SE, Krantz A, Hryhorczuk DO. 1995. Acute accidental lindane ingestion in toddlers. *Ann Emerg Med* 26(5):647-651.
- Akyeampong E, Bend JR, Luginaah I, et al. 2022. Urinary pesticide residual levels and acute respiratory infections in children under 5 years of age: Findings from the Offinso North farm health study. *Environ Health Insights* 16:11786302221094418. <https://doi.org/10.1177/11786302221094418>.
- Alavanja MC, Hofmann JN, Lynch CF, et al. 2014. Non-Hodgkin lymphoma risk and insecticide, fungicide and fumigant use in the agricultural health study. *PLoS One* 9(10):e109332. <https://doi.org/10.1371/journal.pone.0109332>.
- Albertson TE, Joy RM, Stark LG. 1985. Facilitation of kindling in adult rats following neonatal exposure to lindane. *Dev Brain Res* 17:263-266.
- Albro PW, Thomas R. 1974. Intestinal absorption of hexachlorobenzene and hexachlorocyclohexane isomers in rats. *Bull Environ Contam Toxicol* 12:289-294.
- Al-Hussaini TK, Abdelaleem AA, Elnashar I, et al. 2018. The effect of follicular fluid pesticides and polychlorinated biphenyls concentrations on intracytoplasmic sperm injection (ICSI) embryological and clinical outcome. *Eur J Obstet Gynecol Reprod Biol* 220:39-43. <https://doi.org/10.1016/j.ejogrb.2017.11.003>.
- Ali SS, Shakoori AR. 1998. Studies on the toxicity of lindane in albino rat: Histopathological effects in liver. *Punjab Univ J Zool* 13:149-166.

8. REFERENCES

- Ali U, Bajwa A, Iqbal Chaudhry MJ, et al. 2016. Significance of black carbon in the sediment-water partitioning of organochlorine pesticides (OCPs) in the Indus River, Pakistan. *Ecotoxicol Environ Saf* 126:177-185. <https://doi.org/10.1016/j.ecoenv.2015.12.024>.
- Allen RH, Mage DT, Gondy G, et al. 2006. Investigation of job-related pesticide exposure in the third national health and nutrition examination survey. *Arch Environ Occup Health* 61(2):75-86. <https://doi.org/10.3200/AEOH.61.2.75-86>.
- Allsup T, Walsh D. 1982. Gas chromatographic analysis of chlorophenylmercapturic acid lindane metabolites. *J Chromatogr* 236:421-428.
- Alvarado-Hernandez DL, Montero-Montoya R, Serrano-Garcia L, et al. 2013. Assessment of exposure to organochlorine pesticides and levels of DNA damage in mother-infant pairs of an agrarian community. *Environ Mol Mutagen* 54(2):99-111. <https://doi.org/10.1002/em.21753>.
- Alvarez-Pedrerol M, Ribas-Fitó N, Torrent M, et al. 2008a. Thyroid disruption at birth due to prenatal exposure to beta-hexachlorocyclohexane. *Environ Int* 34(6):737-740. <https://doi.org/10.1016/j.envint.2007.12.001>.
- Alvarez-Pedrerol M, Ribas-Fitó N, Torrent M, et al. 2008b. Effects of PCBs, p,p'-DDT, p,p'-DDE, HCB and beta-HCH on thyroid function in preschool children. *Occup Environ Med* 65(7):452-457. <https://doi.org/10.1136/oem.2007.032763>.
- Alvarez-Pedrerol M, Guxens M, Ibarluzea J, et al. 2009. Organochlorine compounds, iodine intake, and thyroid hormone levels during pregnancy. *Environ Sci Technol* 43(20):7909-7915. <https://doi.org/10.1021/es9007273>.
- Amyes SJ. 1990. Lindane: Combined oncogenicity and toxicity study by dietary administration to Wistar rats for 104 weeks. Suffolk, England: Life Science Research Limited. LSR Report No. 90/CIL002/0839.
- Anand M, Taneja A. 2020. Organochlorine pesticides residue in placenta and their influence on anthropometric measures of infants. *Environ Res* 182:109106. <https://doi.org/10.1016/j.envres.2019.109106>.
- Anand M, Gupta GSD, Gopal K, et al. 1991. Influence of dietary protein deficiency on EEG neurotransmitters and neurobehavior after chronic exposure to HCH. *Toxicol Environ Chem* 34:1-11. <https://doi.org/10.1080/02772249109357770>.
- Anand M, Meera P, Kumar R, et al. 1995. Possible role of calcium in the cardiovascular effects of prolonged administration of gamma-HCH (lindane) in rats. *J Appl Toxicol* 15(4):245-248. <https://doi.org/10.1002/jat.2550150403>.
- Anand M, Singh L, Agarwal P, et al. 2019. Pesticides exposure through environment and risk of pre-term birth: a study from Agra city. *Drug Chem Toxicol* 42(5):471-477. <https://doi.org/10.1080/01480545.2017.1413107>.
- Andersen ME, Krishnan K. 1994. Relating in vitro to in vivo exposures with physiologically based tissue dosimetry and tissue response models. In: Salem H, ed. *Animal test alternatives: Refinement, reduction, replacement*. New York, NY: Marcel Dekker, Inc., 9-25.
- Andrews JE, Gray LE. 1990. The effects of lindane and linuron on calcium metabolism, bone morphometry and the kidney in rats. *Toxicology* 60:99-107. [https://doi.org/10.1016/0300-483X\(90\)90165-D](https://doi.org/10.1016/0300-483X(90)90165-D).
- Angerer J, Heinrich R, Laudehr H. 1981. Occupational exposure to hexachlorocyclohexane. V. Gas chromatographic determination of monohydroxychlorobenzenes (chlorophenols) in urine. *Int Arch Occup Environ Health* 48:319-324.
- Angerer J, Maass R, Heinrich R. 1983. Occupational exposure to hexachlorocyclohexane. VI. Metabolism of g-hexachlorocyclohexane in man. *Int Arch Occup Environ Health* 52:59-67.
- Angsubhakorn S, Bhamarapavati N, Romruen K, et al. 1981. Further study of α -benzene hexachloride inhibition of aflatoxin B1 hepatocarcinogenesis in rats. *Br J Cancer* 43:881-883.
- Anilakumar KR, Saritha V, Khanum F, et al. 2009. Ameliorative effect of ajwain extract on hexachlorocyclohexane-induced lipid peroxidation in rat liver. *Food Chem Toxicol* 47(2):279-282. <https://doi.org/10.1016/j.fct.2008.09.061>.

8. REFERENCES

- Appenzeller BMR, Hardy EM, Grova N, et al. 2017. Hair analysis for the biomonitoring of pesticide exposure: comparison with blood and urine in a rat model. *Arch Toxicol* 91(8):2813-2825. <https://doi.org/10.1007/s00204-016-1910-9>.
- Arguin H, Sanchez M, Bray GA, et al. 2010. Impact of adopting a vegan diet or an olestra supplementation on plasma organochlorine concentrations: results from two pilot studies. *Br J Nutr* 103(10):1433-1441. <https://doi.org/10.1017/S000711450999331X>.
- Arisi ACM, Simizu K, Kogake M, et al. 1994. Brain and liver lipid peroxidation levels following acute and short-term lindane administration in the rat. *Toxicology Letters* 74:61-68. [https://doi.org/10.1016/0378-4274\(94\)90074-4](https://doi.org/10.1016/0378-4274(94)90074-4).
- Aronson KJ, Wilson JW, Hamel M, et al. 2010. Plasma organochlorine levels and prostate cancer risk. *J Expo Sci Environ Epidemiol* 20(5):434-445. <https://doi.org/10.1038/jes.2009.33>.
- Arrebola JP, Pumarega J, Gasull M, et al. 2013. Adipose tissue concentrations of persistent organic pollutants and prevalence of type 2 diabetes in adults from Southern Spain. *Environ Res* 122:31-37. <https://doi.org/10.1016/j.envres.2012.12.001>.
- Arrebola JP, Ocaña-Riola R, Arrebola-Moreno AL, et al. 2014. Associations of accumulated exposure to persistent organic pollutants with serum lipids and obesity in an adult cohort from Southern Spain. *Environ Pollut* 195:9-15. <https://doi.org/10.1016/j.envpol.2014.08.003>.
- Arrebola JP, Belhassen H, Artacho-Cordon F, et al. 2015a. Risk of female breast cancer and serum concentrations of organochlorine pesticides and polychlorinated biphenyls: a case-control study in Tunisia. *Sci Total Environ* 520:106-113. <https://doi.org/10.1016/j.scitotenv.2015.03.045>.
- Arrebola JP, Fernandez MF, Martin-Olmedo P, et al. 2015b. Historical exposure to persistent organic pollutants and risk of incident hypertension. *Environ Res* 138:217-223. <https://doi.org/10.1016/j.envres.2015.02.018>.
- Arrebola JP, Ramos JJ, Bartolomé M, et al. 2019. Associations of multiple exposures to persistent toxic substances with the risk of hyperuricemia and subclinical uric acid levels in BIOAMBIENT.ES study. *Environ Int* 123:512-521. <https://doi.org/10.1016/j.envint.2018.12.030>.
- Atkins DHF, Eggleton AEJ. 1971. Studies of atmospheric washout and deposition of γ -HHC, dieldrin, and p,p-DDT using radiolabelled pesticides. In: *Nuclear techniques in environmental pollution: Proceedings of a symposium on use of nuclear techniques in the measurement and control of environmental pollution held by the International Atomic Energy Agency in Salzburg, 26-30 October 1970*. Vienna: International Atomic Energy Agency, 521-533.
- Atlas E, Giam CS. 1988. Ambient concentrations and precipitation scavenging of atmospheric organic pollutants. *Water Air Soil Pollut* 38:19-36.
- ATSDR. 1989. Decision guide for identifying substance-specific data needs related to toxicological profiles; Notice. Agency for Toxic Substances and Disease Registry. *Federal Register* 54(174):37618-37634.
- ATSDR. 2018. Draft guidance for the preparation of toxicological profiles. Agency for Toxic Substances and Disease Registry. https://www.atsdr.cdc.gov/toxprofiles/guidance/profile_development_guidance.pdf. September 29, 2022.
- ATSDR. 2022. Hexachlorocyclohexanes. Full SPL data. Substance priority list (SPL) resource page. Agency for Toxic Substances and Disease Registry. <https://www.atsdr.cdc.gov/spl/resources/index.html>. July 6, 2023.
- Attia AM, Richardson BA, Rodriguez C, et al. 1991. Lindane may enhance nocturnal pineal N-acetyltransferase activity via β -adrenergic receptors. *Brain Res* 554(1-2):253-256. [https://doi.org/10.1016/0006-8993\(91\)90197-4](https://doi.org/10.1016/0006-8993(91)90197-4).
- Attia AM, El-Banna SG, Nomeir FR, et al. 2011. Lindane-induced biochemical perturbations in rat serum and attenuation by omega-3 and *Nigella sativa* seed oil. *Indian J Biochem Biophys* 48(3):184-190.

8. REFERENCES

- Aulakh RS, Bedi JS, Gill JP, et al. 2007. Occurrence of DDT and HCH insecticide residues in human biopsy adipose tissues in Punjab, India. *Bull Environ Contam Toxicol* 78(5):330-334. <https://doi.org/10.1007/s00128-007-9187-6>.
- Baker MT, Nelson RM, Van DR. 1985. The formation of chlorobenzene and benzene by the reductive metabolism of lindane in rat liver microsomes. *Arch Biochem Biophys* 236:506-514.
- Band PR, Abanto Z, Bert J, et al. 2011. Prostate cancer risk and exposure to pesticides in British Columbia farmers. *Prostate* 71(2):168-183. <https://doi.org/10.1002/pros.21232>.
- Banerjee BD, Koner BC, Ray A, et al. 1996. Influence of subchronic exposure to lindane on humoral immunity in mice. *Indian J Exp Biol* 34(11):1109-1113.
- Barnes DG, Dourson M. 1988. Reference dose (RfD): Description and use in health risk assessments. *Regul Toxicol Pharmacol* 8:471-486.
- Barros SB, Simizu K, Junqueira VB. 1991. Liver lipid peroxidation-related parameters after short-term administration of hexachlorocyclohexane isomers to rats. *Toxicology Letters* 56:137-144.
- Barry KH, Koutros S, Berndt SI, et al. 2011. Genetic variation in base excision repair pathway genes, pesticide exposure, and prostate cancer risk. *Environ Health Perspect* 119(12):1726-1732. <https://doi.org/10.1289/ehp.1103454>.
- Bashir S, Hitzfeld KL, Gehre M, et al. 2015. Evaluating degradation of hexachlorocyclohexane (HCH) isomers within a contaminated aquifer using compound-specific stable carbon isotope analysis (CSIA). *Water Res* 71:187-196. <https://doi.org/10.1016/j.watres.2014.12.033>.
- Bassig BA, Shu XO, Sjodin A, et al. 2020. Prediagnostic blood levels of organochlorines and risk of non-Hodgkin lymphoma in three prospective cohorts in China and Singapore. *Int J Cancer* 146(3):839-849. <https://doi.org/10.1002/ijc.32350>.
- Baumann K, Angerer J, Heinrich R, et al. 1980. Occupational exposure to hexachlorocyclohexane. I. Body burden of HCH-isomers. *Int Arch Occup Health* 47:119-127.
- Beard AP, Rawlings NC. 1998. Reproductive effects in mink (*Mustela vison*) exposed to the pesticides lindane, carbofuran and pentachlorophenol in a multigenerational study. *J Reprod Fertil* 113:93-104. <https://doi.org/10.1530/jrf.0.1130095>.
- Beard AP, Rawlings NC. 1999. Thyroid function and effects on reproduction in ewes exposed to the organochlorine pesticides lindane or pentachlorophenol (PCP) from conception. *J Toxicol Environ Health A* 58:509-530.
- Beard AP, McRae AC, Rawlings NC. 1997. Reproductive efficiency in mink (*Mustela vison*) treated with the pesticides lindane, carbofuran and pentachlorophenol. *J Reprod Fertil* 111:21-28. <https://doi.org/10.1530/jrf.0.1110021>.
- Beard AP, Bartlewski PM, Chandolia RK, et al. 1999a. Reproductive and endocrine function in rams exposed to the organochlorine pesticides lindane and pentachlorophenol from conception. *J Reprod Fertil* 115:303-314.
- Beard AP, Bartlewski PM, Rawlings NC. 1999b. Endocrine and reproductive function in ewes exposed to the organochlorine pesticides lindane or pentachlorophenol. *Journal of Toxicology and Environmental Health* 56(1):23-46. <https://doi.org/10.1080/009841099158213>.
- Bedi JS, Gill JP, Aulakh RS, et al. 2013. Pesticide residues in human breast milk: risk assessment for infants from Punjab, India. *Sci Total Environ* 463-464:720-726. <https://doi.org/10.1016/j.scitotenv.2013.06.066>.
- Bemy PJ, Veniat A, Mazallon M. 2003. Bioaccumulation of lead, cadmium, and lindane in zebra mussels (*Dreissena polymorpha*) and associated risk for bioconcentration in tufted duck (*Aythya fuligula*). *Bull Environ Contam Toxicol* 71(1):90-97. <https://doi.org/10.1007/s00128-003-0135-9>.
- Benjamin N, Kushwah A, Sharma RK, et al. 2006. Histopathological changes in liver, kidney and muscles of pesticides exposed malnourished and diabetic rats. *Indian J Exp Biol* 44(3):228-232.
- Berg GL. 1988. Lindane. In: *Farm chemicals handbook*. Willoughby, OH: Meister Publishing Co.,
- Berg V, Charles D, Bergdahl IA, et al. 2021. Pre- and post-diagnostic blood profiles of chlorinated persistent organic pollutants and metabolic markers in type 2 diabetes mellitus cases and controls; a pilot study. *Environ Res* 195:110846. <https://doi.org/10.1016/j.envres.2021.110846>.

8. REFERENCES

- Berny P, Lachaux O, Buronfosse T, et al. 2002. Zebra mussels (*Dreissena polymorpha*) as indicators of freshwater contamination with lindane. *Environ Res* 90(2):142-151. <https://doi.org/10.1006/enrs.2002.4371>.
- Berry DH, Brewster MA, Watson R, et al. 1987. Untoward effects associated with lindane abuse [letter]. *Am J Dis Child* 141:125-126.
- Bessar BAA, Korany K, Szabo AS. 1991. Effect of home preparative procedures and technological processes on lindane residues in tomato. *Acta Aliment* 20:25-30.
- Bevenue A, Hylin JW, Kawano Y, et al. 1972. Pesticides in water: Organochlorine pesticide residues in water, sediment, algae and fish: Hawaii 1970-1971. *Pestic Monit J* 6:56-72.
- Bhalla M, Thami GP. 2004. Reversible neurotoxicity after an overdose of topical lindane in an infant. *Pediatr Dermatol* 21(5):597-599. <https://doi.org/10.1111/j.0736-8046.2004.21515.x>.
- Bhatt DK, Bano M. 2009. Modulation of tricarboxylic acid cycle dehydrogenases during hepatocarcinogenesis induced by hexachlorocyclohexane in mice. *Exp Toxicol Pathol* 61(4):325-332. <https://doi.org/10.1016/j.etp.2008.09.004>.
- Bhatt DK, Nagda G. 2012. Modulation of acid phosphatase and lactic dehydrogenase in hexachlorocyclohexane-induced hepatocarcinogenesis in mice. *J Biochem Mol Toxicol* 26(11):439-444. <https://doi.org/10.1002/jbt.21441>.
- Biberhofer J, Stevens RJJ. 1987. Organochlorine contaminants in ambient waters of Lake Ontario. Environment Canada, Inland Waters/Lands Director Scientific Series No. 159.
- Boffa MJ, Brough PA, Ead RD. 1995. Lindane neurotoxicity. *Br J Dermatol* 133(6):1013.
- Boll M, Weber LW, Stampfl A. 1995. The effect of γ -hexachlorocyclohexane (lindane) on the activities of liver lipogenic enzymes and on serum lipids in rats. *Z Naturforsch C J Biosci* 50(1-2):135-142. <https://doi.org/10.1515/znc-1995-1-220>.
- Bosch AL. 1987a. Dermal absorption of ¹⁴C-lindane in male rats. Madison, WI: Hazelton Laboratories America, Inc. HLA Study No. 6188-103.
- Bosch AL. 1987b. Dermal absorption of ¹⁴C-lindane in male rabbits. Madison, WI: Hazelton Laboratories America, Inc. HLA Study No. 6188-104.
- Bradman AS, Schwartz JM, Fenster L, et al. 2007. Factors predicting organochlorine pesticide levels in pregnant Latina women living in a United States agricultural area. *J Expo Sci Environ Epidemiol* 17(4):388-399. <https://doi.org/10.1038/sj.jes.7500525>.
- Brannen KC, Devaud LL, Liu J. 1998. Prenatal exposure to neurotoxicants dieldrin or lindane alters tert-butylbicyclophosphorothionate binding to GABA(A) receptors in fetal rat brainstem. *Dev Neurosci* 20:34-41.
- Brassow HL, Baumann K, Lehnert G. 1981. Occupational exposure to hexachlorocyclohexane. II. Health conditions of chronically exposed workers. *Int Arch Occup Environ Health* 48:81-87.
- Braun JM, Kalkbrenner AE, Just AC, et al. 2014. Gestational exposure to endocrine-disrupting chemicals and reciprocal social, repetitive, and stereotypic behaviors in 4- and 5-year-old children: the HOME study. *Environ Health Perspect* 122(5):513-520. <https://doi.org/10.1289/ehp.1307261>.
- Brauner EV, Sorensen M, Gaudreau E, et al. 2012. A prospective study of organochlorines in adipose tissue and risk of non-Hodgkin lymphoma. *Environ Health Perspect* 120(1):105-111. <https://doi.org/10.1289/ehp.1103573>.
- Bravo N, Grimalt JO, Chashchin M, et al. 2019. Drivers of maternal accumulation of organohalogen pollutants in Arctic areas (Chukotka, Russia) and 4,4'-DDT effects on the newborns. *Environ Int* 124:541-552. <https://doi.org/10.1016/j.envint.2019.01.049>.
- Breton P, Bouvet S, Delamanche I, et al. 2005. Electrocardiogram disturbances detected in rats exposed from early stages of life to residual doses of lindane. *Pesticide Biochemistry and Physiology* 81(2):97-104. <https://doi.org/10.1016/j.pestbp.2004.10.001>.
- Brubaker WW, Hites RA. 1998. Gas-phase oxidation products of biphenyl and polychlorinated biphenyls. *Environ Sci Technol* 32:3913-3918.

8. REFERENCES

- Buck Louis GM, Chen Z, Peterson CM, et al. 2012. Persistent lipophilic environmental chemicals and endometriosis: the ENDO Study. *Environ Health Perspect* 120(6):811-816. <https://doi.org/10.1289/ehp.1104432>.
- Budavari S, O'Neil MJ, Smith A, et al. 1989. Lindane. In: *The Merck index*. Rahway, NJ: Merck & Co., Inc, 866-867.
- Burns JS, Williams PL, Korrick SA, et al. 2014. Association between chlorinated pesticides in the serum of prepubertal Russian boys and longitudinal biomarkers of metabolic function. *Am J Epidemiol* 180(9):909-919. <https://doi.org/10.1093/aje/kwu212>.
- Butte W, Fox K, Zauke GP. 1991. Kinetics of bioaccumulation and clearance of isomeric hexachlorocyclohexanes. *Sci Total Environ* 109-110:377-382.
- Callan AC, Hinwood AL, Heyworth J, et al. 2016. Sex specific influence on the relationship between maternal exposures to persistent chemicals and birth outcomes. *International Journal of Hygiene and Environmental Health* 219(8):734-741. <https://doi.org/10.1016/j.ijheh.2016.09.018>.
- Cantor KP, Strickland PT, Brock JW, et al. 2003. Risk of non-Hodgkin's lymphoma and prediagnostic serum organochlorines: β -hexachlorocyclohexane, chlordane/heptachlor-related compounds, dieldrin, and hexachlorobenzene. *Environ Health Perspect* 111(2):179-183. <https://doi.org/10.1289/ehp.4347>.
- Capt A, Luzy AP, Esdaile D, et al. 2007. Comparison of the human skin grafted onto nude mouse model with in vivo and in vitro models in the prediction of percutaneous penetration of three lipophilic pesticides. *Regul Toxicol Pharmacol* 47(3):274-287. <https://doi.org/10.1016/j.yrtph.2006.11.008>.
- Caquet T, Thybaud E, Lebras S, et al. 1992. Fate and biological effects of lindane and deltamethrin in fresh-water mesocosms. *Aquat Toxicol* 23:261-278.
- CDC. 2005. Unintentional topic lindane ingestions - United States, 1998-2003. Centers for Disease Control and Prevention. *MMWR Rep* 54(21):533-535.
- CDC. 2019. Fourth national report on human exposure to environmental chemicals, updated tables. January 2019. Centers for Disease Control and Prevention. <https://www.cdc.gov/exposurereport/>. December 11, 2019.
- Cerón JJ, Panizo CG, Montes A. 1995. Toxicological effects in rabbits induced by endosulfan, lindane, and methylparathion representing agricultural byproducts contamination. *Bull Environ Contam Toxicol* 54:258-265.
- Chadwick RW, Freal JJ. 1972a. The identification of five unreported lindane metabolites recovered from rat urine. *Bull Environ Contam Toxicol* 7:137-146.
- Chadwick RW, Freal JJ. 1972b. Comparative acceleration of lindane metabolism to chlorophenols by pretreatment of rats with lindane or with DDT and lindane. *Food Cosmet Toxicol* 10:789-795.
- Chadwick R, Peoples A, Cranmer M. 1972. The effect of ascorbic acid deficiency and protein quality on stimulation of hepatic microsomal enzymes in guinea pigs. *Toxicol Appl Pharmacol* 22:308-309.
- Chadwick RW, Copeland MF, Chadwick C. 1978a. Enhanced pesticide metabolism: A previously unreported effect of dietary fibre in mammals. *Food Cosmet Toxicol* 16:217-225.
- Chadwick RW, Faeder EJ, King LC, et al. 1978b. Effect of acute and chronic Cd exposure on lindane metabolism. *Ecotoxicol Environ Saf* 2:301-316.
- Chadwick RW, Freal JJ, Sovocool GW, et al. 1978c. The identification of three previously unreported lindane metabolites from mammals. *Chemosphere* 8:633-640.
- Chadwick RW, Copeland MF, Mole ML, et al. 1981. Comparative effect of pretreatment with phenobarbital, Aroclor 1254, and β -naphthoflavone on the metabolism of lindane. *Pestic Biochem Physiol* 15:120-136.
- Chadwick RW, Copeland MF, Wolff GL, et al. 1985. Effects of age and obesity on the metabolism of lindane by black a/a, yellow A^{vy}/a, and pseudoagouti A^{vy}/a phenotypes of (YS x VY) F₁ hybrid mice. *J Toxicol Environ Health* 16:771-796.
- Chadwick RW, Cooper RL, Chang J, et al. 1988. Possible antiestrogenic activity of lindane in female rats. *J Biochem Toxicol* 3:147-158. <https://doi.org/10.1002/jbt.2570030303>.

8. REFERENCES

- Chand B, Ramachandran M. 1980. Effect of dietary hexachlorocyclohexane on certain biochemical changes in albino rat. *Indian J Exp Biol* 18:735-736.
- Charles D, Berg V, Nost TH, et al. 2022. Longitudinal changes in concentrations of persistent organic pollutants (1986-2016) and their associations with type 2 diabetes mellitus. *Environ Res* 204(Pt B):112129. <https://doi.org/10.1016/j.envres.2021.112129>.
- Chartrand M, Passeport E, Rose C, et al. 2015. Compound specific isotope analysis of hexachlorocyclohexane isomers: a method for source fingerprinting and field investigation of in situ biodegradation. *Rapid Commun Mass Spectrom* 29(6):505-514. <https://doi.org/10.1002/rcm.7146>.
- Chen ZM, Zabik MJ, Leavitt RA. 1984. Comparative study of thin film photodegradative rates for 36 pesticides. *Ind Eng Chem Prod Res Dev* 23:5-11.
- Chen Z, Zhao Y, Guo T, et al. 2013. Accumulation and phytoavailability of hexachlorocyclohexane isomers and cadmium in *Allium sativum* L. under the stress of hexachlorocyclohexane and cadmium. *Bull Environ Contam Toxicol* 90(2):182-187. <https://doi.org/10.1007/s00128-012-0882-6>.
- Chen MW, Santos HM, Que DE, et al. 2018. Association between organochlorine pesticide levels in breast milk and their effects on female reproduction in a Taiwanese population. *Int J Environ Res Public Health* 15(5):931. <https://doi.org/10.3390/ijerph15050931>.
- Cheslack-Postava K, Rantakokko P, Kiviranta H, et al. 2022. Maternal serum persistent organic pollutant exposure and offspring diagnosed ADHD in a national birth cohort. *Environ Res* 212(Pt A):113145. <https://doi.org/10.1016/j.envres.2022.113145>.
- Chiou CT, McGroddy SE, Kile DE. 1998. Partition characteristics of polycyclic aromatic hydrocarbons on soils and sediments. *Environ Sci Technol* 32:264-269.
- Cifone MA. 1990. Lindane (technical): In the in vitro rat primary hepatocyte unscheduled DNA synthesis assay. Kensington, MD: Hazelton Laboratories America, Inc. HLA Study No. 12024-0-447.
- Clark DE, Smalley HE, Crookshank HR, et al. 1974. Residues in food and feed: Chlorinated hydrocarbon insecticide residues in feed and carcasses of feedlot cattle, Texas-1972. *Pestic Monit J* 8:180-183.
- Clayton G, Clayton F, eds. 1981. Hexachlorocyclohexane. In: *Patty's industrial hygiene and toxicology*. Vol. IIB. 3rd ed. New York, NY: John Wiley & Sons, 3740-3749.
- Clewell HJ. 1995. The application of physiologically based pharmacokinetic modeling in human health risk assessment of hazardous substances. *Toxicol Lett* 79(1-3):207-217. [https://doi.org/10.1016/0378-4274\(95\)03372-r](https://doi.org/10.1016/0378-4274(95)03372-r).
- Clewell HJ, Andersen ME. 1985. Risk assessment extrapolations and physiological modeling. *Toxicol Ind Health* 1(4):111-131.
- Cocco P, Brennan P, Ibba A, et al. 2008. Plasma polychlorobiphenyl and organochlorine pesticide level and risk of major lymphoma subtypes. *Occup Environ Med* 65(2):132-140. <https://doi.org/10.1136/oem.2007.033548>.
- Cole RH, Frederick RE, Healy RP, et al. 1984. Preliminary findings of the priority pollutant monitoring project of the nationwide urban runoff program. *J Water Pollut Control Fed* 56:898-908.
- Conley BE. 1952. Health hazards of electric vaporizing devices for insecticides. *JAMA* 149:367-369.
- Cornacoff JB, Lauer LD, House RV, et al. 1988. Evaluation of the immunotoxicity of β -hexachlorocyclohexane (β -HCH). *Fundam Appl Toxicol* 11(2):293-299. [https://doi.org/10.1016/0272-0590\(88\)90154-6](https://doi.org/10.1016/0272-0590(88)90154-6).
- Cortes DR, Hites RA. 2000. Detection of statistically significant trends in atmospheric concentrations of semivolatile compounds. *Environ Sci Technol* 34:2826-2829.
- Crockett AB, Wiersma GB, Tai H, et al. 1974. Pesticides in soil: Pesticide residue levels in soils and crops, FY-70 - National Soils Monitoring Program (II). *Pestic Monit J* 8:69-97.
- Cupul-Uicab LA, Klebanoff MA, Brock JW, et al. 2013. Prenatal exposure to persistent organochlorines and childhood obesity in the U.S. collaborative perinatal project. *Environ Health Perspect* 121(9):1103-1109. <https://doi.org/10.1289/ehp.1205901>.

8. REFERENCES

- Curren MS, Davis K, Liang CL, et al. 2014. Comparing plasma concentrations of persistent organic pollutants and metals in primiparous women from northern and southern Canada. *Sci Total Environ* 479-480:306-318. <https://doi.org/10.1016/j.scitotenv.2014.01.017>.
- Currie RA, Kadis VW, Breitzkreitz WE, et al. 1979. Pesticide residues in human milk, Alberta, Canada - 1966-1970, 1977-1978. *Pestic Monit J* 13:52-55.
- Czeglédi-Jankó G, Avar P. 1970. Occupational exposure to lindane: Clinical and laboratory findings. *Br J Ind Med* 27:283-286.
- Dallaire R, Dewailly E, Pereg D, et al. 2009. Thyroid function and plasma concentrations of polyhalogenated compounds in Inuit adults. *Environ Health Perspect* 117(9):1380-1386. <https://doi.org/10.1289/ehp.0900633>.
- Dalsenter PR, Faqi AS, Webb J, et al. 1996. Reproductive toxicity and tissue concentrations of lindane in adult male rats. *Hum Exp Toxicol* 15(5):406-410. <https://doi.org/10.1177/096032719601500508>.
- Dalsenter PR, Faqi AS, Chahoud I. 1997a. Serum testosterone and sexual behavior in rats after prenatal exposure to lindane. *Bull Environ Contam Toxicol* 59(3):360-366. <https://doi.org/10.1007/s001289900486>.
- Dalsenter PR, Faqi AS, Webb J, et al. 1997b. Reproductive toxicity and toxicokinetics of lindane in the male offspring of rats exposed during lactation. *Hum Exp Toxicol* 16(3):146-153. <https://doi.org/10.1177/096032719701600303>.
- Dang VD, Kroll KJ, Supowit SD, et al. 2016. Tissue distribution of organochlorine pesticides in largemouth bass (*Micropterus salmoides*) from laboratory exposure and a contaminated lake. *Environ Pollut* 216:877-883. <https://doi.org/10.1016/j.envpol.2016.06.061>.
- Daniels SI, Chambers JC, Sanchez SS, et al. 2018. Elevated levels of organochlorine pesticides in South Asian immigrants are associated with an increased risk of diabetes. *J Endocr Soc* 2(8):832-841. <https://doi.org/10.1210/js.2017-00480>.
- Danopoulos E, Melissinos K, Katsas G. 1953. Serious poisoning by hexachlorocyclohexane. *Arch Ind Hyg* 8:582-587.
- Daud Y, Rehman D, Farooq U. 2010. Lindane toxicity in a 7 year old boy. *J Ayub Med Coll Abbottabad* 22(4):223.
- Davies JE, Dedhia H, Morgade C, et al. 1983. Lindane poisonings. *Arch Dermatol* 119:142-144.
- Davis JR, Brownson RC, Garcia R. 1992. Family pesticide use in the home, garden, orchard, and yard. *Arch Environ Contam Toxicol* 22:260-266.
- De Roos AJ, Schinasi LH, Miligi L, et al. 2021. Occupational insecticide exposure and risk of non-Hodgkin lymphoma: A pooled case-control study from the InterLymph Consortium. *Int J Cancer* 149(10):1768-1786. <https://doi.org/10.1002/ijc.33740>.
- Debost-Légrand A, Warembourg C, Massart C, et al. 2016. Prenatal exposure to persistent organic pollutants and organophosphate pesticides, and markers of glucose metabolism at birth. *Environ Res* 146:207-217. <https://doi.org/10.1016/j.envres.2016.01.005>.
- DeJongh J, Blaauboer BJ. 1997. Simulation of lindane kinetics in rats. *Toxicology* 122:1-9.
- Desalegn AA, Iszatt N, Stigum H, et al. 2021. A case-cohort study of perinatal exposure to potential endocrine disrupters and the risk of cryptorchidism in the Norwegian HUMIS study. *Environ Int* 157:106815. <https://doi.org/10.1016/j.envint.2021.106815>.
- Desi I. 1974. Neurotoxicological effect of small quantities of lindane. Animal studies. *Int Arch Arbeitsmed* 33(2):153-162. <https://doi.org/10.1007/BF00538999>.
- Desi I, Varga L, Farkas I. 1978. Studies on the immunosuppressive effect of organochlorine and organophosphoric pesticides in subacute experiments. *J Hyg Epidemiol Microbiol Immunol* 22(1):115-122.
- Dewan A, Gupta SK, Jani JP, et al. 1980. Effect of lindane on antibody response to typhoid vaccine in weanling rats. *J Environ Sci Health B* 15(4):395-402. <https://doi.org/10.1080/03601238009372191>.
- Dewan P, Jain V, Gupta P, et al. 2013. Organochlorine pesticide residues in maternal blood, cord blood, placenta, and breastmilk and their relation to birth size. *Chemosphere* 90(5):1704-1710. <https://doi.org/10.1016/j.chemosphere.2012.09.083>.

8. REFERENCES

- Deziel NC, Warren JL, Huang H, et al. 2021. Exposure to polychlorinated biphenyls and organochlorine pesticides and thyroid cancer in Connecticut women. *Environ Res* 192:110333. <https://doi.org/10.1016/j.envres.2020.110333>.
- Di Consiglio E, De Angelis G, Traina ME, et al. 2009. Effect of lindane on CYP-mediated steroid hormone metabolism in male mice following in utero exposure. *J Appl Toxicol* 29(8):648-655. <https://doi.org/10.1002/jat.1452>.
- Dick IP, Blain PG, Williams FM. 1997a. The percutaneous absorption and skin distribution of lindane in man. I. In vivo studies. *Hum Exp Toxicol* 16:645-651.
- Dick IP, Blain PG, Williams FM. 1997b. The percutaneous absorption and skin distribution of lindane in man. II. In vitro studies. *Hum Exp Toxicol* 16:652-657.
- Dietrich DR, Swenberg JA. 1990. Lindane induces nephropathy and renal accumulation of $\alpha_2\mu$ - globulin in male but not in female Fischer 344 rats or male NBR rats. *Toxicology Letters* 53:179-181.
- Dietrich DR, Swenberg JA. 1991. NCI-Black-Reiter (NBR) male rats fail to develop renal disease following exposure to agents that induce $\alpha_2\mu$ -globulin ($\alpha_2\mu$) nephropathy. *Fundam Appl Toxicol* 16:749-762.
- Dikshith TSS, Chandra P, Datta KK. 1973. Effect of lindane on the skin of albino rats. *Experientia* 29(6):684-685. <https://doi.org/10.1007/BF01944772>.
- Dikshith TSS, Datta KK, Kushwah HS, et al. 1978. Histopathological and biochemical changes in guinea pigs after repeated dermal exposure to benzene hexachloride. *Toxicology* 10:55-66. [https://doi.org/10.1016/0300-483X\(78\)90055-0](https://doi.org/10.1016/0300-483X(78)90055-0).
- Dikshith TSS, Carrera G, Raizada RB, et al. 1989a. Interaction of hexachlorocyclohexane (HCH) and chlorpropham (CIPC) in male rats. *Toxicology Letters* 45:281-288. [https://doi.org/10.1016/0378-4274\(89\)90019-2](https://doi.org/10.1016/0378-4274(89)90019-2).
- Dikshith TSS, Raizada RB, Srivastava MK, et al. 1989b. Dermal toxicity of hexachlorocyclohexane (HCH) in rabbit. *Indian J Exp Biol* 27(3):252-257.
- Dikshith TS, Srivastava MK, Raizada RB. 1990. Fetotoxicity of hexachlorocyclohexane (HCH) in mice: Morphological, biochemical and residue evaluations. *Vet Hum Toxicol* 32(6):524-527.
- Dikshith TSS, Raizada RB, Srivastava MK. 1991a. Long-term dietary study and development of no-observed-effect level (NOEL) of technical hexachlorocyclohexane to rats. *J Toxicol Environ Health* 34:495-507. <https://doi.org/10.1080/15287399109531585>.
- Dikshith TS, Srivastava MK, Raizada RB. 1991b. Response of young rats to repeated oral administration of technical hexachlorocyclohexane. *Vet Hum Toxicol* 33(3):235-237.
- Dikshith TS, Raizada RB, Singh V, et al. 1991c. Repeated dermal toxicity of technical HCH and methyl parathion (50EC) to female rats (*Rattus norvegicus*). *Indian J Exp Biol* 29(2):149-155.
- Dimitriadou L, Malarvannan G, Covaci A, et al. 2016. Levels and profiles of brominated and chlorinated contaminants in human breast milk from Thessaloniki, Greece. *Sci Total Environ* 539:350-358. <https://doi.org/10.1016/j.scitotenv.2015.08.137>.
- Doan TQ, Berntsen HF, Verhaegen S, et al. 2019. A mixture of persistent organic pollutants relevant for human exposure inhibits the transactivation activity of the aryl hydrocarbon receptor in vitro. *Environ Pollut* 254(Pt B):113098. <https://doi.org/10.1016/j.envpol.2019.113098>.
- DOE. 2016. Lindane; (gamma-Benzenhexachloride); includes the isomers (319-84-6, 319-85-7, 608-73-1). PAC Database. U.S. Department of Energy. <https://pacteels.pnnl.gov/>. July 16, 2023.
- DOE. 2022. DOE-HDBK-1046-2016 (reaffirmed 2022), temporary emergency exposure limits for chemicals: methods and practice. U.S. Department of Energy. <https://www.standards.doe.gov/standards-documents/1000/1046-Bhdbk-2016-reaff-2022/@@images/file>. July 16, 2023.
- Dorfler U, Schneider P, Scheunert I. 1991a. Volatilization rates of pesticides from soil and plant surfaces under controlled conditions. *Toxicol Environ Chem* 31-32:87-95.
- Dorfler U, Adler-Koehler R, Schneider P, et al. 1991b. A laboratory model system for determining the volatility of pesticides from soil and plant surfaces. *Chemosphere* 23:485-496.

8. REFERENCES

- Drysdale M, Ratelle M, Skinner K, et al. 2021. Human biomonitoring results of contaminant and nutrient biomarkers in Old Crow, Yukon, Canada. *Sci Total Environ* 760:143339. <https://doi.org/10.1016/j.scitotenv.2020.143339>.
- Duff RM, Kissel JC. 1996. Effect of soil loading on dermal absorption efficiency from contaminated soil. *J Toxicol Environ Health* 48:98-106.
- Dzwonkowska A, Hubner H. 1986. Induction of chromosomal aberrations in the Syrian hamster by insecticides tested in vivo. *Arch Toxicol* 58:152-156.
- Egeler P, Meller RM, Knacker T, et al. 1997. Bioaccumulation of lindane and hexachlorobenzene by tubificid sludgeworms (oligochaeta) under standardized laboratory conditions. *Chemosphere* 35(4):835- 852.
- Eichler D, Heupt W, Paul W. 1983. Comparative study on the distribution of α - and γ -hexachlorocyclohexane in the rat with particular reference to the problem of isomerization. *Xenobiotica* 13:639-647.
- Eisenreich SJ, Looney BB, Thornton JD. 1981. Airborne organic contaminants in the Great Lakes ecosystem. *Environ Sci Technol* 15:30-38.
- Eitzer BD, Chevalier A. 1999. Landscape care pesticide residues in residential drinking water wells. *Bull Environ Contam Toxicol* 62:420-427.
- El-Masri HA, Mumtaz MM, Yushak ML. 2004. Application of physiologically-based pharmacokinetic modeling to investigate the toxicological interaction between chlorpyrifos and parathion in the rat. *Environ Toxicol Pharmacol* 16(1-2):57-71. <https://doi.org/10.1016/j.etap.2003.10.002>.
- Elserougy S, Beshir S, Saad-Hussein A, et al. 2013. Organochlorine pesticide residues in biological compartments of healthy mothers. *Toxicol Ind Health* 29(5):441-448. <https://doi.org/10.1177/0748233712436645>.
- Engst R, Macholz RH, Kujawa H. 1979. [Metabolism of lindane in microbial organisms, warm-blooded animals and humans]. *Gig Sanit* 10:64-65.
- Engst R, Macholz R, Kujawa M, et al. 1976. The metabolism of lindane and its metabolites gamma-2,3,4,5,6-pentachlorocyclohexene, pentachlorobenzene, and pentachlorophenol in rats and the pathways of lindane metabolism. *J Environ Sci Health B* 11:95-117.
- Ennaceur S. 2017. Study of the genotoxic and cytotoxic effects of the α -, β -, and γ -Hexachlorocyclohexane isomers in human lymphocyte cells using the cytokinesis-block micronucleus assay. *Drug Chem Toxicol* 40(1):85-89. <https://doi.org/10.1080/01480545.2016.1175008>.
- EPA. 1974. Pesticide in the Illinois waters of Lake Michigan. Washington, DC: U.S. Environmental Protection Agency. EPA660374002.
- EPA. 1975. Guidelines for the disposal of small quantities of unused pesticides. Washington, DC: U.S. Environmental Protection Agency. EPA670276057. <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300051QF.txt>. May 5, 2021.
- EPA. 1979. Water-related environmental fate of 129 priority pollutants. Volume I: Introduction and technical background, metals and inorganics, pesticides and PCBs. Washington, DC: U.S. Environmental Protection Agency. EPA440479029a.
- EPA. 1980. Manual of analytical methods for the analysis of pesticides in humans and environmental samples. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA600880038. <https://nepis.epa.gov/Exe/ZyPDF.cgi/20007QPD.PDF?Dockey=20007QPD.PDF>. May 5, 2021.
- EPA. 1982a. Aquatic fate process data for organic priority pollutants. Washington, DC: U.S. Environmental Protection Agency. EPA440481014.
- EPA. 1982b. Retention and transformation of selected pesticides and phosphorous in soil-water systems: A critical review. Athens, GA: U.S. Environmental Protection Agency. EPA600382060.
- EPA. 1985a. Drinking water criteria document for lindane. Cincinnati, OH: U.S. Environmental Protection Agency. EPA600X841821.
- EPA. 1985b. Guidance for the reregistration of pesticide products containing lindane as the active ingredient. Washington, DC: U.S. Environmental Protection Agency. EPARS85027.

8. REFERENCES

- EPA. 1985c. Baseline estimates and time trends for beta-benzene hexachloride, hexachlorobenzene, and polychlorinated biphenyls in human adipose tissue: 1970-1983. Washington, DC: U.S. Environmental Protection Agency. EPA560585025.
- EPA. 1986. Broad scan analysis of the FY82 national human adipose tissue survey specimens. Volume 1 - Executive summary. Washington, DC: U.S. Environmental Protection Agency.
- EPA. 1988a. Data evaluation report: EPA Id No.: 52904-C. Lindane. Review of a 13-week dermal toxicity study (with interim kill and recovery period) in the rat; MRID 408217-01. U.S. Environmental Protection Agency. Record No. 231696.
https://www3.epa.gov/pesticides/chem_search/cleared_reviews/csr_PC-009001_18-May-89_123.pdf. May 4, 2021.
- EPA. 1988b. Recommendations for and documentation of biological values for use in risk assessment. Washington, DC: U.S. Environmental Protection Agency. EPA600687008.
<https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=34855>. May 5, 2021.
- EPA. 1989a. List of hazardous substances and reportable quantities. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 302.4.
- EPA. 1989b. Hydrolysis rate constants for enhancing property-reactivity relationships. Athens, GA: U.S. Environmental Protection Agency. EPA600389063. PB89220479.
- EPA. 1990. Nonoccupational pesticide exposure study (NOPES): Final report. Research Triangle Park, NC: U.S. Environmental Protection Agency. EPA600390003.
- EPA. 1991a. Data evaluation report: Lindane. Reproductive performance study in rats treated continuously through two successive generations; MRID 422461-01. U.S. Environmental Protection Agency. MRID42246101.
- EPA. 1991b. Alpha-2 μ -globulin: Association with chemically-induced renal toxicity and neoplasia in the male rat. Final draft. Washington, DC: U.S. Environmental Protection Agency. EPA625391019F.
- EPA. 1993. Notice of receipt of requests for amendments to delete uses in certain pesticide registrations. U.S. Environmental Protection Agency. Federal Register 58(220):60630-60631.
- EPA. 1995. Method 508: Determination of chlorinated pesticides in water by gas chromatography with an electron capture device. Cincinnati, OH: U.S. Environmental Protection Agency.
<https://www.o2si.com/docs/epa-method-508.pdf>. May 5, 2021.
- EPA. 1999a. Data evaluation report: Lindane (gamma HCH). Study type: Acute oral (gavage) neurotoxicity - rat (81-8); MRID 44769201. U.S. Environmental Protection Agency.
- EPA. 1999b. Data evaluation report: Lindane (gamma HCH). Study type: Subchronic oral neurotoxicity - rat (82-7); MRID 44781101. U.S. Environmental Protection Agency.
- EPA. 1999c. Data evaluation report: Lindane. Developmental neurotoxicity - rat [870.6300; (83-6)]; MRID 45073501. U.S. Environmental Protection Agency.
- EPA. 1999d. Compendium of methods for the determination of toxic organic compounds in ambient air. Second edition. Washington, DC: U.S. Environmental Protection Agency. EPA625R96010b.
<https://www.epa.gov/sites/production/files/2019-11/documents/tocomp99.pdf>. April 2, 2021.
- EPA. 2000a. Data evaluation report: Lindane. Oncogenicity feeding - mouse [OPPTS 870.4200 (83-2)]; MRID No. 45291402. U.S. Environmental Protection Agency.
- EPA. 2000b. Method 1656, Revision A: Organo-halide pesticides in wastewater, soil, sludge, sediment, and tissue by GC/HSD. U.S. Environmental Protection Agency. EPA821R00017.
<https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1002CPW.txt>. May 5, 2021.
- EPA. 2001. Cancer assessment document. Evaluation of the carcinogenic potential of lindane. Final report. U.S. Environmental Protection Agency.
https://hero.epa.gov/hero/index.cfm/reference/details/reference_id/628259. May 11, 2021.
- EPA. 2002. Registration eligibility decision for lindane. Case 315. U.S. Environmental Protection Agency.
- EPA. 2006a. Lindane; Notice of receipt of requests to voluntarily cancel lindane pesticide registrations. U.S. Environmental Protection Agency. Federal Register 71:49445.

8. REFERENCES

- EPA. 2006b. Lindane; cancellation order. U.S. Environmental Protection Agency. Federal Register 71:74905.
- EPA. 2006c. Assessment of lindane and other hexachlorocyclohexane isomers. Washington, DC: U.S. Environmental Protection Agency. <https://www.regulations.gov/document/EPA-HQ-OPP-2006-0034-0002>. March 24, 2021.
- EPA. 2007. Method 1699: Pesticides in water, soil, sediment, biosolids, and tissue by HRGC/HRMS. Washington, DC: U.S. Environmental Protection Agency. EPA821R08001. https://www.epa.gov/sites/production/files/2015-10/documents/method_1699_2007.pdf. May 5, 2021.
- EPA. 2009. National primary drinking water regulations. U.S. Environmental Protection Agency. EPA816F090004. https://www.epa.gov/sites/production/files/2016-06/documents/npwdr_complete_table.pdf. September 7, 2017.
- EPA. 2010. Six-year review 2 contaminant occurrence data (1998-2005). U.S. Environmental Protection Agency. <https://www.epa.gov/dwsixyearreview/six-year-review-2-contaminant-occurrence-data-1998-2005>. May 5, 2021.
- EPA. 2012. 2012 Chemical data reporting results. U.S. Environmental Protection Agency. February 20, 2019. <https://www.epa.gov/chemical-data-reporting/access-cdr-data>. May 5, 2021.
- EPA. 2014. Applicability of treatment standards. U.S. Environmental Protection Agency. Code of Federal Regulations. 40 CFR 268.40. <https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.29.268&rgn=div5>. May 7, 2021.
- EPA. 2016. 2016 Chemical data reporting results. U.S. Environmental Protection Agency. <https://www.epa.gov/chemical-data-reporting/access-cdr-data>. May 5, 2021.
- EPA. 2018a. 2018 Edition of the drinking water standards and health advisories. Washington, DC: U.S. Environmental Protection Agency. EPA822S12001. <https://www.epa.gov/system/files/documents/2022-01/dwtable2018.pdf>. July 16, 2023.
- EPA. 2018b. Acute Exposure Guideline Levels (AEGs) values. U.S. Environmental Protection Agency. https://www.epa.gov/sites/production/files/2018-08/documents/compiled_aegls_update_27jul2018.pdf. April 12, 2020.
- EPA. 2020a. Initial list of hazardous air pollutants with modifications. U.S. Environmental Protection Agency. <https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications>. May 5, 2021.
- EPA. 2020b. 2017 National emissions inventory (NEI) data. U.S. Environmental Protection Agency. <https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data>. March 30, 2021.
- EPA. 2020c. List of lists. Consolidated list of chemicals subject to the Emergency Planning and Community Right To-Know Act (EPCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and Section 112(r) of the Clean Air Act. U.S. Environmental Protection Agency. EPA550B20001. https://www.epa.gov/sites/production/files/2015-03/documents/list_of_lists.pdf. May 12, 2021.
- EPA. 2021. Air toxics data. Ambient monitoring archive. U.S. Environmental Protection Agency. <https://www3.epa.gov/ttnamti1/toxdat.html#data>. April 2, 2021.
- EPA. 2022a. 2020 CDR data. U.S. Environmental Protection Agency. <https://www.epa.gov/chemical-data-reporting/access-cdr-data#2020>. October 26, 2022.
- EPA. 2022b. Toxic chemical release inventory reporting forms and instructions: Revised 2021 version. U.S. Environmental Protection Agency. EPA740B22002. https://ordspub.epa.gov/ords/guideme_ext/guideme_ext/guideme/file/ry_2021_rfi.pdf. August 22, 2023.
- Etim OE, Farombi EO, Usoh IF, et al. 2006. The protective effect of aloe vera juice on lindane induced hepatotoxicity and genotoxicity. *Pak J Pharm Sci* 19(4):337-340.
- Everett CJ, Matheson EM. 2010. Biomarkers of pesticide exposure and diabetes in the 1999-2004 national health and nutrition examination survey. *Environ Int* 36(4):398-401. <https://doi.org/10.1016/j.envint.2010.02.010>.

8. REFERENCES

- Everett CJ, Thompson OM. 2015. Association of DDT and heptachlor epoxide in human blood with diabetic nephropathy. *Rev Environ Health* 30(2):93-97. <https://doi.org/10.1515/reveh-2015-0003>.
- Fabisiková A, Drobná B, Conka K, et al. 2012. The effect of prenatal and postnatal exposure to PCBs and some pesticides on mental and psychomotor development of infants at the age of 10 month. *Organohalogen Compounds* 74:948-951. <https://dioxin20xx.org/wp-content/uploads/pdfs/2012/1241.pdf>. August 4, 2023.
- Fagan J. 1981. Henoch-Schonlein purpura and (γ)-benzene hexachloride [letter]. *Pediatrics* 67:310-311.
- Fang J, Liu H, Zhao H, et al. 2019a. Association of prenatal exposure to organochlorine pesticides and birth size. *Sci Total Environ* 654:678-683. <https://doi.org/10.1016/j.scitotenv.2018.10.384>.
- Fang J, Liu H, Zhao H, et al. 2019b. Association of in utero hexachlorocyclohexane exposure with gestational age. *Ecotoxicol Environ Saf* 174:263-269. <https://doi.org/10.1016/j.ecoenv.2019.02.089>.
- Farm Chemicals Handbook. 1993. Lindane. In: *Pesticide dictionary*. Willoughby, OH: Meister Publishing Company, C204.
- Fatih Fidan A, Hakk Cigerci I, Baysu-Sozbilir N, et al. 2008. The effects of the dose-dependent γ -hexachlorocyclohexane (lindane) on blood and tissue antioxidant defense systems, lipid peroxidation and histopathological changes in rats. *J Anim Vet Adv* 7(11):1480-1488.
- Fazzalari FA. 1978. *Compilation of odor and taste threshold values data (Committee E-18)*. Philadelphia, PA: American Society for Testing and Materials. ASTM Data Series DS 48A. <https://doi.org/10.1520/DS48A-EB>.
- FDA. 2015. Lindane shampoo and lindane lotion. U.S. Food and Drug Administration. <https://www.fda.gov/drugs/postmarket-drug-safety-information-patients-and-providers/lindane-shampoo-and-lindane-lotion>. May 5, 2021.
- FDA. 2017. Subpart B - Requirements for specific standardized beverages. Bottled water. U.S. Food and Drug Administration. Code of Federal Regulations. 21 CFR 165.110. <https://www.gpo.gov/fdsys/pkg/CFR-2017-title21-vol2/pdf/CFR-2017-title21-vol2-sec165-110.pdf>. September 7, 2017.
- FDA. 2020a. Pesticide residue monitoring report and data for FY 2018. U.S. Food and Drug Administration. <https://www.fda.gov/food/pesticides/pesticide-residue-monitoring-report-and-data-fy-2018>. May 5, 2021.
- FDA. 2020b. Analytical results of the total diet study. U.S. Food and Drug Administration. <https://www.fda.gov/food/total-diet-study/analytical-results-total-diet-study>. May 5, 2021.
- FDA. 2023. Substances added to food. U.S. Food and Drug Administration. <https://www.cfsanappsexternal.fda.gov/scripts/fdcc/?set=FoodSubstances>. July 16, 2023.
- Feldmann RJ, Maibach HI. 1974. Percutaneous penetration of some pesticides and herbicides in man. *Toxicol Appl Pharmacol* 28:126-132.
- Fendinger NJ, Adams DD, Glotfelty DE. 1992. The role of gas ebullition in the transport of organic contaminants from sediments. *Sci Total Environ* 112:189-201.
- Fenster L, Eskenazi B, Anderson M, et al. 2006. Association of in utero organochlorine pesticide exposure and fetal growth and length of gestation in an agricultural population. *Environ Health Perspect* 114(4):597-602. <https://doi.org/10.1289/ehp.8423>.
- Fernandez MF, Olmos B, Granada A, et al. 2007. Human exposure to endocrine-disrupting chemicals and prenatal risk factors for cryptorchidism and hypospadias: a nested case-control study. *Environ Health Perspect* 115 Suppl 1:8-14. <https://doi.org/10.1289/ehp.9351>.
- Ferrando MD, Alarcon V, Fernandez-Casalderrey A, et al. 1992. Persistence of some pesticides in the aquatic environment. *Bull Environ Contam Toxicol* 48:747-755.
- Fischer TF. 1994. Lindane toxicity in a 24-year-old woman. *Ann Emerg Med* 24(5):972-974.
- Fitzhugh OG, Nelson AA. 1947. The comparative chronic toxicities of fumaric, tartaric, oxalic, and maleic acids. *J Am Pharm Assoc Am Pharm Assoc* 36(7):217-219. <https://doi.org/10.1002/jps.3030360708>.
- Fitzhugh OG, Nelson AA, Frawley JP. 1950. The chronic toxicities of technical benzene hexachloride and its alpha, beta and gamma isomers. *J Pharmacol Exp Ther* 100(1):59-66.

8. REFERENCES

- Fitzloff JF, Pan JC. 1984. Epoxidation of the lindane metabolite, β -PCCH, by human- and rat-liver microsomes. *Xenobiotica* 14:599-604.
- Fitzloff JF, Portig J, Stein K. 1982. Lindane metabolism by human and rat liver microsomes. *Xenobiotica* 12:197-202.
- Fonseca RG, Resende LAL, Silva MD, et al. 1993. Chronic motor neuron disease possibly related to intoxication with organochlorine insecticides. *Acta Neurol Scand* 88:56-58.
- Ford WM, Hill EP. 1991. Organochlorine pesticides in soil sediments and aquatic animals in the Upper Steele Bayou watershed of Mississippi (USA). *Arch Environ Contam Toxicol* 20:160-167.
- Forrester MB, Sievert JS, Stanley SK. 2004. Epidemiology of lindane exposures for pediculosis reported to Poison Centers in Texas, 1998-2002. *J Toxicol Clin Toxicol* 42(1):55-60. <https://doi.org/10.1081/clt-120028745>.
- Frank R, Braun HE, Stonefield KI, et al. 1990. Organochlorine and organophosphorus residues in the fat of domestic farm animal species, Ontario, Canada 1986-1988. *Food Addit Contam* 7:629-636.
- Franz TJ, Lehman PA, Franz SF, et al. 1996. Comparative percutaneous absorption of lindane and permethrin. *Archives of Dermatology* 132(8):901-905.
- Freire C, Lopez-Espinosa MJ, Fernandez M, et al. 2011. Prenatal exposure to organochlorine pesticides and TSH status in newborns from Southern Spain. *Sci Total Environ* 409(18):3281-3287. <https://doi.org/10.1016/j.scitotenv.2011.05.037>.
- Freire C, Koifman RJ, Sarcinelli P, et al. 2012. Long term exposure to organochlorine pesticides and thyroid function in children from Cidade dos Meninos, Rio de Janeiro, Brazil. *Environ Res* 117:68-74. <https://doi.org/10.1016/j.envres.2012.06.009>.
- Freire C, Koifman RJ, Sarcinelli PN, et al. 2013. Long-term exposure to organochlorine pesticides and thyroid status in adults in a heavily contaminated area in Brazil. *Environ Res* 127:7-15. <https://doi.org/10.1016/j.envres.2013.09.001>.
- Freire C, Koifman RJ, Sarcinelli PN, et al. 2014. Association between serum levels of organochlorine pesticides and sex hormones in adults living in a heavily contaminated area in Brazil. *Int J Hyg Environ Health* 217(2-3):370-378. <https://doi.org/10.1016/j.ijheh.2013.07.012>.
- Freire C, Koifman RJ, Koifman S. 2015. Hematological and hepatic alterations in Brazilian population heavily exposed to organochlorine pesticides. *J Toxicol Environ Health A* 78(8):534-548. <https://doi.org/10.1080/15287394.2014.999396>.
- Friberg L, Martensson J. 1953. Case of panmyelophthisis after exposure to chlorophenothane and benzene hexachloride. *AMA Arch Ind Hyg* 8:166-169.
- Fukata H, Omori M, Osada H, et al. 2005. Necessity to measure PCBs and organochlorine pesticide concentrations in human umbilical cords for fetal exposure assessment. *Environ Health Perspect* 113(3):297-303. <https://doi.org/10.1289/ehp.7330>.
- Fytianos K, Vasilkiotis G, Weil L, et al. 1985. Preliminary study of organochlorine compounds in milk products, human milk, and vegetables. *Bull Environ Contam Toxicol* 34:504-508.
- Gaines T. 1960. The acute toxicity of pesticides to rats. *Toxicol Appl Pharmacol* 2:88-99. [https://doi.org/10.1016/0041-008x\(60\)90074-0](https://doi.org/10.1016/0041-008x(60)90074-0).
- Garcia-Villarino M, Signes-Pastor AJ, Riano-Galan I, et al. 2022. Serum concentrations of persistent organic pollutants mixture during pregnancy and anogenital distance in 8-year-old children from the INMA-Asturias cohort. *Environ Res* 213:113607. <https://doi.org/10.1016/j.envres.2022.113607>.
- Gartrell MJ, Craun JC, Podrebarac DS, et al. 1986a. Pesticides, selected elements, and other chemicals in infant and toddler total diet samples, October 1980-March 1982. *J AOAC* 69:123-145.
- Gartrell MJ, Craun JC, Podrebarac DS, et al. 1986b. Pesticides, selected elements, and other chemicals in adult total diet samples, October 1980-March 1982. *J AOAC* 69:146-161.
- Gasull M, Pumarega J, Tellez-Plaza M, et al. 2012. Blood concentrations of persistent organic pollutants and prediabetes and diabetes in the general population of Catalonia. *Environ Sci Technol* 46(14):7799-7810. <https://doi.org/10.1021/es300712g>.

8. REFERENCES

- Gasull M, Castell C, Pallarès N, et al. 2018. Blood concentrations of persistent organic pollutants and unhealthy metabolic phenotypes in normal-weight, overweight, and obese individuals. *Am J Epidemiol* 187(3):494-506. <https://doi.org/10.1093/aje/kwx267>.
- Gautam AK, Gandhi DN, Jani JP, et al. 1989. Histological and pharmacological changes in vas deferens of rats exposed to hexachlorocyclohexane. *Res Commun Chem Pathol Pharmacol* 63(3):463-466.
- Génard-Walton M, Warembourg C, Duros S, et al. 2023. Serum persistent organic pollutants and diminished ovarian reserve: a single-exposure and mixture exposure approach from a French case-control study. *Hum Reprod* 38(4):701-715. <https://doi.org/10.1093/humrep/dead028>.
- Genualdi SA, Hageman KJ, Ackerman LK, et al. 2011. Sources and fate of chiral organochlorine pesticides in western U.S. National Park ecosystems. *Environ Toxicol Chem* 30(7):1533-1538. <https://doi.org/10.1002/etc.538>.
- Genuis SJ, Lane K, Birkholz D. 2016. Human elimination of organochlorine pesticides: Blood, urine, and sweat study. *Biomed Res Int* 2016:1624643. <https://doi.org/10.1155/2016/1624643>.
- Gewin HM. 1939. Benzene hexachloride and aplastic anemia. *JAMA* 14:296-297.
- Geyer H, Scheunert I, Bruggemann R, et al. 1997. Half-lives and bioconcentration of lindane (g-HCH) in different fish species and relationship with their lipid content. *Chemosphere* 35(1-2):343-351.
- Ghosh R, Siddarth M, Singh N, et al. 2017. Organochlorine pesticide level in patients with chronic kidney disease of unknown etiology and its association with renal function. *Environ Health Prev Med* 22(1):49. <https://doi.org/10.1186/s12199-017-0660-5>.
- Gilbert ME. 1995. Repeated exposure to lindane leads to behavioral sensitization and facilitates electrical kindling. *Neurotoxicol Teratol* 17:131-141. [https://doi.org/10.1016/0892-0362\(94\)00064-K](https://doi.org/10.1016/0892-0362(94)00064-K).
- Gilbert ME, Mack CM. 1995. Seizure thresholds in kindled animals are reduced by the pesticides lindane and endosulfan. *Neurotoxicol Teratol* 17:143-150. [https://doi.org/10.1016/0892-0362\(94\)00065-L](https://doi.org/10.1016/0892-0362(94)00065-L).
- Gilliland CD, Summer CL, Silliland MG, et al. 2001. Organochlorine insecticides, polychlorinated biphenyls, and metals in water, sediment, and green frogs from southwestern Michigan. *Chemosphere* 44:327-339.
- Ginsburg CM, Lowry W, Reisch JS. 1977. Absorption of lindane (gamma benzene hexachloride) in infants and children. *J Pediatrics* 91:998-1000.
- Gladden BC, Shkiryak-Nyzhnyk ZA, Chyslovska N, et al. 2003. Persistent organochlorine compounds and birth weight. *Annals of Epidemiology* 13(3):151-157. [https://doi.org/10.1016/S1047-2797\(02\)00268-5](https://doi.org/10.1016/S1047-2797(02)00268-5).
- Goel A, McConnell LL, Torrents A, et al. 2010. Environmental factors affecting the levels of legacy pesticides in the airshed of Delaware and Chesapeake Bays, USA. *Environ Toxicol Chem* 29(9):1893-1906. <https://doi.org/10.1002/etc.243>.
- Goldner WS, Sandler DP, Yu F, et al. 2013. Hypothyroidism and pesticide use among male private pesticide applicators in the agricultural health study. *J Occup Environ Med* 55(10):1171-1178. <https://doi.org/10.1097/JOM.0b013e31829b290b>.
- Gopal K, Anand M, Khanna RN, et al. 1992. Some neurotoxicological consequences of hexachlorocyclohexane (HCH) stress in rats fed on protein deficient diet. *Toxicol Environ Chem* 36:57-63. <https://doi.org/10.1080/02772249209357827>.
- Gopaldaswamy UV, Aiyar AS. 1984. Biotransformation of lindane in the rat. *Bull Environ Contam Toxicol* 32:148-156.
- Govind R, Flaherty PA, Dobbs RA. 1991. Fate and effects of semivolatile organic pollutants during anaerobic digestion of sludge. *Water Res* 25:547-556.
- Grabarczyk M, Kopec-Szlezak J, Szczepanska I, et al. 1990. The effect of gamma-hexachlorocyclohexane (lindane) on blood cells, kidney and liver tissues in rabbits. *Haematologia* 23:171-179.
- Grey WE, Marthre DE, Rogers SJ. 1983. Potential exposure of commercial seed-treating applicators to the pesticides carboxin-thiram and lindane. *Bull Environ Contam Toxicol* 31:244-250.

8. REFERENCES

- Griffith FD, Blanke RV. 1975. Pesticides in people: Blood organochlorine pesticide levels in Virginia residents. *Pestic Monit J* 8:219-224.
- Gunderson EL. 1988. FDA total diet study, April 1982–April 1984: Dietary intakes of pesticides, selected elements, and other chemicals. *J AOAC* 71:1200-1209.
- Gunderson EL. 1995a. Dietary intakes of pesticides, selected elements, and other chemicals: FDA total diet study, June 1984–April 1986. *J AOAC Int* 78(4):910-921.
- Gunderson EL. 1995b. FDA total diet study, July 1986–April 1991, dietary intakes of pesticides, selected elements, and other chemicals. *J AOAC Int* 78(6):1353-1363.
- Guo H, Jin Y, Cheng Y, et al. 2014. Prenatal exposure to organochlorine pesticides and infant birth weight in China. *Chemosphere* 110:1-7. <https://doi.org/10.1016/j.chemosphere.2014.02.017>.
- Gupta A, Agarwal R, Shukla GS. 1999. Functional impairment of blood–brain barrier following pesticide exposure during early development in rats. *Hum Exp Toxicol* 18(3):174-179.
- Gupta C, Tripathi DN, Vikram A, et al. 2011. Quercetin inhibits diethylnitrosamine-induced hepatic preneoplastic lesions in rats. *Nutr Cancer* 63(2):234-241. <https://doi.org/10.1080/01635581.2011.523806>.
- Haider K. 1979. Degradation and metabolization of lindane and other hexachlorocyclohexane isomers by anaerobic and aerobic soil microorganisms. *Z Naturforsch C Biosci* 34(11):1066-1069. <https://doi.org/10.1515/znc-1979-1138>.
- Hall RC, Hall RC. 1999. Long-term psychological and neurological complications of lindane poisoning. *Psychosomatics* 40(6):513-517.
- Hamada M, Kawano E, Kawamura S, et al. 1981. Radiation- and photo-induced degradation of five isomers of 1,2,3,4,5,6-hexachlorocyclohexane. *Agric Biol Chem* 45:659-665.
- Han X, Meng L, Li Y, et al. 2019. Associations between exposure to persistent organic pollutants and thyroid function in a case-control study of East China. *Environ Sci Technol* 53(16):9866-9875. <https://doi.org/10.1021/acs.est.9b02810>.
- Han X, Zhang F, Meng L, et al. 2020. Exposure to organochlorine pesticides and the risk of type 2 diabetes in the population of East China. *Ecotoxicol Environ Saf* 190:110125. <https://doi.org/10.1016/j.ecoenv.2019.110125>.
- Hanada M, Yutani C, Miyaji T. 1973. Induction of hepatoma in mice by benzene hexachloride. *Gann* 64(5):511-513. https://doi.org/10.20772/cancersci1959.64.5_511.
- Hanig JP, Yoder PD, Krop S. 1976. Convulsions in weanling rabbits after a single topical application of 1% lindane. *Toxicol Appl Pharmacol* 38:463-469. [https://doi.org/10.1016/0041-008X\(76\)90177-0](https://doi.org/10.1016/0041-008X(76)90177-0).
- Hansch C, Leo A. 1995. Hexachlorocyclohexane. In: *Substituent constants for correlation analysis in chemistry and biology*. New York, NY: John Wiley and Sons, 202.
- Hao W, Kingston HM, Dillard A, et al. 2020. Quantification of persistent organic pollutants in human whole blood samples using stir bar sorptive extraction coupled with GC/MS/MS and isotope dilution mass spectrometry. *Microchemical Journal* 153:104279. <https://doi.org/10.1016/j.microc.2019.104279>.
- Hargrave BT, Vass WP, Erickson PE, et al. 1988. Atmospheric transport of organochlorines to the Arctic Ocean. *Tellus* 40B:480-493.
- Harman-Fetcho JA, McConnell LL, Baker JE. 1999. Agricultural pesticides in the Patuxent River, a tributary of the Chesapeake Bay. *Journal of Environmental Quality* 28(3):928-938. <https://doi.org/10.2134/jeq1999.00472425002800030025x>.
- Harner T, Wideman JL, Jantunen LM, et al. 1999. Residues of organochlorine pesticides in Alabama soils. *Environ Pollut* 106(3):323-332. [https://doi.org/10.1016/s0269-7491\(99\)00110-4](https://doi.org/10.1016/s0269-7491(99)00110-4).
- Harris CJ, Williford EA, Kemberling SR, et al. 1969. Pesticide intoxications in Arizona. *Ariz Med* 26:872-876.
- Hassoun EA, Stohs SJ. 1996a. Comparative teratological studies on TCDD, endrin, and lindane in C57BL/6J and DBA/2J mice. *Comp Biochem Physiol* 113C(3):393-398. [https://doi.org/10.1016/0742-8413\(96\)00011-4](https://doi.org/10.1016/0742-8413(96)00011-4).

8. REFERENCES

- Hassoun EA, Stohs SJ. 1996b. TCDD, endrin, and lindane induced oxidative stress in fetal and placental tissues of C57BL/6J and DBA/2J mice. *Comp Biochem Physiol* 115C(1):11-18.
- Hassoun EA, Bagchi D, Stohs SJ. 1996. TCDD, endrin, and lindane induced increases in lipid metabolites in maternal sera and amniotic fluids of pregnant C57BL/6J and DBA/2J mice. *Res Commun Mol Pathol Pharmacol* 94(2):157-169.
- Hauzenberger I, Perthen-Palmisano B, Hermann M. 2002. Lindane. Report presented at the third meeting of the POPs Expert Group in Geneva, Switzerland in June 2002.
- Hayes WJ. 1982. Benzene hexachloride and lindane. In: *Pesticides studied in man*. Baltimore, MD: Williams and Wilkins, 211-228.
- Heiberg OM, Wright HN. 1955. Benzene hexachloride poisoning. *Arch Ind Health* 11:457-458.
- Heinisch E, Jonas K, Klein S. 1993. HCH isomers in soil and vegetation from the surroundings of an industrial landfill of the former GDR, 1971-1989. *Sci Total Environ (Suppl Part 1)*:151-159.
- Herbst M, Weisse I, Koellmer H. 1975. A contribution to the question of the possible hepatocarcinogenic effects of lindane. *Toxicology* 4(1):91-96. [https://doi.org/10.1016/0300-483x\(75\)90025-6](https://doi.org/10.1016/0300-483x(75)90025-6).
- Hernik A, Struciński P, Buckley BT, et al. 2016. Relationship between paired cord blood and milk POPs levels as a tool for assessing perinatal exposure, a pilot study. *Human and Ecological Risk Assessment* 22(7):1456-1468. <https://doi.org/10.1080/10807039.2016.1185688>.
- Herrero-Mercado M, Waliszewski SM, Caba M, et al. 2010. Organochlorine pesticide levels in umbilical cord blood of newborn in Veracruz, Mexico. *Bull Environ Contam Toxicol* 85(4):367-371. <https://doi.org/10.1007/s00128-010-0108-8>.
- Herrero-Mercado M, Waliszewski SM, Caba M, et al. 2011. Organochlorine pesticide gradient levels among maternal adipose tissue, maternal blood serum and umbilical blood serum. *Bull Environ Contam Toxicol* 86(3):289-293. <https://doi.org/10.1007/s00128-011-0204-4>.
- Hfaiedh N, Murat J-C, Elfeki A. 2011. Protective effects of garlic (*Allium sativum*) extract upon lindane-induced oxidative stress and related damages in testes and brain of male rats. *Pesticide Biochemistry and Physiology* 100(2):187-192. <https://doi.org/10.1016/j.pestbp.2011.03.009>.
- Hfaiedh N, Murat JC, Elfeki A. 2012. A combination of ascorbic acid and α -tocopherol or a combination of Mg and Zn are both able to reduce the adverse effects of lindane-poisoning on rat brain and liver. *J Trace Elem Med Biol* 26(4):273-278. <https://doi.org/10.1016/j.jtemb.2012.04.002>.
- Hiskia A, Mylonas A, Tsipi D, et al. 1997. Photocatalytic degradation of lindane in aqueous solution. *Pestic Sci* 50:171-174.
- Hitachi M, Yamada K, Takayama S. 1975. Brief communication: Cytologic changes induced in rat liver cells by short-term exposure to chemical substances. *J Natl Cancer Inst* 54(5):1245.
- Hjermitslev MH, Long M, Wielsoe M, et al. 2020. Persistent organic pollutants in Greenlandic pregnant women and indices of foetal growth: The ACCEPT study. *Sci Total Environ* 698:134118. <https://doi.org/10.1016/j.scitotenv.2019.134118>.
- Hoff RM, Muir DCG, Grift NP. 1992a. Annual cycle of polychlorinated biphenyls and organohalogen pesticides in air in southern Ontario. 1. Air concentration data. *Environ Sci Technol* 26:266-275.
- Hoff RM, Muir DCG, Grift NP. 1992b. Annual cycle of polychlorinated biphenyls and organohalogen pesticides in air in southern Ontario. 2. Atmospheric transport and sources. *Environ Sci Technol* 26:276-283.
- Hollifield HC. 1979. Rapid nephelometric estimate of water solubility of highly insoluble organic chemicals of environmental interest. *Bull Environ Contam Toxicol* 23:579-586.
- Hong HL, Boorman GA. 1993. Residual myelotoxicity of lindane in mice. *Fundam Appl Toxicol* 21(4):500-507. <https://doi.org/10.1006/faat.1993.1126>.
- Howsam M, Grimalt JO, Guino E, et al. 2004. Organochlorine exposure and colorectal cancer risk. *Environ Health Perspect* 112(15):1460-1466. <https://doi.org/10.1289/ehp.7143>.
- Hoyer A, Grandjean P, Jorgensen T, et al. 1998. Organochlorine exposure and risk of breast cancer. *Lancet* 352:1816-1820.

8. REFERENCES

- Hulth L, Hoglund L, Bergman A, et al. 1978. Convulsive properties of lindane, lindane metabolites, and the lindane isomer α -hexachlorocyclohexane: Effects on the convulsive threshold for pentylenetetrazol and the brain content of γ -aminobutyric acid (GABA) in the mouse. *Toxicol Appl Pharmacol* 46:101-108.
- Humphreys EH, Janssen S, Heil A, et al. 2008. Outcomes of the California ban on pharmaceutical lindane: clinical and ecologic impacts. *Environ Health Perspect* 116(3):297-302. <https://doi.org/10.1289/ehp.10668>.
- IARC. 1979. Hexachlorocyclohexane. In: IARC monographs on the evaluation of the carcinogenic risk of chemicals to humans: Some halogenated hydrocarbons. Vol. 20. Geneva, Switzerland: International Agency for Research on Cancer, 195-241.
- IARC. 1987. Hexachlorocyclohexanes. IARC Monographs on the evaluation of carcinogenic risks to humans. Supplement 7. Overall evaluations of carcinogenicity: An updating of IARC monographs volumes 1-42. Lyon, France: International Agency for Research on Cancer. 220-222. <https://publications.iarc.fr/139>. March 23, 2021.
- IARC. 2018. DDT, lindane, and 2,4-D. Volume 113. IARC Monographs on the evaluation of carcinogenic risks to humans. Lyon, France: International Agency for Research on Cancer. <https://publications.iarc.fr/550>. March 23, 2021.
- Ibarluzea JM, Fernandez MF, Santa-Marina L, et al. 2004. Breast cancer risk and the combined effect of environmental estrogens. *Cancer Causes Control* 15(6):591-600. <https://doi.org/10.1023/B:CACO.0000036167.51236.86>.
- IRIS. 1987a. α -Hexachlorocyclohexane (α -HCH). CASRN 319-84-6. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0162_summary.pdf. March 22, 2021.
- IRIS. 1987b. β -Hexachlorocyclohexane (β -HCH). CASRN 319-85-7. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0244_summary.pdf. March 22, 2021.
- IRIS. 1987c. γ -Hexachlorocyclohexane (γ -HCH). CASRN 58-89-9. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0065_summary.pdf. March 22, 2021.
- IRIS. 1987d. δ -Hexachlorocyclohexane (δ -HCH). CASRN 319-86-8. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0163_summary.pdf. March 22, 2021.
- IRIS. 1987e. ϵ -Hexachlorocyclohexane (ϵ -HCH). CASRN 6108-10-7. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0164_summary.pdf. March 22, 2021.
- IRIS. 1987f. Technical hexachlorocyclohexane (t-HCH). CASRN 608-73-1. Integrated Risk Information System. Chemical assessment summary. U.S. Environmental Protection Agency. https://cfpub.epa.gov/ncea/iris/iris_documents/documents/subst/0165_summary.pdf. March 22, 2021.
- Ishidate MJ, Odashima S. 1977. Chromosome tests with 134 compounds on Chinese hamster cells in vitro - a screening for chemical carcinogens. *Mutat Res* 49:337-354.
- Ito N, Nagasaki H, Arai M, et al. 1973. Histologic and ultrastructural studies on the hepatocarcinogenicity of benzene hexachloride in mice. *J Natl Cancer Inst* 51:817-826. <https://doi.org/10.1093/jnci/51.3.817>.
- Ito N, Nagasaki H, Aoe H, et al. 1975. Development of hepatocellular carcinomas in rats treated with benzene hexachloride. *J Natl Cancer Inst* 54(3):801-805.

8. REFERENCES

- Ito N, Hananouchi M, Sugihara S, et al. 1976. Reversibility and irreversibility of liver tumors in mice induced by the α isomer of 1,2,3,4,5,6-hexachlorocyclohexane. *Cancer Res* 36(7 pt 1):2227-2234.
- Itoh H, Iwasaki M, Kasuga Y, et al. 2014. Association between serum organochlorines and global methylation level of leukocyte DNA among Japanese women: a cross-sectional study. *Sci Total Environ* 490:603-609. <https://doi.org/10.1016/j.scitotenv.2014.05.035>.
- Iverson F, Ryan JJ, Lizotte R, et al. 1984. In vivo and in vitro binding of α - and γ -hexachlorocyclohexane to mouse liver macromolecules. *Toxicology Letters* 20:331-335.
- Jacobsen BN, Nyholm N, Pedersen BM, et al. 1991. Microbial degradation of pentachlorophenol and lindane in laboratory-scale activated sludge reactors. *Water Sci Technol* 23:349-356.
- Jain P, Kapoor A, Rubeshkumar P, et al. 2022. Sudden deaths due to accidental leakage of Lindane from a storage tank in a village, Sitapur, Uttar Pradesh, India, 2020: A field epidemiological investigation. *Environ Epidemiol* 6(3):e213. <https://doi.org/10.1097/ee9.0000000000000213>.
- Jantunen LM, Bidleman TF, Harner T, et al. 2000. Toxaphene, chlordane, and other organochlorine pesticides in Alabama air. *Environmental Science & Technology* 34(24):5097-5105. <https://doi.org/10.1021/es001197y>.
- Jeddy Z, Kordas K, Allen K, et al. 2018. Prenatal exposure to organochlorine pesticides and early childhood communication development in British girls. *Neurotoxicology* 69:121-129. <https://doi.org/10.1016/j.neuro.2018.10.003>.
- Jenssen D, Ramel C. 1980. The micronucleus test as part of a short-term mutagenicity test program for the prediction of carcinogenicity evaluated by 143 agents tested. *Mutat Res* 75:191-202.
- Johri A, Yadav S, Dhawan A, et al. 2007. Overexpression of cerebral and hepatic cytochrome P450s alters behavioral activity of rat offspring following prenatal exposure to lindane. *Toxicol Appl Pharmacol* 225(3):278-292. <https://doi.org/10.1016/j.taap.2007.08.006>.
- Johri A, Yadav S, Dhawan A, et al. 2008. Responsiveness of cerebral and hepatic cytochrome P450s in rat offspring prenatally exposed to lindane. *Toxicol Appl Pharmacol* 231(1):10-16. <https://doi.org/10.1016/j.taap.2008.03.019>.
- Jonnalagadda PR, Jahan P, Venkatasubramanian S, et al. 2012. Genotoxicity in agricultural farmers from Guntur district of South India-A case study. *Hum Exp Toxicol* 31(7):741-747. <https://doi.org/10.1177/0960327111408151>.
- Joseph P, Shivanandappa T, Krishnakumari MK. 1992a. Influence of vitamin A on hexachlorocyclohexane (HCH) toxicity in the rat. *J Nutr Biochem* 3:408-414. [https://doi.org/10.1016/0955-2863\(92\)90015-B](https://doi.org/10.1016/0955-2863(92)90015-B).
- Joseph P, Shivanandappa T, Narasimhamurthy K, et al. 1992b. Effect of vitamin A on hexachlorocyclohexane (HCH) toxicity in the rat. *Gen Pharmacol* 23:1159-1164.
- Joseph P, Viswanatha S, Krishnakumari MK. 1992c. Role of vitamin A in the haematotoxicity of hexachlorocyclohexane (HCH) in the rat. *J Environ Sci Health B* 27(3):269-280. <https://doi.org/10.1080/03601239209372779>.
- Joy RM, Stark LG, Albertson TE. 1982. Proconvulsant effects of lindane: Enhancement of amygdaloid kindling in the rat. *Neurobehav Toxicol Teratol* 4(3):347-354.
- Juan WH, Yang LC, Hong HS. 2004. Acute generalized exanthematous pustulosis induced by topical lindane. *Dermatology* 209(3):239-240. <https://doi.org/10.1159/000079899>.
- Jung D, Becher H, Edler L, et al. 1997. Elimination of β -hexachlorocyclohexane in occupationally exposed persons. *J Toxicol Environ Health* 51:23-34.
- Junque E, Garcia S, Martinez MA, et al. 2020. Changes of organochlorine compound concentrations in maternal serum during pregnancy and comparison to serum cord blood composition. *Environ Res* 182:108994. <https://doi.org/10.1016/j.envres.2019.108994>.
- Just AC, Hawker DW, Connell DW. 1990. Partitioning of lindane between sediment, water, and the crustacean *Metapenaeus macleayi*. *Aust J Marine Freshwater Res* 41:389-397.
- Kachuri L, Beane Freeman LE, Spinelli JJ, et al. 2020. Insecticide use and risk of non-Hodgkin lymphoma subtypes: A subset meta-analysis of the North American Pooled Project. *Int J Cancer* 147(12):3370-3383. <https://doi.org/10.1002/ijc.33164>.

8. REFERENCES

- Kalantzi OI, Alcock RE, Johnston PA, et al. 2001. The global distribution of PCBs and organochlorine pesticides in butter. *Environ Sci Technol* 35:1013-1018.
- Kalantzi OI, Hewitt R, Ford KJ, et al. 2004. Low dose induction of micronuclei by lindane. *Carcinogenesis* 25(4):613-622. <https://doi.org/10.1093/carcin/bgh048>.
- Kalsch W, Knacker T, Robertz M, et al. 1998. Partitioning and mineralization of [¹⁴C]lindane in a laboratory sediment-water system. *Environmental Toxicology and Chemistry* 17(4):662-669. <https://doi.org/10.1002/etc.5620170420>.
- Kamal El-Dein EM, Aness LM, Elsayed Aly SM. 2016. Effects of α -lipoic acid on γ -radiation and lindane-induced heart toxicity in rats. *Pakistan Journal of Zoology* 48(5):1523-1529.
- Kanja LW, Skaare JU, Ojwang SBO, et al. 1992. A comparison of organochlorine pesticide-residues in maternal adipose-tissue, maternal blood, cord blood, and human-milk from mother infant pairs. *Arch Environ Contam Toxicol* 22:21-24.
- Kannan K, Battula S, Loganathan BG, et al. 2003. Trace organic contaminants, including toxaphene and trifluralin, in cotton field soils from Georgia and South Carolina, USA. *Arch Environ Contam Toxicol* 45(1):30-36. <https://doi.org/10.1007/s00244-002-0267-7>.
- Kao CC, Que DE, Bongo SJ, et al. 2019. Residue levels of organochlorine pesticides in breast milk and its associations with cord blood thyroid hormones and the offspring's neurodevelopment. *Int J Environ Res Public Health* 16(8):1438. <https://doi.org/10.3390/ijerph16081438>.
- Kar S, Singh PK. 1979a. Mutagenicity of pesticides carbofuran and hexachlorocyclohexane to blue-green alga *Nostoc muscorum*. *Microbios Lett* 12:79-82.
- Kar S, Singh PK. 1979b. Detoxification of pesticides carbofuran and hexachlorocyclohexane by blue-green algae *Nostoc muscorum* and *Wollea bharadwajae*. *Microbios Lett* 10:111-114.
- Karnik AB, Thakore KN, Nigam SR, et al. 1981. Studies on glucose-6-phosphatase, fructose-1,2-diphosphatase activity, glycogen distribution and endoplasmic reticulum changes during hexachlorocyclohexane induced hepato-carcinogenesis in pure inbred Swiss mice. *Neoplasm* 28:575-584.
- Kashyap SK. 1986. Health surveillance and biological monitoring of pesticide formulators in India. *Toxicology Letters* 33:107-114.
- Kashyap SK, Nigam SK, Gupta RC, et al. 1979. Carcinogenicity of hexachlorocyclohexane (BHC) in pure inbred Swiss mice. *J Environ Sci Health B* 14(3):305-318. <https://doi.org/10.1080/03601237909372130>.
- Katsumata K, Katsumata K. 2003. Norwegian scabies in an elderly patient who died after treatment with γ BHC. *Intern Med* 42(4):367-369. <https://doi.org/10.2169/internalmedicine.42.367>.
- Katz JM, Winter CK. 2009. Comparison of pesticide exposure from consumption of domestic and imported fruits and vegetables. *Food Chem Toxicol* 47(2):335-338. <https://doi.org/10.1016/j.fct.2008.11.024>.
- Kaur N, Starling AP, Calafat AM, et al. 2020. Longitudinal association of biomarkers of pesticide exposure with cardiovascular disease risk factors in youth with diabetes. *Environ Res* 181:108916. <https://doi.org/10.1016/j.envres.2019.108916>.
- Keerthinarayana S, Bandyopadhyay M. 1998. Assessment of equilibrium time and effect of co-solutes in lindane sorption. *J Environ Sci Health* 33(2):179-209. <https://doi.org/10.1080/03601239809373138>.
- Keith LH, Garrison AW, Allen FR, et al. 1976. Identification and analysis of organic pollutants in drinking water from 13 U.S. cities. In: Keith LH, ed. *Identification and analysis of organic pollutants in water*. Ann Arbor, MI: Ann Arbor Science Publishers Inc, 329-373.
- Kennedy DW, Aust SD, Bumpus JA. 1990. Comparative biodegradation of alkyl halide insecticides by the white rot fungus, *Phanerochaete chrysosporium* (BKM-F-1767). *Appl Environ Microbiol* 56:2347-2353.
- Khanjani N, Sim MR. 2006. Reproductive outcomes of maternal contamination with cyclodiene insecticides, hexachlorobenzene and β -benzene hexachloride. *Sci Total Environ* 368(2-3):557-564. <https://doi.org/10.1016/j.scitotenv.2006.03.029>.

8. REFERENCES

- Khanna RN, Das M, Anand M. 2002. Influence of phenobarbital and carbon tetrachloride on the modulation of tissue retention profile of hexachlorocyclohexane in rats. *Biomed Environ Sci* 15(2):119-129.
- Khanna RN, Anband M, Gopal K, et al. 1988. Effect of repeated exposure to lindane and cadmium on lindane metabolism in rats. *Toxicology Letters* 42:177-182.
- Khanna RN, Gupta R, Gupta GSD, et al. 1990. Effects of the level of dietary protein on the toxicity of hexachlorocyclohexane in rats. *Toxicol Environ Chem* 25:91-103.
- Khare S, Rizvi A, Shukla O, et al. 1977. Epidemic outbreak of neuro-ocular manifestations due to chronic BHC poisoning. *J Assoc Physicians India* 25:215-222.
- Khera KS, Whalen C, Trivett G, et al. 1979. Teratogenicity studies on pesticidal formulations of dimethoate, diuron, and lindane in rats. *Bull Environ Contam Toxicol* 22(4-5):522-529. <https://doi.org/10.1007/BF02026981>.
- Khurana R, Mahipal S, Chauhan R. 1999. Effect of pesticides on delayed type hypersensitivity reaction in sheep. *Indian Journal of Animal Sciences* 69(11):0367-8318.
- Kim S, Park J, Kim HJ, et al. 2013. Association between several persistent organic pollutants and thyroid hormone levels in serum among the pregnant women of Korea. *Environ Int* 59:442-448. <https://doi.org/10.1016/j.envint.2013.07.009>.
- Kim KS, Lee YM, Kim SG, et al. 2014. Associations of organochlorine pesticides and polychlorinated biphenyls in visceral vs. subcutaneous adipose tissue with type 2 diabetes and insulin resistance. *Chemosphere* 94:151-157. <https://doi.org/10.1016/j.chemosphere.2013.09.066>.
- Kim KS, Lee YM, Lee HW, et al. 2015. Associations between organochlorine pesticides and cognition in U.S. elders: National Health and Nutrition Examination Survey 1999-2002. *Environ Int* 75:87-92. <https://doi.org/10.1016/j.envint.2014.11.003>.
- Kiraly J, Szentesi I, Ruzicska M, et al. 1979. Chromosome studies in workers producing organophosphate insecticides. *Arch Environ Contam Toxicol* 8:309-319.
- Kirk ER, Othmer DF. 1985. Benzene hexachloride. In: *Concise encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 269-270.
- Klonne DR, Kintigh WJ. 1988. Lindane technical: Fourteen-week dust aerosol inhalation study on mice. Export, PA: Bushy Run Research Center. BRRC #51-524. MetPath #14014.
- Knap AH, Binkley KS. 1991. Chlorinated organic compounds in the troposphere over the western North Atlantic Ocean measured by aircraft. *Atmos Environ* 25:1507-1516.
- Kokroko J, Kogut K, Harley K, et al. 2020. Prenatal β -hexachlorocyclohexane (β -HCH) exposure and 7-year child IQ in the CHAMACOS birth cohort. *Neurotox Res* 37(3):553-563. <https://doi.org/10.1007/s12640-020-00160-w>.
- Koner BC, Banerjee BD, Ray A. 1998. Organochlorine pesticide-induced oxidative stress and immune suppression in rats. *Indian J Exp Biol* 36(4):395-398.
- Kopec-Szlezak J, Goralczyk K, Wozniak J, et al. 1989. Changes in serum and internal organs during increased accumulation of gamma-hexachlorocyclohexane in adipose tissue of rabbits. *Mater Med Pol* 21:286-291.
- Kornvig S, Wielsoe M, Long M, et al. 2021. Prenatal exposure to persistent organic pollutants and metals and problematic child behavior at 3-5 years of age: a Greenlandic cohort study. *Sci Rep* 11(1):22182. <https://doi.org/10.1038/s41598-021-01580-0>.
- Koutros S, Andreotti G, Berndt SI, et al. 2011. Xenobiotic-metabolizing gene variants, pesticide use, and the risk of prostate cancer. *Pharmacogenet Genomics* 21(10):615-623. <https://doi.org/10.1097/FPC.0b013e3283493a57>.
- Kováčik J, Antoš V, Micalizzi G, et al. 2018. Accumulation and toxicity of organochlorines in green microalgae. *J Hazard Mater* 347:168-175. <https://doi.org/10.1016/j.jhazmat.2017.12.056>.
- Kramer MS, Hutchison TA, Rudnick SA, et al. 1980. Operational criteria for adverse drug reactions in evaluating suspected toxicity of a popular scabicide. *Clin Pharmacol Ther* 27:149-155.

8. REFERENCES

- Krishnan K, Andersen ME, Clewell HJ, et al. 1994. Physiologically based pharmacokinetic modeling of chemical mixtures. In: Yang RSH, ed. *Toxicology of chemical mixtures: Case studies, mechanisms, and novel approaches*. San Diego, CA: Academic Press, 399-437.
- Kujawa M, Engst R, Macholz R. 1977. On the metabolism of lindane. In: Zaidi SH, ed. *Environmental pollution and human health: Proceedings of the international symposium on industrial toxicology, November 4-7, 1975*. Lucknow: Industrial Toxicology Research Centre, 661-672.
- Kumar D, Khan PK, Sinha SP. 1995. Cytogenetic toxicity and no-effect limit dose of pesticides. *Food Chem Toxicol* 33:309-314.
- Kumar V, Yadav CS, Singh S, et al. 2010. CYP 1A1 polymorphism and organochlorine pesticides levels in the etiology of prostate cancer. *Chemosphere* 81(4):464-468. <https://doi.org/10.1016/j.chemosphere.2010.07.067>.
- Kuntz KW, Warry ND. 1983. Chlorinated organic contaminants in water and suspended sediments of the lower Niagara River. *J Great Lakes Res* 9:241-248.
- Kurihara N, Tanaka K, Nakajima M. 1979. Mercapturic acid formation from lindane in rats. *Pestic Biochem Physiol* 10:137-150.
- Kurihara N, Uchida M, Fujita T, et al. 1973. Studies on BHC isomers and related compounds. V. Some physicochemical properties of BHC isomers. *Pesticide Biochemistry and Physiology* 2(4):383-390. [https://doi.org/10.1016/0048-3575\(73\)90050-3](https://doi.org/10.1016/0048-3575(73)90050-3).
- Kutz FW, Strassman SC, Spearling JF. 1979. Survey of selected organochlorine pesticides in the general population of the United States: Fiscal years 1970-1975. *Ann NY Acad Sci* 320:60-68.
- Kutz FW, Wood PH, Bottimore DP. 1991. Organochlorine pesticides and polychlorinated biphenyls in human adipose tissue. *Rev Environ Contam Toxicol* 120:1-82.
- La Sala G, Farini D, De Felici M. 2009. Proapoptotic effects of lindane on mouse primordial germ cells. *Toxicol Sci* 108(2):445-451. <https://doi.org/10.1093/toxsci/kfp027>.
- Lahiri P, Chakravarty J, Sircar S. 1990. Residue accumulation in mice chronically fed lindane (g-HCH). *Proc Indian Natl Sci Acad Part B Biol Sci* 56:277-280.
- Lakkad BC, Nigam SK, Karnik AB, et al. 1982. Dominant-lethal study of technical-grade hexachlorocyclohexane in Swiss mice. *Mutat Res* 101:315-320.
- Lam T, Williams PL, Lee MM, et al. 2014. Prepubertal organochlorine pesticide concentrations and age of pubertal onset among Russian boys. *Environ Int* 73:135-142. <https://doi.org/10.1016/j.envint.2014.06.020>.
- Lam T, Williams PL, Lee MM, et al. 2015. Prepubertal serum concentrations of organochlorine pesticides and age at sexual maturity in Russian boys. *Environ Health Perspect* 123(11):1216-1221. <https://doi.org/10.1289/ehp.1409022>.
- Landgren O, Kyle RA, Hoppin JA, et al. 2009. Pesticide exposure and risk of monoclonal gammopathy of undetermined significance in the Agricultural Health Study. *Blood* 113(25):6386-6391. <https://doi.org/10.1182/blood-2009-02-203471>.
- Lange M, Nitzche K, Zesch A. 1981. Percutaneous absorption of lindane by healthy volunteers and scabies patients: Dependency of penetration kinetics in serum upon frequency of application, time, and mode of washing. *Arch Dermatol Res* 271:387-399.
- Lapertot ME, Pulgarin C. 2006. Biodegradability assessment of several priority hazardous substances: choice, application and relevance regarding toxicity and bacterial activity. *Chemosphere* 65(4):682-690. <https://doi.org/10.1016/j.chemosphere.2006.01.046>.
- Laug EP, Nelson AA, Fitzhugh OG, et al. 1950. Liver cell alteration and DDT storage in the fat of the rat induced by dietary levels of 1 to 50 p.p.m. DDT. *Journal of Pharmacology and Experimental Therapeutics* 98(3):268-273.
- Lauritzen HB, Larose TL, Oien T, et al. 2018. Prenatal exposure to persistent organic pollutants and child overweight/obesity at 5-year follow-up: a prospective cohort study. *Environ Health* 17(1):9. <https://doi.org/10.1186/s12940-017-0338-x>.

8. REFERENCES

- Laws SC, Carey SA, Hart DW, et al. 1994. Lindane does not alter the estrogen receptor or the estrogen-dependent induction of progesterone receptors in sexually immature or ovariectomized adult rats. *Toxicology* 92:127-142.
- Law SA, Bidleman TF, Martin MJ, et al. 2004. Evidence of enantioselective degradation of α -hexachlorocyclohexane in groundwater. *Environ Sci Technol* 38(6):1633-1638. <https://doi.org/10.1021/es030508c>.
- Lebov JF, Engel LS, Richardson D, et al. 2015. Pesticide exposure and end-stage renal disease risk among wives of pesticide applicators in the Agricultural Health Study. *Environ Res* 143(Pt A):198-210. <https://doi.org/10.1016/j.envres.2015.10.002>.
- Lee B, Groth P. 1977. Scabies: Transcutaneous poisoning during treatment [letter]. *Pediatrics* 59:643.
- Lee DH, Jacobs DR, Porta M. 2007. Association of serum concentrations of persistent organic pollutants with the prevalence of learning disability and attention deficit disorder. *J Epidemiol Community Health* 61(7):591-596. <https://doi.org/10.1136/jech.2006.054700>.
- Lee HA, Park SH, Hong YS, et al. 2016. The effect of exposure to persistent organic pollutants on metabolic health among Korean children during a 1-year follow-up. *Int J Environ Res Public Health* 13(3):270. <https://doi.org/10.3390/ijerph13030270>.
- Lee YM, Ha CM, Kim SA, et al. 2017. Low-dose persistent organic pollutants impair insulin secretory function of pancreatic β -cells: Human and in vitro evidence. *Diabetes* 66(10):2669-2680. <https://doi.org/10.2337/db17-0188>.
- Lee YM, Kim SA, Choi GS, et al. 2018a. Association of colorectal polyps and cancer with low-dose persistent organic pollutants: A case-control study. *PLoS One* 13(12):e0208546. <https://doi.org/10.1371/journal.pone.0208546>.
- Lee JY, Lee KM, Lee DH, et al. 2018b. Association of low-dose exposure to persistent organic pollutants with E-cadherin promoter methylation in healthy Koreans. *Biomarkers* 23(3):293-298. <https://doi.org/10.1080/1354750X.2017.1417482>.
- Leeder JS, Kearns GL. 1997. Pharmacogenetics in pediatrics: Implications for practice. *Ped Clin North America* 44:55-77.
- Lenters V, Iszatt N, Fornis J, et al. 2019. Early-life exposure to persistent organic pollutants (OCPs, PBDEs, PCBs, PFASs) and attention-deficit/hyperactivity disorder: A multi-pollutant analysis of a Norwegian birth cohort. *Environ Int* 125:33-42. <https://doi.org/10.1016/j.envint.2019.01.020>.
- Lerro CC, Jones RR, Langseth H, et al. 2018. A nested case-control study of polychlorinated biphenyls, organochlorine pesticides, and thyroid cancer in the Janus Serum Bank cohort. *Environ Res* 165:125-132. <https://doi.org/10.1016/j.envres.2018.04.012>.
- Lerro CC, Beane Freeman LE, DellaValle CT, et al. 2021. Pesticide exposure and incident thyroid cancer among male pesticide applicators in agricultural health study. *Environ Int* 146:106187. <https://doi.org/10.1016/j.envint.2020.106187>.
- Lewis RG, Lee RE. 1976. Air pollution from pesticides: Sources, occurrence [sic], and dispersion. In: Lee RE, ed. *Air pollution from pesticides and agricultural processes*. Cleveland, OH: CRC Press, 5-50.
- Li J, Jiang S, Chang Y, et al. 2013. Association among serum organochlorine pesticide residues, glutathione S-transferase M1 genetic polymorphism and female breast cancer. *Adv Breast Cancer Res* 2:19-23. <https://doi.org/10.4236/abcr.2013.22005>.
- Li C, Cheng Y, Tang Q, et al. 2014. The association between prenatal exposure to organochlorine pesticides and thyroid hormone levels in newborns in Yancheng, China. *Environ Res* 129:47-51. <https://doi.org/10.1016/j.envres.2013.12.009>.
- Li S, Wang X, Yang L, et al. 2016. Interaction between β -hexachlorocyclohexane and ADIPOQ genotypes contributes to the risk of type 2 diabetes mellitus in East Chinese adults. *Sci Rep* 6:37769. <https://doi.org/10.1038/srep37769>.
- Lide DR. 1991. Hexachlorocyclohexane. In: *CRC handbook of chemistry and physics: A ready-reference book of chemical and physical data*. Boston, MA: CRC Press, 35-195.
- Lifshitz M, Gavrilov V. 2002. Acute lindane poisoning in a child. *Isr Med Assoc J* 4(9):731-732.

8. REFERENCES

- Lim JE, Nam C, Yang J, et al. 2017. Serum persistent organic pollutants (POPs) and prostate cancer risk: A case-cohort study. *Int J Hyg Environ Health* 220(5):849-856. <https://doi.org/10.1016/j.ijheh.2017.03.014>.
- Lindenau A, Fischer B, Seiler P, et al. 1994. Effects of persistent chlorinated hydrocarbons on reproductive tissues in female rabbits. *Hum Reprod* 9(5):772-780. <https://doi.org/10.1093/oxfordjournals.humrep.a138595>.
- Liu PT, Morgan DP. 1986. Comparative toxicity and biotransformation of lindane in C57BL/6 and DBA/2 mice. *Life Sci* 39:1237-1244. [https://doi.org/10.1016/0024-3205\(86\)90184-0](https://doi.org/10.1016/0024-3205(86)90184-0).
- Llorens J, Tusell JM, Sunol C, et al. 1989. Effects of lindane on spontaneous behavior of rats analyzed by multivariate statistics. *Neurotoxicol Teratol* 11:145-151. [https://doi.org/10.1016/0892-0362\(89\)90053-6](https://doi.org/10.1016/0892-0362(89)90053-6).
- Llorens J, Tusell JM, Sunol C, et al. 1990. On the effects of lindane on the plus-maze model of anxiety. *Neurotoxicol Teratol* 12:643-647. [https://doi.org/10.1016/0892-0362\(90\)90078-Q](https://doi.org/10.1016/0892-0362(90)90078-Q).
- Loganathan BG, Tanabe S, Hidaka Y, et al. 1993. Temporal trends of persistent organochlorine residues in human adipose tissue from Japan, 1928-1985. *Environ Pollut* 81:31-39.
- Loge JP. 1965. Aplastic anemia following exposure to benzene hexachloride (lindane). *JAMA* 193:104-108.
- Lopez-Carrillo L, Lopez-Cervantes M, Torres-Sanchez L, et al. 2002. Serum levels of beta-hexachlorocyclohexane, hexachlorobenzene and polychlorinated biphenyls and breast cancer in Mexican women. *Eur J Cancer* 11(2):129-135.
- Lopez-Espinosa MJ, Granada A, Carreno J, et al. 2007. Organochlorine pesticides in placentas from southern Spain and some related factors. *Placenta* 28(7):631-638. <https://doi.org/10.1016/j.placenta.2006.09.009>.
- Lopez-Espinosa MJ, Vizcaino E, Murcia M, et al. 2010. Prenatal exposure to organochlorine compounds and neonatal thyroid stimulating hormone levels. *J Expo Sci Environ Epidemiol* 20(7):579-588. <https://doi.org/10.1038/jes.2009.47>.
- Lopez-Espinosa MJ, Murcia M, Iniguez C, et al. 2011. Prenatal exposure to organochlorine compounds and birth size. *Pediatrics* 128(1):e127-e134. <https://doi.org/10.1542/peds.2010-1951>.
- Luebeck EG, Graskraupp B, Timmermann-Trosienier I, et al. 1995. Growth kinetics of enzyme-altered liver foci in rats treated with phenobarbital or α -hexachlorocyclohexane. *Toxicology and Applied Pharmacology* 130(2):304-315. <https://doi.org/10.1006/taap.1995.1035>.
- Macholz RM, Kujawa M. 1985. Recent state of lindane metabolism: Part III. *Res Rev* 94:119-149.
- Macholz RM, Knoll R, Lewerenz HJ, et al. 1982a. Metabolism of alpha-hexachlorocyclohexane: Free metabolites in urine and organs of rats. *Xenobiotica* 12(4):277-231.
- Macholz RM, Knoll R, Lewerenz HJ, et al. 1982b. Biodegradation of beta-hexachlorocyclohexane: Free metabolites in rat urine and organs. *Arch Toxicol* 50:85-88.
- Mackay D, Leinonen PJ. 1975. Rate of evaporation of low-solubility contaminants from water bodies to atmosphere. *Environ Sci Technol* 9:1178-1180.
- Madrigal JM, Sargis RM, Persky V, et al. 2021. Multiple organochlorine pesticide exposures and measures of sex steroid hormones in adult males: Cross-sectional findings from the 1999-2004 National Health and Nutrition Examination Survey. *Int J Hyg Environ Health* 231:113609. <https://doi.org/10.1016/j.ijheh.2020.113609>.
- Magliano DJ, Ranciere F, Slama R, et al. 2021. Exposure to persistent organic pollutants and the risk of type 2 diabetes: a case-cohort study. *Diabetes Metab* 47(5):101234. <https://doi.org/10.1016/j.diabet.2021.101234>.
- Malaiyandi M, Muzika K, Benoit FM. 1982. Isomerization of γ -hexachlorocyclohexane to its α -isomer by ultra-violet light irradiation. *J Environ Sci Health A* 17:299-311.
- Maranghi F, Rescia M, Macri C, et al. 2007. Lindane may modulate the female reproductive development through the interaction with ER- β : an in vivo-in vitro approach. *Chem Biol Interact* 169(1):1-14. <https://doi.org/10.1016/j.cbi.2007.04.008>.

8. REFERENCES

- Marks KJ, Howards PP, Smarr MM, et al. 2021. Prenatal exposure to mixtures of persistent endocrine disrupting chemicals and early menarche in a population-based cohort of British girls. *Environ Pollut* 276:116705. <https://doi.org/10.1016/j.envpol.2021.116705>.
- Marsalek J, Schroeter H. 1988. Annual loadings of toxic contaminants in urban runoff from the Canadian Great Lakes basin. *Water Pollut Res J Can* 23:360-378.
- Martinez AO, Martinez-Conde E. 1995. The neurotoxic effects of lindane at acute and subchronic dosages. *Ecotoxicol Environ Saf* 30:101-105. <https://doi.org/10.1006/eesa.1995.1011>.
- Martinez E, de Vera N, Artigas F. 1991. Differential response of rat brain polyamines to convulsant agents. *Life Sci* 48:77-84. [https://doi.org/10.1016/0024-3205\(91\)90427-D](https://doi.org/10.1016/0024-3205(91)90427-D).
- Marvin C, Painter S, Williams D, et al. 2004. Spatial and temporal trends in surface water and sediment contamination in the Laurentian Great Lakes. *Environ Pollut* 129(1):131-144. <https://doi.org/10.1016/j.envpol.2003.09.029>.
- Mathur AK, Narang S, Gupta BN, et al. 1992. Effect of dermal exposure to LAS detergent and HCH pesticide in guinea pigs: Biochemical and histopathologic changes in liver and kidney. *J Toxicol Cutaneous Ocul Toxicol* 11(1):3-13. <https://doi.org/10.3109/15569529209042589>.
- Mathur AK, Narang S, Gupta BN, et al. 1993. Interaction of linear alkylbenzene sulfonate and hexachlorocyclohexane in guinea pigs after dermal application. *J Toxicol Cutaneous Ocul Toxicol* 12(1):25-34. <https://doi.org/10.3109/15569529309057656>.
- Matsumura F, Benezet HJ. 1973. Studies on the bioaccumulation and microbial degradation of 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Environ Health Perspect* 5:253-258.
- Matsuoka LY. 1981. Convulsions following application of gamma-benzene hexachloride [letter]. *J Am Acad Dermatol* 5:98-99.
- Matsuura I, Saitoh T, Tani E, et al. 2005. Evaluation of a two-generation reproduction toxicity study adding endpoints to detect endocrine disrupting activity using lindane. *J Toxicol Sci* 30(Special Issue):S135-S161. <https://doi.org/10.2131/jts.30.s135>.
- Mattioli F, Robbiano L, Adamo D, et al. 1996. Genotoxic effects of α -hexachlorocyclohexane in primary cultures of rodent and human hepatocytes. *Mutagenesis* 11(1):79-83.
- McCarthy JP, Adinolfi J, McMullin SL, et al. 1992. NCA survey of pesticide residues in brewed coffees. *Colloq Sci Int Cafe* 14:175-181.
- McCready D, Aronson KJ, Chu W, et al. 2004. Breast tissue organochlorine levels and metabolic genotypes in relation to breast cancer risk Canada. *Cancer Causes Control* 15(4):399-418. <https://doi.org/10.1023/B:CACO.0000027505.32564.c2>.
- McGlynn KA, Quraishi SM, Graubard BI, et al. 2008. Persistent organochlorine pesticides and risk of testicular germ cell tumors. *J Natl Cancer Inst* 100(9):663-671. <https://doi.org/10.1093/jnci/djn101>.
- McNamara BP, Krop S. 1948. Observations on the pharmacology of the isomers of hexachlorocyclohexane. *J Pharmacol Exp Ther* 92:140-146.
- McQueen EG, Brosnan C, Ferry DG. 1968. Poisoning from a rose spray containing lindane and malathion. *N Z Med J* 67:533-537.
- McTernan WF, Pereira JA. 1991. Biotransformation of lindane and 2,4-D in batch enrichment cultures. *Water Res* 25:1417-1423.
- Medehouenou TCM, Ayotte P, Carmichael PH, et al. 2019. Exposure to polychlorinated biphenyls and organochlorine pesticides and risk of dementia, Alzheimer's disease and cognitive decline in an older population: a prospective analysis from the Canadian Study of Health and Aging. *Environ Health* 18(1):57. <https://doi.org/10.1186/s12940-019-0494-2>.
- Mediratta PK, Tanwar K, Reeta KH, et al. 2008. Attenuation of the effect of lindane on immune responses and oxidative stress by *Ocimum sanctum* seed oil (OSSO) in rats. *Indian J Physiol Pharmacol* 52(2):171-177.
- Meera P, Rao PR, Shanker R, et al. 1992. Immunomodulatory effects of γ -HCH (lindane) in mice. *Immunopharmacol Immunotoxicol* 14(1-2):261-282. <https://doi.org/10.3109/08923979209009224>.
- Melancon SM, Pollard JE, Hern SC. 1986. Evaluation of SESOIL, PRZM and PESTAN in a laboratory column leaching experiment. *Environ Toxicol Chem* 5:865-878.

8. REFERENCES

- Mendeloff AI, Smith DE. 1955. Exposure to insecticides, bone marrow failure, gastrointestinal bleeding, and uncontrollable infections. *Am J Med* 9:274-284.
- Mendez MA, Garcia-Esteban R, Guxens M, et al. 2011. Prenatal organochlorine compound exposure, rapid weight gain, and overweight in infancy. *Environ Health Perspect* 119(2):272-278. <https://doi.org/10.1289/ehp.1002169>.
- Meng G, Feng Y, Nie Z, et al. 2016. Internal exposure levels of typical POPs and their associations with childhood asthma in Shanghai, China. *Environ Res* 146:125-135. <https://doi.org/10.1016/j.envres.2015.12.026>.
- Mes J. 1992. Organochlorine residues in human blood and biopsy fat and their relationship. *Bull Environ Contam Toxicol* 48:815-820.
- Mes J, Malcolm S. 1992. Comparison of chlorinated hydrocarbon residues in human populations from the Great Lakes and other regions of Canada. *Chemosphere* 25:417-424.
- Miao Y, Rong M, Li M, et al. 2021. Serum concentrations of organochlorine pesticides, biomarkers of oxidative stress, and risk of breast cancer. *Environ Pollut* 286:117386. <https://doi.org/10.1016/j.envpol.2021.117386>.
- Miao Y, Zeng JY, Rong M, et al. 2022. Organochlorine pesticide exposures, metabolic enzyme genetic polymorphisms and semen quality parameters among men attending an infertility clinic. *Chemosphere* 303(Pt 1):135010. <https://doi.org/10.1016/j.chemosphere.2022.135010>.
- Michalakakis M, Tzatzarakis M, Alegakis A, et al. 2012. Pesticides levels (DDTs, HCHs and DAPs) in blood and hair samples of children diagnosed with hypospadias. *Toxicology Letters* 211:S187. <https://doi.org/10.1016/j.toxlet.2012.03.673>.
- Mill T. 1999. Predicting photoreaction rates in surface waters. *Chemosphere* 38:1379-1390.
- Min JY, Cho JS, Lee KJ, et al. 2011. Potential role for organochlorine pesticides in the prevalence of peripheral arterial diseases in obese persons: results from the National Health and Nutrition Examination Survey 1999-2004. *Atherosclerosis* 218(1):200-206. <https://doi.org/10.1016/j.atherosclerosis.2011.04.044>.
- Minh NH, Someya M, Minh TB, et al. 2004. Persistent organochlorine residues in human breast milk from Hanoi and Hochiminh City, Vietnam: contamination, accumulation kinetics and risk assessment for infants. *Environ Pollut* 129(3):431-441. <https://doi.org/10.1016/j.envpol.2003.11.012>.
- Mladenović D, Hrncić D, Vučević D, et al. 2007. Ethanol suppressed seizures in lindane-treated rats. Electroencephalographic and behavioral studies. *J Physiol Pharmacol* 58(4):641-656.
- Mørck TA, Erdmann SE, Long M, et al. 2014. PCB concentrations and dioxin-like activity in blood samples from Danish school children and their mothers living in urban and rural areas. *Basic Clin Pharmacol Toxicol* 115(1):134-144. <https://doi.org/10.1111/bcpt.12214>.
- Morello-Frosch R, Cushing LJ, Jesdale BM, et al. 2016. Environmental chemicals in an urban population of pregnant women and their newborns from San Francisco. *Environ Sci Technol* 50(22):12464-12472. <https://doi.org/10.1021/acs.est.6b03492>.
- Morgan DP, Lin LI. 1978. Blood organochlorine pesticide concentrations, clinical hematology, and biochemistry in workers occupationally exposed to pesticides. *Arch Environ Contam Toxicol* 7:423-447.
- Morgan DP, Roberts RJ, Walter AW, et al. 1980. Anemia associated with exposure to lindane. *Arch Environ Health* 35:307-310.
- Morgan MK, Wilson NK, Chuang JC. 2014. Exposures of 129 preschool children to organochlorines, organophosphates, pyrethroids, and acid herbicides at their homes and daycares in North Carolina. *Int J Environ Res Public Health* 11(4):3743-3764. <https://doi.org/10.3390/ijerph110403743>.
- Moriya M, Ohta T, Watanabe K, et al. 1983. Further mutagenicity studies on pesticides in bacterial reversion assay systems. *Mutat Res* 116:185-216.
- Mortazavi N, Asadikaram G, Ebadzadeh MR, et al. 2019. Organochlorine and organophosphorus pesticides and bladder cancer: A case-control study. *J Cell Biochem* 120(9):14847-14859. <https://doi.org/10.1002/jcb.28746>.

8. REFERENCES

- Mougin C, Pericaud C, Malosse C, et al. 1996. Biotransformation of the insecticide lindane by the white rot basidiomycete *Phanerochaete chrysosporium*. *Pestic Sci* 47:51-59.
- Mougin C, Pericaud C, Dubroca J, et al. 1997. Enhanced mineralization of lindane in soils supplemented with the white rot basidiomycete *Phanerochaete chrysosporium*. *Soil Biol Biochem* 29(9):1321-1324.
- Mudawal A, Srivastava A, Singh A, et al. 2018. Proteomic approaches to investigate age related vulnerability to lindane induced neurodegenerative effects in rats. *Food Chem Toxicol* 115:499-510. <https://doi.org/10.1016/j.fct.2018.03.049>.
- Muller D, Klepel H, Macholz RM, et al. 1981. Electroneurophysiological studies on neurotoxic effects of hexachlorocyclohexane isomers and gamma-pentachlorocyclohexene. *Bull Environ Contam Toxicol* 27(5):704-706. <https://doi.org/10.1007/BF01611085>.
- Mumtaz MM, Ray M, Crowell SR, et al. 2012a. Translational research to develop a human PBPK models tool kit-volatile organic compounds (VOCs). *J Toxicol Environ Health A* 75(1):6-24. <https://doi.org/10.1080/15287394.2012.625546>.
- Mumtaz M, Fisher J, Blount B, et al. 2012b. Application of physiologically based pharmacokinetic models in chemical risk assessment. *J Toxicol* 2012:904603. <https://doi.org/10.1155/2012/904603>.
- Munir KM, Soman CS, Bhide SV. 1983. Hexachlorocyclohexane-induced tumorigenicity in mice under different experimental conditions. *Tumori* 69:383-386. <https://doi.org/10.1177/030089168306900503>.
- Munk ZM, Nantel A. 1977. Acute lindane poisoning with development of muscle necrosis. *Can Med Assoc J* 117:1050-1054.
- Murli H. 1990. Lindane (technical): In an in vitro cytogenetic assay measuring chromosomal aberration frequencies in Chinese Hamster Ovary (CHO) cells with multiple harvests under conditions of metabolic activation. Kensington, MD: Hazelton Laboratories America, Inc. HLA Study No. 12024-0-437C.
- Murphy R, Harvey C. 1985. Residues and metabolites of selected persistent halogenated hydrocarbons in blood specimens from a general population survey. *Environ Health Perspect* 60:115-120.
- Mustafa MD, Banerjee BD, Ahmed RS, et al. 2013. Gene-environment interaction in preterm delivery with special reference to organochlorine pesticides. *Mol Hum Reprod* 19(1):35-42. <https://doi.org/10.1093/molehr/gas039>.
- Mustieles V, Fernandez MF, Martin-Olmedo P, et al. 2017. Human adipose tissue levels of persistent organic pollutants and metabolic syndrome components: Combining a cross-sectional with a 10-year longitudinal study using a multi-pollutant approach. *Environ Int* 104:48-57. <https://doi.org/10.1016/j.envint.2017.04.002>.
- Naeher LP, Barr DB, Rithmire N, et al. 2009. Pesticide exposure resulting from treatment of lice infestation in school-aged children in Georgia. *Environ Int* 35(2):358-362. <https://doi.org/10.1016/j.envint.2008.09.001>.
- Nagaraja TN, Desiraju T. 1994. Brain regional variations in the levels of biogenic amines, glutamate, GABA and glutamate decarboxylase activity in developing and adult rats exposed chronically to hexachlorocyclohexane. *Biogenic Amines* 10:141-149.
- Nagasaki H, Kawabata H, Miyata K, et al. 1975. Effect of various factors on induction of liver tumors in animals by the α -isomer of benzene hexachloride. *Gann* 66(2):185-191. https://doi.org/10.20772/cancersci1959.66.2_185.
- Nagda G, Bhatt DK. 2011. Alleviation of lindane induced toxicity in testis of Swiss mice (*Mus musculus*) by combined treatment with vitamin C, vitamin E and α -lipoic acid. *Indian J Exp Biol* 49(3):191-199.
- Nagy Z, Mile I, Antoni F. 1975. The mutagenic effect of pesticides on *Escherichia coli* WP2 try. *Acta Microbiol Acad Sci Hung* 22(3):309-314.
- Nair A, Mandapati R, Dureja P, et al. 1996. DDT and HCH load in mothers and their infants in Delhi, India. *Bull Environ Contam Toxicol* 56:58-64.

8. REFERENCES

- Namulanda G, Maisonet M, Taylor E, et al. 2016. In utero exposure to organochlorine pesticides and early menarche in the Avon Longitudinal Study of parents and children. *Environ Int* 94:467-472. <https://doi.org/10.1016/j.envint.2016.06.001>.
- Nantel A, Ayotte L, Benedatti JL, et al. 1977. A group of adults acutely poisoned by food contaminated with lindane. *Acta Pharmacol Toxicol* 41(Suppl 2):250.
- NAS/NRC. 2006. Human biomonitoring for environmental chemicals. Washington, DC: The National Academies Press, National Research Council. <https://doi.org/10.17226/11700>.
- NCI. 1977. Bioassay of lindane for possible carcinogenicity. Bethesda, MD: National Cancer Institute. DHEW publication no. (NIH) 77-814. https://ntp.niehs.nih.gov/sites/default/files/ntp/htdocs/lt_rpts/tr014.pdf. August 4, 2023.
- Neidert E, Saschenbrecker PW. 1996. Occurrence of pesticide residues in selected agricultural food commodities available in Canada. *J AOAC Int* 79:549-566.
- Neururer H, Womastek R. 1991. [Pesticides in the air]. *Bodenkultur* 42:57-70. (German)
- Nigam SK, Lakkad BC, Karnick AB, et al. 1979. Effect of hexachlorocyclohexane feeding on testicular tissue of pure inbred Swiss mice. *Bull Environ Contam Toxicol* 23(4-5):431-437. <https://doi.org/10.1007/BF01769983>.
- Nigam SK, Karnick AB, Majumder SK, et al. 1986. Serum hexachlorocyclohexane residues in workers engaged at a HCH manufacturing plant. *Int Arch Occup Environ Health* 57:315-320.
- NIOSH. 1994. Lindane. Immediately dangerous to life or health concentrations (IDLH). National Institute for Occupational Safety and Health. <https://www.cdc.gov/niosh/idlh/58899.html>. March 23, 2021.
- NIOSH. 2019. Lindane. NIOSH pocket guide to chemical hazards. National Institute for Occupational Safety and Health. <https://www.cdc.gov/niosh/npg/npgd0370.html>. March 23, 2021.
- NLM. 2021. PubChem: Lindane. National Library of Medicine. <https://pubchem.ncbi.nlm.nih.gov/compound/727>. May 11, 2021.
- Noegrohati S, Hammers WE. 1992. Sorption-desorption kinetics of some organochlorine insecticides in silt-water suspensions. *Toxicol Environ Chem* 34:187-206.
- Nordmeyer H, Pestemer W, Rahman A. 1992. Sorption and transport behavior of some pesticides in groundwater sediments. *Stygologia* 7:5-11.
- Nordt SP, Chew G. 2000. Acute lindane poisoning in three children. *J Emerg Med* 18(1):51-53.
- NTP. 1984. National Toxicology Program fiscal year 1984 annual plan. Research Triangle Park, NC: National Toxicology Program.
- NTP. 2013. Draft OHAT approach for systematic review and evidence integration for literature-based health assessments – February 2013. National Toxicology Program. https://ntp.niehs.nih.gov/ntp/ohat/evaluationprocess/draftohatapproach_february2013.pdf. May 5, 2021.
- NTP. 2015. OHAT risk of bias rating tool for human and animal studies. National Toxicology Program. https://ntp.niehs.nih.gov/ntp/ohat/pubs/riskofbiastool_508.pdf. March 19, 2019.
- NTP. 2021. Lindane, hexachlorocyclohexane (technical grade), and other hexachlorocyclohexane isomers. In: Report on carcinogens. 15th ed. National Toxicology Program, <https://ntp.niehs.nih.gov/sites/default/files/ntp/roc/content/profiles/lindane.pdf>. July 16, 2023.
- Nybom N, Knutsson B. 1947. Investigations on C-mitosis in *Allium cepa*. *Hereditas* 33:220-234.
- Nyholm N, Jacobsen BN, Pedersen BM, et al. 1992. Removal of organic micropollutants at ppb levels in laboratory activated-sludge reactors under various operating-conditions: biodegradation. *Water Res* 26:339-353.
- Ociepa-Zawal M, Rubis B, Wawrzynczak D, et al. 2010. Accumulation of environmental estrogens in adipose tissue of breast cancer patients. *J Environ Sci Health A Tox Hazard Subst Environ Eng* 45(3):305-312. <https://doi.org/10.1080/10934520903468038>.
- Oesch F, Friedberg T, Herbst M, et al. 1982. Effects of lindane treatment on drug metabolizing enzymes and liver weight of CF1 mice in which it evoked hepatomas and in non-susceptible rodents. *Chem Biol Interact* 40:1-14.

8. REFERENCES

- Oldiges H, Takenaka S, Hochrainer D. 1980. Inhalation study with lindane (γ -hexachlorocyclohexane) to determine the LC50. Schmalleberg, Germany: Fraunhofer-Institut, Institute for Toxicology and Aerosol Research. Celamerck Document No. 111AA-423-002.
- Oldiges H, Hertel R, K rdel W, et al. 1983. 90-day inhalation study with lindane. Schmalleberg, Germany: Fraunhofer-Institut, Institute for Toxicology and Aerosol Research. Celamerck Document No. 111AC-435-005.
- Olgun S, Misra HP. 2006. Pesticides induced oxidative stress in thymocytes. *Mol Cell Biochem* 290(1-2):137-144. <https://doi.org/10.1007/s11010-006-9178-7>.
- Olgun S, Gogal RM, Adeshina F, et al. 2004. Pesticide mixtures potentiate the toxicity in murine thymocytes. *Toxicology* 196(3):181-195. <https://doi.org/10.1016/j.tox.2003.09.007>.
- Oliver BG, Charlton MN. 1984. Chlorinated organic contaminants on settling particulates in the Niagara River vicinity of Lake Ontario. *Environ Sci Technol* 18:903-908.
- Orr JW. 1948. Absence of carcinogenic activity of benzene hexachloride ('gammexane'). *Nature* 162(4109):189-189. <https://doi.org/10.1038/162189a0>.
- Ortega P, Hayes WJ, Durham WF. 1957. Pathologic changes in the liver of rats after feeding low levels of various insecticides. *AMA Arch Pathol* 64:614-622.
- OSHA. 2021a. Occupational safety and health standards. Subpart Z - Toxic and hazardous substances. Air contaminants. Table Z-1: Limits for air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1910.1000. <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol6/pdf/CFR-2021-title29-vol6-sec1910-1000.pdf>. August 28, 2022.
- OSHA. 2021b. Occupational safety and health standards for shipyard employment. Subpart Z - Toxic and hazardous substances. Air contaminants. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1915.1000. <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol7/pdf/CFR-2021-title29-vol7-sec1915-1000.pdf>. August 28, 2022.
- OSHA. 2021c. Safety and health regulations for construction. Subpart D - Occupational health and environment controls. Gases, vapors, fumes, dusts, and mists. Occupational Safety and Health Administration. Code of Federal Regulations. 29 CFR 1926.55. <https://www.govinfo.gov/content/pkg/CFR-2021-title29-vol8/pdf/CFR-2021-title29-vol8-sec1926-55.pdf>. August 28, 2022.
- Padma TV, Dickhut RM. 2002. Spatial and temporal variation in hexachlorocyclohexane isomers in a temperate estuary. *Mar Pollut Bull* 44(12):1345-1353. [https://doi.org/10.1016/s0025-326x\(02\)00171-6](https://doi.org/10.1016/s0025-326x(02)00171-6).
- Page GW. 1981. Comparison of groundwater and surface water for patterns and levels of contamination by toxic substances. *Environ Sci Technol* 15:1475-1481.
- Pages N, diBlasi-Vouvet S, Schlatter J, et al. 2000. Hormone disruptive effects of residual doses of lindane in male rats exposed at prenatal and postnatal periods [Abstract]. *Hum Exp Toxicol* 19(8):479.
- Pahwa P, Karunanayake CP, Dosman JA, et al. 2011. Soft-tissue sarcoma and pesticides exposure in men: results of a Canadian case-control study. *J Occup Environ Med* 53(11):1279-1286. <https://doi.org/10.1097/JOM.0b013e3182307845>.
- Palmer AK, Bottomley AM, Worden AN, et al. 1978. Effect of lindane on pregnancy in the rabbit and rat. *Toxicology* 9:239-247. [https://doi.org/10.1016/0300-483X\(78\)90006-9](https://doi.org/10.1016/0300-483X(78)90006-9).
- Pankow JF, Isabelle LM, Asher WE. 1984. Trace organic compounds in rain. 1. Sampler design and analysis by adsorption/thermal desorption (ATD). *Environ Sci Technol* 18:310-318.
- Park EY, Kim J, Park E, et al. 2021. Serum concentrations of persistent organic pollutants and colorectal cancer risk: A case-cohort study within Korean National Cancer Center Community (KNCCC) cohort. *Chemosphere* 271:129596. <https://doi.org/10.1016/j.chemosphere.2021.129596>.
- Parmar D, Yadav S, Dayal M, et al. 2003. Effect of lindane on hepatic and brain cytochrome P450s and influence of P450 modulation in lindane induced neurotoxicity. *Food Chem Toxicol* 41(8):1077-1087. [https://doi.org/10.1016/s0278-6915\(03\)00045-0](https://doi.org/10.1016/s0278-6915(03)00045-0).

8. REFERENCES

- Paul R, Talukdar A, Bhattacharya R, et al. 2013. γ -Benzene hexachloride poisoning leading to acute hepatorenal decompensation. *BMJ Case Rep* 2013:9851. <https://doi.org/10.1136/bcr-2013-009851>.
- Pestana D, Fernandes V, Faria G, et al. 2011. Persistent organic pollutant (POPs) levels in human visceral and subcutaneous adipose tissue on an obese Portuguese population-Metabolic improvement after bariatric surgery versus POPs burden. *Toxicology Letters* 205:S75-S76. <https://doi.org/10.1016/j.toxlet.2011.05.284>.
- Petersen MS, Halling J, Bech S, et al. 2008. Impact of dietary exposure to food contaminants on the risk of Parkinson's disease. *Neurotoxicology* 29(4):584-590. <https://doi.org/10.1016/j.neuro.2008.03.001>.
- Philip GH, Sriraman PK, Ramamurthi R. 1989. Histopathological changes in liver and kidney of *Mus booduga* following oral benzenehexachloride (BHC) feeding. *Bull Environ Contam Toxicol* 42(4):499-502. <https://doi.org/10.1007/BF01700228>.
- Pi N, Chia SE, Ong CN, et al. 2016. Associations of serum organohalogen levels and prostate cancer risk: Results from a case-control study in Singapore. *Chemosphere* 144:1505-1512. <https://doi.org/10.1016/j.chemosphere.2015.10.020>.
- Piccoli C, Cremonese C, Koifman RJ, et al. 2016. Pesticide exposure and thyroid function in an agricultural population in Brazil. *Environ Res* 151:389-398. <https://doi.org/10.1016/j.envres.2016.08.011>.
- Pierik FH, Klebanoff MA, Brock JW, et al. 2007. Maternal pregnancy serum level of heptachlor epoxide, hexachlorobenzene, and β -hexachlorocyclohexane and risk of cryptorchidism in offspring. *Environ Res* 105(3):364-369. <https://doi.org/10.1016/j.envres.2007.04.005>.
- Pius J, Shivanandappa T, Krishnakumari MK. 1990. Protective role of vitamin A in the male reproductive toxicity of hexachlorocyclohexane (HCH) in the rat. *Reprod Toxicol* 4:325-330.
- Ploteau S, Cano-Sancho G, Volteau C, et al. 2017. Associations between internal exposure levels of persistent organic pollutants in adipose tissue and deep infiltrating endometriosis with or without concurrent ovarian endometrioma. *Environ Int* 108:195-203. <https://doi.org/10.1016/j.envint.2017.08.019>.
- Pollack AZ, Krall JR, Kannan K, et al. 2021. Adipose to serum ratio and mixtures of persistent organic pollutants in relation to endometriosis: Findings from the ENDO Study. *Environ Res* 195:110732. <https://doi.org/10.1016/j.envres.2021.110732>.
- Pool-Zobel BL, Lotzman N, Knoll M, et al. 1994. Detection of genotoxic effects in human gastric and nasal mucosa cells isolated from biopsy samples. *Environ Mol Mutagen* 24:23-45.
- Porta M, Jarrod M, López T, et al. 2009. Correcting serum concentrations of organochlorine compounds by lipids: alternatives to the organochlorine/total lipids ratio. *Environ Int* 35(7):1080-1085. <https://doi.org/10.1016/j.envint.2009.06.004>.
- Porta M, Gasull M, Pumarega J, et al. 2022. Plasma concentrations of persistent organic pollutants and pancreatic cancer risk. *Int J Epidemiol* 51(2):479-490. <https://doi.org/10.1093/ije/dyab115>.
- Portig J, Stein K, Vohland HW. 1989. Preferential distribution of α -hexachlorocyclohexane into cerebral white matter. *Xenobiotica* 19:123-130.
- Powell GM. 1980. Toxicity of lindane [letter]. *Central Afr J Med* 26:170.
- Prasad AK, Pant N, Srivastava SC, et al. 1995. Effect of dermal application of hexachlorocyclohexane (HCH) on male reproductive system of rat. *Hum Exp Toxicol* 14(6):484-488. <https://doi.org/10.1177/096032719501400603>.
- Prasad WL, Srilatha C, Sailaja N, et al. 2016. Amelioration of gamma-hexachlorocyclohexane (lindane) induced renal toxicity by *Camellia sinensis* in Wistar rats. *Vet World* 9(11):1331-1337. <https://doi.org/10.14202/vetworld.2016.1331-1337>.
- Presutti R, Harris SA, Kachuri L, et al. 2016. Pesticide exposures and the risk of multiple myeloma in men: An analysis of the North American Pooled Project. *Int J Cancer* 139(8):1703-1714. <https://doi.org/10.1002/ijc.30218>.

8. REFERENCES

- Purdue MP, Hoppin JA, Blair A, et al. 2007. Occupational exposure to organochlorine insecticides and cancer incidence in the Agricultural Health Study. *Int J Cancer* 120(3):642-649. <https://doi.org/10.1002/ijc.22258>.
- Quadroni S, Bettinetti R. 2019. An unnoticed issue: Organochlorine pesticides in tobacco products around the world. *Chemosphere* 219:54-57. <https://doi.org/10.1016/j.chemosphere.2018.12.009>.
- Quansah R, Bend JR, Abdul-Rahaman A, et al. 2016. Associations between pesticide use and respiratory symptoms: A cross-sectional study in Southern Ghana. *Environ Res* 150:245-254. <https://doi.org/10.1016/j.envres.2016.06.013>.
- Quintana PJ, Delfino RJ, Korrick S, et al. 2004. Adipose tissue levels of organochlorine pesticides and polychlorinated biphenyls and risk of non-Hodgkin's lymphoma. *Environ Health Perspect* 112(8):854-861. <https://doi.org/10.1289/ehp.6726>.
- Quintero JC, Moreira MT, Feijoo G, et al. 2005. Effect of surfactants on the soil desorption of hexachlorocyclohexane (HCH) isomers and their anaerobic biodegradation. *Journal of Chemical Technology and Biotechnology* 80(9):1005-1015. <https://doi.org/10.1002/jctb.1277>.
- Raaschou-Nielsen O, Pavuk M, Leblanc A, et al. 2005. Adipose organochlorine concentrations and risk of breast cancer among postmenopausal Danish women. *Cancer Epidemiol Biomarkers Prev* 14(1):67-74.
- Radomski JL, Astolfi E, Deichmann WB, et al. 1971a. Blood levels of organochlorine pesticides in Argentina: Occupationally and nonoccupationally exposed adults, children and newborn infants. *Toxicol Appl Pharmacol* 20:186-193.
- Radomski JL, Deichmann WB, Rey AA, et al. 1971b. Human pesticide blood levels as a measure of body burden and pesticide exposure. *Toxicol Appl Pharmacol* 20:175-185.
- Radosavljević T, Mladenović D, Vučević D, et al. 2008. Effect of acute lindane and alcohol intoxication on serum concentration of enzymes and fatty acids in rats. *Food Chem Toxicol* 46(5):1739-1743. <https://doi.org/10.1016/j.fct.2008.01.011>.
- Rafeeinia A, Asadikaram G, Karimi Darabi M, et al. 2023. Organochlorine pesticides, oxidative stress biomarkers, and leukemia: a case-control study. *J Investig Med* 71(3):295-306. <https://doi.org/10.1177/10815589221145043>.
- Raizada RB, Misra P, Saxena I, et al. 1980. Weak estrogenic activity of lindane in rats. *J Toxicol Environ Health* 6:483-492.
- Raizada RB, Srivastava MK, Sarin S. 1993. Impact of technical hexachlorocyclohexane (HCH) on biogenic amines and locomotor activity of rat. *Natl Acad Sci Letts Indian* 16(2):73-76.
- Ramabhatta S, Sunilkumar GR, Somashekhar C. 2014. Lindane toxicity following accidental oral ingestion. *Indian J Dermatol Venereol Leprol* 80(2):181-182. <https://doi.org/10.4103/0378-6323.129419>.
- Ramachandran M, Banerjee BD, Gulati M, et al. 1984. DDT and HCH residues in the body fat and blood samples from some Delhi hospitals. *Indian J Med Res* 80:590-593.
- Ramamoorthy S. 1985. Competition of fate processes in the bioconcentration of lindane. *Bull Environ Contam Toxicol* 34:349-358.
- Ramchander V, Cameron ES, Reid HF. 1991. Lindane toxicity in an infant. *West Indian Med J* 40:41-43.
- Rauch AE, Kowalsky SF, Lesar TS, et al. 1990. Lindane (Kwell)-induced aplastic anemia. *Arch Intern Med* 150:2393-2395.
- Ravinder P, Srinivasan K, Radhakrishnamurthy R. 1989. Biochemical toxicity of hexachlorocyclohexane and its γ -isomer in albino mice. *Indian J Exp Biol* 27(3):248-251.
- Ravinder P, Srinivasan K, Radhakrishnamurthy R. 1990. Dietary hexachlorocyclohexane induced changes in blood and liver lipids in albino mice. *Indian J Exp Biol* 28(2):155-157.
- Reina-Pérez I, Artacho-Cordón F, Mustieles V, et al. 2023. Cross-sectional associations of persistent organic pollutants measured in adipose tissue and metabolic syndrome in clinically diagnosed middle-aged adults. *Environ Res* 222:115350. <https://doi.org/10.1016/j.envres.2023.115350>.

8. REFERENCES

- Reinhart DR, Pohland FG. 1991. The assimilation of organic hazardous wastes by municipal solid waste landfills. *J Ind Microbiol* 8:193-200.
- Reinhart DR, Pohland FG, Gould JP, et al. 1991. The fate of selected organic pollutants codisposed with municipal refuse. *Res J Water Pollut Control Fed* 63:780-788.
- RePORTER. 2023. Hexachlorocyclohexanes. National Institutes of Health, Research Portfolio Online Reporting Tools. <http://projectreporter.nih.gov/reporter.cfm>. March 15, 2021.
- Ribas-Fito N, Sala M, Cardo E, et al. 2003. Organochlorine compounds and concentrations of thyroid stimulating hormone in newborns. *Occup Environ Med* 60(4):301-303. <https://doi.org/10.1136/oem.60.4.301>.
- Richardson JR, Shalat SL, Buckley B, et al. 2009. Elevated serum pesticide levels and risk of Parkinson disease. *Arch Neurol* 66(7):870-875. <https://doi.org/10.1001/archneurol.2009.89>.
- Richardson JR, Roy A, Shalat SL, et al. 2011. β -Hexachlorocyclohexane levels in serum and risk of Parkinson's disease. *Neurotoxicology* 32(5):640-645. <https://doi.org/10.1016/j.neuro.2011.04.002>.
- Rippen G, Ilgenstein M, Klöpffer W, et al. 1982. Screening of the adsorption behavior of new chemicals: Natural soils and model adsorbents. *Ecotoxicology and Environmental Safety* 6(3):236-245. [https://doi.org/10.1016/0147-6513\(82\)90014-8](https://doi.org/10.1016/0147-6513(82)90014-8).
- Rivera S, Sanfeliu C, Sunol C, et al. 1991. Regional effects on the cerebral concentration of noradrenaline, serotonin, and dopamine in suckling rats after a single dose of lindane. *Toxicology* 69:43-54. [https://doi.org/10.1016/0300-483X\(91\)90152-Q](https://doi.org/10.1016/0300-483X(91)90152-Q).
- Rivera S, Rosa R, Marinez E, et al. 1998. Behavioral and monoaminergic changes after lindane exposure in developing rats. *Neurotoxicol Teratol* 20(2):155-160. [https://doi.org/10.1016/S0892-0362\(97\)00079-2](https://doi.org/10.1016/S0892-0362(97)00079-2).
- Rivett KF, Chesterman H, Kellett DN, et al. 1978. Effects of feeding lindane to dogs for periods of up to 2 years. *Toxicology* 9:273-289. [https://doi.org/10.1016/0300-483X\(78\)90010-0](https://doi.org/10.1016/0300-483X(78)90010-0).
- Rocchi P, Perocco P, Alberghini W, et al. 1980. Effect of pesticides on scheduled and unscheduled DNA synthesis of rat thymocytes and human lymphocytes. *Arch Toxicol* 45:101-108.
- Rogers WM, Kendall DC, Salmon GD, et al. 1995. Accumulated pesticide and industrial chemical findings from a ten-year study of ready-to-eat foods. *J AOAC Int* 78:614-631.
- Rooney AA, Boyles AL, Wolfe MS, et al. 2014. Systematic review and evidence integration for literature-based environmental health science assessments. *Environ Health Perspect* 122(7):711-718. <https://doi.org/10.1289/ehp.1307972>.
- Roy RR, Wilson P, Laski RR, et al. 1997. Monitoring of domestic and imported apples and rice by the U.S. Food and Drug Administration Pesticide Program. *J AOAC Int* 80:883-894.
- Roy Chowdhury A, Gautam AK. 1990. BHC induced testicular impairments in rats. *Indian J Physiol Pharmacol* 34:215-217.
- Rüdel H. 1997. Volatilisation of pesticides from soil and plant surfaces. *Chemosphere* 38(1-2):143-152.
- Rugman FP, Cosstick R. 1990. Aplastic anaemia associated with organochlorine pesticide: Case reports and review of evidence. *J Clin Pathol* 43:98-101.
- Ruiz P, Ray M, Fisher J, et al. 2011. Development of a human Physiologically Based Pharmacokinetic (PBPK) Toolkit for environmental pollutants. *Int J Mol Sci* 12(11):7469-7480. <https://doi.org/10.3390/ijms12117469>.
- Rupa DS, Rita P, Reddy PP, et al. 1988. Screening of chromosomal aberrations and sister chromatid exchanges in peripheral lymphocytes of vegetable garden workers. *Hum Toxicol* 7:333-336.
- Rupa DS, Reddy PP, Reddi OS. 1989a. Analysis of sister-chromatid exchanges, cell kinetics and mitotic index in lymphocytes of smoking pesticide sprayers. *Mutat Res* 223:253-258.
- Rupa DS, Reddy PP, Reddi OS. 1989b. Chromosomal aberrations in peripheral lymphocytes of cotton field workers exposed to pesticides. *Environ Res* 49:1-6.
- Rupa DS, Reddy PP, Reddi OS. 1989c. Frequencies of chromosomal aberrations in smokers exposed to pesticides in cotton fields. *Mutat Res* 222:37-41.

8. REFERENCES

- Rupa DS, Reddy PP, Reddi OS. 1989d. Genotoxic effect of benzene hexachloride in cultured human lymphocytes. *Hum Genet* 83:271-273.
- Rylander C, Sandanger TM, Nost TH, et al. 2015. Combining plasma measurements and mechanistic modeling to explore the effect of POPs on type 2 diabetes mellitus in Norwegian women. *Environ Res* 142:365-373. <https://doi.org/10.1016/j.envres.2015.07.002>.
- Ryu DH, Yu HT, Kim SA, et al. 2018. Is chronic exposure to low-dose organochlorine pesticides a new risk factor of t-cell immunosenescence? *Cancer Epidemiol Biomarkers Prev* 27(10):1159-1167. <https://doi.org/10.1158/1055-9965.Epi-17-0799>.
- Safe SH. 1993. Toxic aromatics. In: Kroschwitz JI, Howe-Grant M, eds. *Kirk-Othmer's encyclopedia of chemical technology*. New York, NY: John Wiley & Sons, 127-139.
- Sahaya K, Mahajan P, Mediratta PK, et al. 2007. Reversal of lindane-induced impairment of step-down passive avoidance and oxidative stress by neurosteroids in rats. *Toxicology* 239(1-2):116-126. <https://doi.org/10.1016/j.tox.2007.07.002>.
- Sahoo A, Samanta L, Das A, et al. 1999. Hexachlorocyclohexane-induced behavioral and neurochemical changes in rat. *J Appl Toxicol* 19(1):13-18. [https://doi.org/10.1002/\(SICI\)1099-1263\(199901/02\)19:1<13::AID-JAT531>3.0.CO;2-E](https://doi.org/10.1002/(SICI)1099-1263(199901/02)19:1<13::AID-JAT531>3.0.CO;2-E).
- Sahu SK, Patnaik KK, Bhuyan S, et al. 1993. Degradation of soil-applied isomers of hexachlorocyclohexane by a *Pseudomonas* SP. *Soil Biol Biochem* 25(3):387-391. [https://doi.org/10.1016/0038-0717\(93\)90139-3](https://doi.org/10.1016/0038-0717(93)90139-3).
- Saleh FY, Lee GF, Butler JS. 1978. Kepone and other selected chlorinated hydrocarbon pesticides and PCBs behavior during hydraulic dredging of the James River near Hopewell, Virginia. *J Environ Sci Health A* 13:261-294.
- Saleh FY, Dickson KL, Rodgers JH. 1982. Fate of lindane in the aquatic environment: Rate constants of physical and chemical processes. *Environ Toxicol Chem* 1:289-297.
- Saleh IA, Zouari N, Al-Ghouti MA. 2020. Removal of pesticides from water and wastewater: Chemical, physical and biological treatment approaches. *Environ Tech Innov* 19:101026. <https://doi.org/10.1016/j.eti.2020.101026>.
- Salimi F, Asadikaram G, Abolhassani M, et al. 2023. Organochlorine pesticides induce thyroid tumors through oxidative stress; an in vivo and in silico study. *Environ Sci Pollut Res Int* 30(15):45046-45066. <https://doi.org/10.1007/s11356-023-25304-1>.
- Salo HM, Koponen J, Kiviranta H, et al. 2019. No evidence of the role of early chemical exposure in the development of β -cell autoimmunity. *Environmental Science and Pollution Research* 26(2):1370-1378. <https://doi.org/10.1007/s11356-018-3659-6>.
- Samanta L, Chainy GBN. 1997. Comparison of hexachlorocyclohexane-induced oxidative stress in the testis of immature and adult rats. *Comp Biochem Physiol* 118C(3):319-327.
- Samanta L, Sahoo A, Chainy GB. 1999. Age-related changes in rat testicular oxidative stress parameters by hexachlorocyclohexane. *Arch Toxicol* 73(2):96-107. <https://doi.org/10.1007/s002040050593>.
- Samuel T, Pillai MKK. 1990. Effect of temperature and sunlight exposure on the fate of soil-applied [^{14}C]-gamma-hexachlorocyclohexane. *Arch Environ Contam Toxicol* 19:214-220.
- Sandhu SS, Warren WJ, Nelson P. 1978. Pesticidal residue in rural potable water. *J Am Water Works Assoc* 70:41-45.
- Saradha B, Mathur PP. 2006. Induction of oxidative stress by lindane in epididymis of adult male rats. *Environ Toxicol Pharmacol* 22(1):90-96. <https://doi.org/10.1016/j.etap.2005.12.008>.
- Sasaki K, Ishizaka T, Suzuki T, et al. 1991. Organochlorine chemicals in skin lipids as an index of their accumulation in the human body. *Archives of Environmental Contamination and Toxicology* 21(2):190-194. <https://doi.org/10.1007/bf01055336>.
- Sauviat MP, Bouvet S, Godeau G, et al. 2005. Electrical activity alterations induced by chronic absorption of lindane (γ -hexachlorocyclohexane) trace concentrations in adult rat heart. *Can J Physiol Pharmacol* 83(3):243-251. <https://doi.org/10.1139/y04-132>.
- Sauviat M-P, Godeau G, Pages N. 2007. Alterations of offspring heart muscle electrical activity transferred by rat male genitors chronically treated with lindane (γ -hexachlorocyclohexane) trace

8. REFERENCES

- concentrations. *Pesticide Biochemistry and Physiology* 87(2):131-137. <https://doi.org/10.1016/j.pestbp.2006.07.002>.
- Sawada N, Iwasaki M, Inoue M, et al. 2010. Plasma organochlorines and subsequent risk of prostate cancer in Japanese men: a nested case-control study. *Environ Health Perspect* 118(5):659-665. <https://doi.org/10.1289/ehp.0901214>.
- Sawyer ME, Evans MV, Wilson CA, et al. 2016. Development of a human physiologically based pharmacokinetic (PBPK) model for dermal permeability for lindane. *Toxicology Letters* 245:106-109. <https://doi.org/10.1016/j.toxlet.2016.01.008>.
- Saxena MC, Siddiqui MKJ, Bhargava AK, et al. 1980. Role of chlorinated hydrocarbon pesticides in abortions and premature labour. *Toxicology* 17:323-331.
- Saxena MC, Siddiqui MKJ, Seth TD, et al. 1981a. Organochlorine pesticides in specimens from women undergoing spontaneous abortion, premature or full-term delivery. *J Anal Toxicol* 5:6-9.
- Saxena MC, Siddiqui MKJ, Bhargava AK, et al. 1981b. Placental transfer of pesticides in humans. *Arch Toxicol* 48:127-134.
- Saxena DK, Murthy RC, Chandra SV. 1986. Embryotoxic and teratogenic effects of interaction of cadmium and lindane in rats. *Acta Pharmacol Toxicol* 59:175-178.
- Scascitelli M, Pacchierotti F. 2003. Effects of lindane on oocyte maturation and preimplantation embryonic development in the mouse. *Reprod Toxicol* 17(3):299-303. [https://doi.org/10.1016/s0890-6238\(03\)00008-x](https://doi.org/10.1016/s0890-6238(03)00008-x).
- Schattenberg HJ, Hsu JP. 1992. Pesticide residue survey of produce from 1989 to 1991. *J AOAC Int* 75:925-933.
- Schimmel SC, Patrick JM, Forester J. 1977. Toxicity and bioconcentration of BHC and lindane in selected estuarine animals. *Arch Environ Contam Toxicol* 6:355-363.
- Schmitt CJ, Zajicek JL, Ribick MA. 1985. National pesticide monitoring program: Residues of organochlorine chemicals in freshwater fish, 1980-1981. *Arch Environ Contam Toxicol* 14:225-260.
- Schmitt CJ, Zajicek JL, Peterman PH. 1990. National contaminant biomonitoring program: Residues of organochlorine chemicals in U.S. Freshwater Fish, 1976-1984. *Arch Environ Contam Toxicol* 19(5):748-781. <https://doi.org/10.1007/bf01183992>.
- Schmitt M, Gellert G, Ludwig J, et al. 2005. Assessment of cyto- and genotoxic effects of a variety of chemicals using *Saccharomyces cerevisiae*. *Acta Hydrochim Hydrobiol* 33(1):56-63. <https://doi.org/10.1002/aheh.200300554>.
- Schröter C, Parzefall W, Schröter H, et al. 1987. Dose-response studies on the effects of α -, β -, and γ -hexachlorocyclohexane on putative preneoplastic foci, monooxygenases, and growth in rat liver. *Cancer Res* 47:80-88.
- Schwarz M, Wolf K, Schneider A, et al. 2021. Association of persistent organic pollutants with sensorimotor neuropathy in participants with and without diabetes or prediabetes: Results from the population-based KORA FF4 study. *Int J Hyg Environ Health* 235:113752. <https://doi.org/10.1016/j.ijheh.2021.113752>.
- Seiler P, Fischer B, Lindenau A, et al. 1994. Effects of persistent chlorinated hydrocarbons on fertility and embryonic development in the rabbit. *Hum Reprod* 9(10):1920-1926. <https://doi.org/10.1093/oxfordjournals.humrep.a138359>.
- Seo SH, Choi SD, Batterman S, et al. 2022. Health risk assessment of exposure to organochlorine pesticides in the general population in Seoul, Korea over 12 years: A cross-sectional epidemiological study. *J Hazard Mater* 424(Pt B):127381. <https://doi.org/10.1016/j.jhazmat.2021.127381>.
- Sericano JL, Atlas EL, Wade TL, et al. 1990. NOAA's status and trends mussel watch program: Chlorinated pesticides and PCBs in oysters (*Crassostrea virginica*) and sediments from the Gulf of Mexico, 1986-1987. *Mar Environ Res* 29:161-203.
- Serrano MT, Vendrell M, Rivera S, et al. 1990. Effect of lindane on the myelination process in the rat. *Neurotoxicol Teratol* 12:577-583. [https://doi.org/10.1016/0892-0362\(90\)90065-K](https://doi.org/10.1016/0892-0362(90)90065-K).
- Seth V, Ahmad RS, Suke SG, et al. 2005. Lindane-induced immunological alterations in human poisoning cases. *Clin Biochem* 38(7):678-680. <https://doi.org/10.1016/j.clinbiochem.2005.03.009>.

8. REFERENCES

- Sexton K, Ryan AD. 2012. Using exposure biomarkers in children to compare between-child and within-child variance and calculate correlations among siblings for multiple environmental chemicals. *J Expo Sci Environ Epidemiol* 22(1):16-23. <https://doi.org/10.1038/jes.2011.30>.
- Shah HK, Sharma T, Banerjee BD. 2020. Organochlorine pesticides induce inflammation, ROS production, and DNA damage in human epithelial ovary cells: An in vitro study. *Chemosphere* 246:125691. <https://doi.org/10.1016/j.chemosphere.2019.125691>.
- Sexton K, Ryan AD, Adgate JL, et al. 2011. Biomarker measurements of concurrent exposure to multiple environmental chemicals and chemical classes in children. *J Toxicol Environ Health A* 74(14):927-942. <https://doi.org/10.1080/15287394.2011.573745>.
- Shah PR, Kute VB, Gumber MR, et al. 2013. Benzene hexachloride poisoning with rhabdomyolysis and acute kidney injury. *Indian J Nephrol* 23(1):80-81. <https://doi.org/10.4103/0971-4065.107222>.
- Shahin MM, von Borstel RC. 1977. Mutagenic and lethal effects of α -benzene hexachloride, dibutyl phthalate, and trichloroethylene in *Saccharomyces cerevisiae*. *Mutat Res* 48:173-180.
- Sharma P, Singh R. 2010. Protective role of curcumin on lindane induced reproductive toxicity in male Wistar rats. *Bull Environ Contam Toxicol* 84(4):378-384. <https://doi.org/10.1007/s00128-010-9942-y>.
- Sharma H, Zhang P, Barber DS, et al. 2010. Organochlorine pesticides dieldrin and lindane induce cooperative toxicity in dopaminergic neurons: role of oxidative stress. *Neurotoxicology* 31(2):215-222. <https://doi.org/10.1016/j.neuro.2009.12.007>.
- Sharma E, Mustafa M, Pathak R, et al. 2012. A case control study of gene environmental interaction in fetal growth restriction with special reference to organochlorine pesticides. *Eur J Obstet Gynecol Reprod Biol* 161(2):163-169. <https://doi.org/10.1016/j.ejogrb.2012.01.008>.
- Sharma T, Banerjee BD, Mustafa M, et al. 2013. Gene environment interaction in preterm delivery with special reference to organochlorine pesticide: a case control study. *Int J Biochem Mol Biol* 4(4):209-214.
- Sharma T, Banerjee BD, Thakur GK, et al. 2019. Polymorphism of xenobiotic metabolizing gene and susceptibility of epithelial ovarian cancer with reference to organochlorine pesticides exposure. *Exp Biol Med* 244(16):1446-1453. <https://doi.org/10.1177/1535370219878652>.
- Sharom MS, Miles JRW, Harris CR, et al. 1980. Persistence of 12 insecticides in water. *Water Res* 14:1089-1093.
- Shearer JJ, Sandler DP, Andreotti G, et al. 2021. Pesticide use and kidney function among farmers in the Biomarkers of Exposure and Effect in Agriculture study. *Environ Res* 199:111276. <https://doi.org/10.1016/j.envres.2021.111276>.
- Shen L, Wania F, Lei YD, et al. 2004. Hexachlorocyclohexanes in the North American atmosphere. *Environ Sci Technol* 38(4):965-975. <https://doi.org/10.1021/es034998k>.
- Shen H, Main KM, Virtanen HE, et al. 2007. From mother to child: investigation of prenatal and postnatal exposure to persistent bioaccumulating toxicants using breast milk and placenta biomonitoring. *Chemosphere* 67(9):S256-262. <https://doi.org/10.1016/j.chemosphere.2006.05.106>.
- Shimazu H, Shiraishi N, Akematsu T, et al. 1972. Carcinogenicity screening tests on induction of chromosomal aberrations in rat bone marrow cells in vivo [abstract]. *Mutat Res* 38:347.
- Shirasu Y, Moriya M, Kato K, et al. 1976. Mutagenicity screening of pesticides in the microbial system. *Mutat Res* 40:19-30.
- Shivanandappa T, Krishnakumari MK. 1983. Hexachlorocyclohexane-induced testicular dysfunction in rats. *Acta Pharmacol Toxicol* 52:12-17.
- Shrestha S, Umbach DM, Beane Freeman LE, et al. 2021. Occupational pesticide use and self-reported olfactory impairment in US farmers. *Occup Environ Med* 78(3):179-191. <https://doi.org/10.1136/oemed-2020-106818>.
- Siddarth M, Datta SK, Mustafa M, et al. 2014. Increased level of organochlorine pesticides in chronic kidney disease patients of unknown etiology: role of GSTM1/GSTT1 polymorphism. *Chemosphere* 96:174-179. <https://doi.org/10.1016/j.chemosphere.2013.10.029>.

8. REFERENCES

- Siddiqui MKJ, Saxena M, Krishna MC. 1981. Storage of DDT and BHC in adipose tissue of Indian males. *Int J Environ Anal Chem* 10:197-204.
- Siddiqui MK, Srivastava S, Srivastava SP, et al. 2003. Persistent chlorinated pesticides and intra-uterine foetal growth retardation: a possible association. *Int Arch Occup Environ Health* 76(1):75-80. <https://doi.org/10.1007/s00420-002-0393-6>.
- Sidorova TS, Matesic DF. 2008. Protective effect of the natural product, chaetoglobosin K, on lindane- and dieldrin-induced changes in astroglia: identification of activated signaling pathways. *Pharm Res* 25(6):1297-1308. <https://doi.org/10.1007/s11095-007-9487-x>.
- Simon-Giavarotti KA, Giavarotti L, Gomes LF, et al. 2002. Enhancement of lindane-induced liver oxidative stress and hepatotoxicity by thyroid hormone is reduced by gadolinium chloride. *Free Radic Res* 36(10):1033-1039. <https://doi.org/10.1080/1071576021000028280>.
- Sineli P, Benimeli CS, Amoroso MJ, et al. 2014. Biodegradation of alpha- and beta-Hexachlorocyclohexane by Indigenous Actinobacteria. In: Alvarez A, Polti M, eds. *Bioremediation in Latin America*. Switzerland: Springer International Publishing, 279-288. https://doi.org/10.1007/978-3-319-05738-5_18.
- Singh R, Sharma P. 2011. Hepatoprotective effect of curcumin on lindane-induced oxidative stress in male Wistar rats. *Toxicol Int* 18(2):124-129. <https://doi.org/10.4103/0971-6580.84264>.
- Singh G, Kathpal TS, Spencer WF, et al. 1991. Dissipation of some organochlorine insecticides in cropped and uncropped soil. *Environ Pollut* 70:219-240.
- Singh NK, Chhillar N, Banerjee BD, et al. 2012. Gene-environment interaction in Alzheimer's disease. *Am J Alzheimers Dis Other Demen* 27(7):496-503. <https://doi.org/10.1177/1533317512456067>.
- Singh N, Chhillar N, Banerjee B, et al. 2013. Organochlorine pesticide levels and risk of Alzheimer's disease in north Indian population. *Hum Exp Toxicol* 32(1):24-30. <https://doi.org/10.1177/0960327112456315>.
- Singh NK, Banerjee BD, Bala K, et al. 2014. Polymorphism in cytochrome P450 2D6, glutathione S-transferases Pi I Genes, and organochlorine pesticides in Alzheimer disease: A case-control study in north Indian population. *J Geriatr Psychiatry Neurol* 27(2):119-127. <https://doi.org/10.1177/0891988714522698>.
- Sinha C, Shukla GS. 2003. Species variation in pesticide-induced blood-brain barrier dysfunction. *Hum Exp Toxicol* 22(12):647-652. <https://doi.org/10.1191/0960327103ht405oa>.
- Sipes IG, Gandolfi AJ. 1991. Biotransformation of toxicants. In: Amdur MO, Doull J, Klaassen CD, eds. *Toxicology: The basic science of poisons*. 4th ed. New York, NY: Pergamon Press, 86-126.
- Sircar S, Lahiri P. 1989. Lindane (g-HCH) causes reproductive failure and fetotoxicity in mice. *Toxicology* 59:171-177.
- Sisto R, Moleti A, Palkovicova Murinova L, et al. 2015. Environmental exposure to organochlorine pesticides and deficits in cochlear status in children. *Environ Sci Pollut Res Int* 22(19):14570-14578. <https://doi.org/10.1007/s11356-015-4690-5>.
- Šmídová K, Hofman J, Ite AE, et al. 2012. Fate and bioavailability of ¹⁴C-pyrene and ¹⁴C-lindane in sterile natural and artificial soils and the influence of aging. *Environ Pollut* 171:93-98. <https://doi.org/10.1016/j.envpol.2012.07.031>.
- Šmídová K, Šerá J, Bielská L, et al. 2015. Influence of feeding and earthworm density on compound bioaccumulation in earthworms *Eisenia andrei*. *Environ Pollut* 207:168-175. <https://doi.org/10.1016/j.envpol.2015.09.025>.
- Smith AG. 1991. Chlorinated hydrocarbon insecticides. In: *Handbook of pesticide toxicology*. Vol. 2. San Diego, CA: Academic Press, 731-743, 791-816, 868-915.
- Smith MT, Guyton KZ, Gibbons CF, et al. 2016. Key characteristics of carcinogens as a basis for organizing data on mechanisms of carcinogenesis. *Environmental Health Perspectives* 124(6):713-721. <https://doi.org/10.1289/ehp.1509912>.
- Smith-Baker C, Saleh MA. 2011. Hair as a marker for pesticides exposure. *J Environ Sci Health B* 46(7):648-653. <https://doi.org/10.1080/03601234.2012.597701>.

8. REFERENCES

- Solomon L, Faherer L, West D. 1977a. Gamma benzene hexachloride toxicity. *Arch Dermatol* 113:353-357.
- Solomon L, West D, Fitzloff J, et al. 1977b. Gamma benzene hexachloride in guinea-pig brain after topical application. *J Invest Dermatol* 68:310-312.
- Solomon BA, Haut SR, Carr EM, et al. 1995. Neurotoxic reaction to lindane in an HIV-seropositive patient: An old medication's new problem. *J Fam Pract* 40:291-295.
- Song S, Ma X, Pan M, et al. 2018. Excretion kinetics of three dominant organochlorine compounds in human milk within the first 6 months postpartum. *Environ Monit Assess* 190(8):457. <https://doi.org/10.1007/s10661-018-6850-9>.
- Srinivasan K, Radhakrishnamurty R. 1983. Studies on the distribution of β - and γ -isomers of hexachlorocyclohexane in rat tissues. *J Environ Sci Health B* 18:401-418.
- Srinivasan K, Radhakrishnamurty R. 1988. Biochemical changes produced by β - and γ -hexachlorocyclohexane isomers in albino rats. *J Environ Sci Health* 23:367-386.
- Srinivasan K, Ramesh HP, Radhakrishnamurty R. 1984. Renal tubular dysfunction caused by dietary hexachlorocyclohexane (HCH) isomers. *J Environ Sci Health* 19:453-466. <https://doi.org/10.1080/03601238409372443>.
- Srinivasan K, Mahadevappa KL, Radhakrishnamurty R. 1991. Effect of maternal dietary hexachlorocyclohexane exposure on pup survival and growth in albino rats. *J Environ Sci Health B* 26(3):339-349. <https://doi.org/10.1080/03601239109372740>.
- Srivastava MK, Raizada RB. 1993. Prenatal effects of technical hexachlorocyclohexane in mice. *Journal of Toxicology and Environmental Health* 40(1):105-115. <https://doi.org/10.1080/15287399309531778>.
- Srivastava MK, Raizada RB. 2000. A limited three-generation reproduction study on hexachlorocyclohexane (HCH) in rats. *Food Chem Toxicol* 38:195-201.
- Srivastava A, Shivanandappa T. 2014. Prevention of hexachlorocyclohexane-induced neuronal oxidative stress by natural antioxidants. *Nutr Neurosci* 17(4):164-171. <https://doi.org/10.1179/1476830513y.0000000075>.
- Srivastava A, Srivastava AK, Mishra M, et al. 2019. A proteomic approach to investigate enhanced responsiveness in rechallenged adult rats prenatally exposed to lindane. *Neurotoxicology* 74:184-195. <https://doi.org/10.1016/j.neuro.2019.07.004>.
- Stachel B, Dougherty RC, Lahl U, et al. 1989. Toxic environmental chemicals in human semen: Analytical method and case studies. *Andrologia* 21:282-291.
- Stanley CW, Barney JE, Helton MR, et al. 1971. Measurement of atmospheric levels of pesticides. *Environ Sci Technol* 5:430-435.
- Staples CA, Werner A, Hoogheem T. 1985. Assessment of priority pollutant concentrations in the United States using STORET database. *Environ Toxicol Chem* 4:131-142.
- Starr HJ, Clifford NJ. 1972. Acute lindane intoxication. A case study. *Arch Environ Health* 25:374-375.
- Starr HG, Aldrich FD, McDougall WD, et al. 1974. Contribution of household dust to the human exposure to pesticides. *Pest Monit J* 8:209-212.
- Steenland K, Mora AM, Barr DB, et al. 2014. Organochlorine chemicals and neurodegeneration among elderly subjects in Costa Rica. *Environ Res* 134:205-209. <https://doi.org/10.1016/j.envres.2014.07.024>.
- Storen G. 1955. Lethal poisoning with the moth- and insecticide 'Jacutin'. *Nord J Hyg* 36:77-81.
- Strachan WMJ. 1988. Toxic contaminants in rainfall in Canada: 1984. *Environ Toxicol Chem* 7:871-877.
- Sturgeon S, Broxk J, Potischman N, et al. 1998. Serum concentrations of organochlorine compounds and endometrial cancer risk (United States). *Cancer Causes Control* 9:417-424.
- Sudakin DL. 2007. Fatality after a single dermal application of lindane lotion. *Arch Environ Occup Health* 62(4):201-203. <https://doi.org/10.3200/aeoh.62.4.201-203>.

8. REFERENCES

- Sulik M, Deregowski K, Kemon A. 1988. Distribution and excretion of lindane-14C in acute intoxication in rats. *Mater Med Pol* 20:92-94.
- Sullivan K, Kregel M, Bradford W, et al. 2018. Neuropsychological functioning in military pesticide applicators from the Gulf War: Effects on information processing speed, attention and visual memory. *Neurotoxicol Teratol* 65:1-13. <https://doi.org/10.1016/j.ntt.2017.11.002>.
- Sumida K, Saito K, Oeda K, et al. 2007. A comparative study of gene expression profiles in rat liver after administration of alpha-hexachlorocyclohexane and lindane. *J Toxicol Sci* 32(3):261-288. <https://doi.org/10.2131/jts.32.261>.
- Sunder Ram Rao CV, Shreenivas R, Singh V, et al. 1988. Disseminated intravascular coagulation in a case of fatal lindane poisoning. *Vet Hum Toxicol* 30:132-134.
- Sunyer J, Alvarez-Pedrerol M, To-Figueras J, et al. 2008. Urinary porphyrin excretion in children is associated with exposure to organochlorine compounds. *Environ Health Perspect* 116(10):1407-1410. <https://doi.org/10.1289/ehp.11354>.
- Suter P. 1983. Three months toxicity study in rats with lindane. Itingen, Switzerland: Research and Consulting Company AG. RCC project no. 005220.
- Sweeney RA. 1969. Metabolism of lindane by unicellular algae. In: Proceedings of the 12th Conference on Great Lakes Research. International Association for Great Lakes Research, 98-102.
- Sweeney LM, Gearhart JM. 2020. Examples of physiologically based pharmacokinetic modeling applied to risk assessment. In: Fisher JW, Gearhart JM, Lin Z, eds. Physiologically based pharmacokinetic (PBPK) modeling. Academic Press, 281-299. <https://doi.org/10.1016/B978-0-12-818596-4.00011-4>.
- Szeto SY, Price PM. 1991. Persistence of pesticide residues in mineral and organic soils in the Fraser Valley of British Columbia. *J Agric Food Chem* 39:1679-1684.
- Szokolay A, Rosival L, Uhnak J, et al. 1977. Dynamics of benzene hexachloride (BHC) isomers and other chlorinated pesticides in the food chain and in human fat. *Ecotoxicol Environ Safety* 1:349-359.
- Szymczynski GA, Waliszewski SM. 1981. Comparison of the content of chlorinated pesticide residues in human semen, testicles and fat tissues. *Andrologia* 13:250-252.
- Takahashi W, Saidin D, Takei G, et al. 1981. Organochlorine pesticide residues in human milk in Hawaii, 1979-1980. *Bull Environ Contam Toxicol* 27:506-511.
- Tan J, Loganath A, Chong YS, et al. 2009. Exposure to persistent organic pollutants in utero and related maternal characteristics on birth outcomes: a multivariate data analysis approach. *Chemosphere* 74(3):428-433. <https://doi.org/10.1016/j.chemosphere.2008.09.045>.
- Tan YM, Chan M, Chukwudebe A, et al. 2020. PBPK model reporting template for chemical risk assessment applications. *Regul Toxicol Pharmacol* 115:104691. <https://doi.org/10.1016/j.yrtph.2020.104691>.
- Tanabe S, Tatsukawa R, Kawano M, et al. 1982. Global distribution and atmospheric transport of chlorinated hydrocarbons: HCH (BHC) isomers and DDT compounds in the western Pacific, eastern Indian and Antarctic Oceans. *J Oceanogr Soc Jpn* 38:137-148.
- Tanaka K, Kurihara N, Nakajima N. 1979. Oxidative metabolism of lindane and its isomers with microsomes from rat liver and house fly abdomen. *Pestic Biochem Physiol* 10:96-103.
- Tao S, Lu Y, Zhang D, et al. 2009. Assessment of oral bioaccessibility of organochlorine pesticides in soil using an in vitro gastrointestinal model. *Environ Sci Technol* 43(12):4524-4529. <https://doi.org/10.1021/es900188c>.
- Tawar N, Banerjee BD, Madhu SV, et al. 2022. Association of organochlorine pesticides with genetic markers of endoplasmic reticulum stress in Type 2 diabetes mellitus: A case-control study among the North-Indian population. *Front Endocrinol (Lausanne)* 13:841463. <https://doi.org/10.3389/fendo.2022.841463>.
- Telch J, Jarvis DA. 1982. Acute intoxication with lindane (gamma benzene hexachloride). *Can Med Assoc J* 126:662-663.
- Tenenbein M. 1991. Seizures after lindane therapy. *J Am Geriatr Soc* 39:394-395.

8. REFERENCES

- Tewari A, Sethi RS, Banga HS, et al. 2017. Concomitant effect of low dose of lindane and intranasal lipopolysaccharide on respiratory system of mice. *Hum Exp Toxicol* 36(11):1201-1211. <https://doi.org/10.1177/0960327116685889>.
- Tezak Z, Simic B, Kniewald J. 1992. Effect of pesticides on oestradiol-receptor complex formation in rat uterus cytosol. *Food Chem Toxicol* 30:879-885.
- Thakore KN, Karnik AB, Nigam SK, et al. 1981. Sequential changes in lactate, isocitrate, and malate dehydrogenases in mice exposed to technical grade hexachlorocyclohexane (BHC) and their possible relationship to liver tumors. *Pestic Biochem Physiol* 15:262-266. [https://doi.org/10.1016/0048-3575\(81\)90009-2](https://doi.org/10.1016/0048-3575(81)90009-2).
- Thomas JC, Berger F, Jucquier M, et al. 1996. Isolation and characterization of a novel γ -hexachlorocyclohexane-degrading bacterium. *J Bacteriol* 178(20):6049-6055.
- Thorpe E, Walker AIT. 1973. The toxicology of dieldrin (HEOD). II. Comparative long-term oral toxicity studies in mice with dieldrin, DDT, phenobarbitone, β -BHC, and γ -BHC. *Food Cosmet Toxicol* 11:433-442. [https://doi.org/10.1016/0015-6264\(73\)90008-4](https://doi.org/10.1016/0015-6264(73)90008-4).
- Tilson HA, Shaw S, McLamb RL. 1987. The effects of lindane, DDT, and chlordecone on avoidance responding and seizure activity. *Toxicol Appl Pharmacol* 88:57-65.
- Tochman AM, Kamiński R, Turski WA, et al. 2000. Protection by conventional and new antiepileptic drugs against lindane-induced seizures and lethal effects in mice. *Neurotox Res* 2(1):63-70. <https://doi.org/10.1007/bf03033328>.
- Tomczak S, Baumann K, Lehnert G. 1981. Occupational exposure to hexachlorocyclohexane. IV. Sex hormone alterations in HCH-exposed workers. *Int Arch Occup Environ Health* 48:283-287.
- Torres-Arreola L, Berkowitz G, Torres-Sanchez L, et al. 2003. Preterm birth in relation to maternal organochlorine serum levels. *Annals of Epidemiology* 13(3):158-162. [https://doi.org/10.1016/s1047-2797\(02\)00424-6](https://doi.org/10.1016/s1047-2797(02)00424-6).
- Traina ME, Rescia M, Urbani E, et al. 2003. Long-lasting effects of lindane on mouse spermatogenesis induced by in utero exposure. *Reprod Toxicol* 17(1):25-35. [https://doi.org/10.1016/s0890-6238\(02\)00101-6](https://doi.org/10.1016/s0890-6238(02)00101-6).
- TRI21. 2022. TRI explorer: Providing access to EPA's toxics release inventory data. Washington, DC: Toxics Release Inventory. U.S. Environmental Protection Agency. <https://enviro.epa.gov/triexplorer>. December 19, 2022.
- Trivedi NP, Rawal UM, Patel BP. 2007. Hepatoprotective effect of andrographolide against hexachlorocyclohexane-induced oxidative injury. *Integr Cancer Ther* 6(3):271-280. <https://doi.org/10.1177/1534735407305985>.
- Trivedi NP, Rawal UM, Patel BP. 2009. Potency of andrographolide as an antitumor compound in BHC-induced liver damage. *Integr Cancer Ther* 8(2):177-189. <https://doi.org/10.1177/1534735409335606>.
- Tryphonas L, Iverson F. 1983. Sequential histopathologic analysis of α -hexachlorocyclohexane-induced hepatic megalocytosis and adenoma formation in the HPB mouse. *J Natl Cancer Inst* 71:1307-1318. <https://doi.org/10.1093/jnci/71.6.1307>.
- Tsatsakis AM, Tzatzarakis MN, Tutudaki M, et al. 2008. Assessment of levels of organochlorine pesticides and their metabolites in the hair of a Greek rural human population. *Hum Exp Toxicol* 27(12):933-940. <https://doi.org/10.1177/0960327108102047>.
- Tsezos M, Wang X. 1991a. Study on the kinetics of hazardous pollutants adsorption and desorption by biomass: Mechanistic considerations. *J Chem Technol Biotechnol* 50:507-521.
- Tsezos M, Wang X. 1991b. A study on lindane: Biosorption and biodegradation interactions. *Biotech Forum Europe* 8:120-125.
- Tsukada H, Gotoh M, Mochizuki Y, et al. 1979. Changes in peroxisomes in preneoplastic liver and hepatoma of mice induced by α -benzene hexachloride. *Cancer Res* 39(5):1628-1634.
- Tu CM. 1976. Utilization and degradation of lindane by soil microorganisms. *Arch Microbiol* 108:259-263.

8. REFERENCES

- Turner JC, Shanks V. 1980. Absorption of some organochlorine compounds by the rat small intestine - in vivo. *Bull Environ Contam Toxicol* 24:652-655.
- Tusell JM, Sunol C, Gelpi E, et al. 1988. Effect of lindane at repeated low doses. *Toxicology* 49:375-379. [https://doi.org/10.1016/0300-483X\(88\)90021-2](https://doi.org/10.1016/0300-483X(88)90021-2).
- Tyagi V, Mustafa MD, Sharma T, et al. 2016. Association of organochlorine pesticides with the mRNA expression of tumour necrosis factor-alpha (TNF- α) & cyclooxygenase-2 (COX-2) genes in idiopathic preterm birth. *Indian J Med Res* 143(6):731-738. <https://doi.org/10.4103/0971-5916.191986>.
- Tyagi S, Siddarth M, Mishra BK, et al. 2021. High levels of organochlorine pesticides in drinking water as a risk factor for type 2 diabetes: A study in north India. *Environ Pollut* 271:116287. <https://doi.org/10.1016/j.envpol.2020.116287>.
- Ukropec J, Radikova Z, Huckova M, et al. 2010. High prevalence of prediabetes and diabetes in a population exposed to high levels of an organochlorine cocktail. *Diabetologia* 53(5):899-906. <https://doi.org/10.1007/s00125-010-1683-2>.
- Ullmann L. 1986a. Acute dermal toxicity study with lindane in rats. Itingen, Switzerland: Research and Consulting Company AG. RCC Project No. 061648.
- Ullmann L. 1986b. 4-Hour acute aerosol inhalation toxicity study with lindane in rats. Itingen, Switzerland: Research and Consulting Company AG. RCC Project No. 061637.
- Ullmann L. 1986c. Primary eye irritation study with lindane in rabbits. Itingen, Switzerland: Research and Consulting Company AG. RCC Project No. 061672.
- Ullmann L. 1986d. Primary skin irritation study with lindane in rabbits (4-hour occlusive application). Itingen, Switzerland: Research and Consulting Company AG. RCC Project No. 061661.
- Uphouse L, Williams J. 1989. Diestrous treatment with lindane disrupts the female rat reproductive cycle. *Toxicology Letters* 48:21-28. [https://doi.org/10.1016/0378-4274\(89\)90181-1](https://doi.org/10.1016/0378-4274(89)90181-1).
- Upton K, De Roos AJ, Thompson ML, et al. 2013. Organochlorine pesticides and risk of endometriosis: findings from a population-based case-control study. *Environ Health Perspect* 121(11-12):1319-1324. <https://doi.org/10.1289/ehp.1306648>.
- USGS. 2003. Methods of analysis of the U.S. Geological Survey National Water Quality Laboratory - Determination of organochlorine pesticides and polychlorinated biphenyls in bottom and suspended sediment by gas chromatography with electron-capture detection. Denver, CO: U.S. Geological Survey. Resources Investigations Report 03-4293. https://www.nemi.gov/methods/method_summary/8946/. May 5, 2021.
- Valera B, Ayotte P, Poirier P, et al. 2013a. Associations between plasma persistent organic pollutant levels and blood pressure in Inuit adults from Nunavik. *Environ Int* 59:282-289. <https://doi.org/10.1016/j.envint.2013.06.019>.
- Valera B, Jorgensen ME, Jeppesen C, et al. 2013b. Exposure to persistent organic pollutants and risk of hypertension among Inuit from Greenland. *Environ Res* 122:65-73. <https://doi.org/10.1016/j.envres.2012.12.006>.
- Van Velsen FL, Danse LHJC, Van LFXR, et al. 1986. The subchronic oral toxicity of the β -isomer of hexachlorocyclohexane in rats. *Fundam Appl Toxicol* 6:697-712. [https://doi.org/10.1016/0272-0590\(86\)90183-1](https://doi.org/10.1016/0272-0590(86)90183-1).
- Vargas-Gonzalez HH, Mendez-Rodriguez LC, Garcia-Hernandez J, et al. 2016. Persistent organic pollutants (POPs) in populations of the clam *Chione californiensis* in coastal lagoons of the Gulf of California. *J Environ Sci Health B* 51(7):435-445. <https://doi.org/10.1080/03601234.2016.1159455>.
- Varona-Urbe ME, Torres-Rey CH, Diaz-Criollo S, et al. 2016. Exposure to pesticide mixtures and DNA damage among rice field workers. *Arch Environ Occup Health* 71(1):3-9. <https://doi.org/10.1080/19338244.2014.910489>.
- Veith G, Defoe D, Bergstedt B. 1979. Measuring and estimating the bioconcentration factor of chemicals in fish. *J Fish Res Board Can* 36:1040-1048.
- Vendrell M, Tusell JM, Serratosa J. 1992a. c-fos Expression as a model for studying the action of hexachlorocyclohexane isomers in the CNS. *J Neurochem* 58:862-869.

8. REFERENCES

- Vendrell M, Tusell JM, Serratosa J. 1992b. Effect of γ -hexachlorocyclohexane and its isomers on proto-oncogene c-fos expression in brain. *Neurotoxicology* 13:301-308.
- Verbrugge DA, Othoudt RA, Grzyb KR, et al. 1991. Concentrations of inorganic and organic contaminants in sediments of six harbors on the North American Great Lakes. *Chemosphere* 22:809-820.
- Verma A, Pillai MK. 1991. Bioavailability of soil-bound residues of DDT and HCH to certain plants. *Soil Biology and Biochemistry* 23(4):347-351. [https://doi.org/10.1016/0038-0717\(91\)90190-u](https://doi.org/10.1016/0038-0717(91)90190-u).
- Verner M, Charbonneau M, López-Carrillo L, et al. 2008. Physiologically based pharmacokinetic modeling of persistent organic pollutants for lifetime exposure assessment: A new tool in breast cancer epidemiologic studies. *Environmental Health Perspectives* 116(7):886-892. <https://doi.org/10.1289/ehp.10917>.
- Verner MA, Ayotte P, Muckle G, et al. 2009. A physiologically based pharmacokinetic model for the assessment of infant exposure to persistent organic pollutants in epidemiologic studies. *Environ Health Perspect* 117(3):481-487. <https://doi.org/10.1289/ehp.0800047>.
- Verschueren K. 1983. α -Hexachlorocyclohexane. In: *Handbook of environmental data of organic chemicals*. 2nd ed. New York, NY: Van Nostrand Reinhold Co, 718-725.
- Viel JF, Floret N, Deconinck E, et al. 2011. Increased risk of non-Hodgkin lymphoma and serum organochlorine concentrations among neighbors of a municipal solid waste incinerator. *Environ Int* 37(2):449-453. <https://doi.org/10.1016/j.envint.2010.11.009>.
- Vijaya Padma V, Sowmya P, Arun Felix T, et al. 2011. Protective effect of gallic acid against lindane induced toxicity in experimental rats. *Food Chem Toxicol* 49(4):991-998. <https://doi.org/10.1016/j.fct.2011.01.005>.
- Vijaya Padma V, Poornima P, Prakash C, et al. 2013. Oral treatment with gallic acid and quercetin alleviates lindane-induced cardiotoxicity in rats. *Can J Physiol Pharmacol* 91(2):134-140. <https://doi.org/10.1139/cjpp-2012-0279>.
- Vijgen J, Abhilash PC, Li YF, et al. 2011. Hexachlorocyclohexane (HCH) as new Stockholm Convention POPs-a global perspective on the management of lindane and its waste isomers. *Environ Sci Pollut Res Int* 18(2):152-162. <https://doi.org/10.1007/s11356-010-0417-9>.
- Viswanathan R, Ray S, Scheunert I, et al. 1988. Investigations on accumulation and biotransformation by earthworms of lindane occurring as soil contaminant. In: Abbou R, ed. *Hazard Waste: Detection, Control, Treatment*. Amsterdam, The Netherlands: Elsevier Science Publishers B.V., 759-765.
- Vizcaino E, Grimalt JO, Carrizo D, et al. 2011. Assessment of prenatal exposure to persistent organohalogen compounds from cord blood serum analysis in two Mediterranean populations (Valencia and Menorca). *J Environ Monit* 13(2):422-432. <https://doi.org/10.1039/c0em00483a>.
- Vodopick H. 1975. Cherchez la Chienne: Erythropoietic hypoplasia after exposure to g-benzene hexachloride. *JAMA* 24(8):850-851.
- Wadaskar JV, Ekhe JD, Kale SP. 2006. Adsorption-desorption of HCH and endosulfan on a soil. *Environ Technol* 27(9):1011-1017. <https://doi.org/10.1080/09593332708618709>.
- Waite DT, Gurprasad NP, Sproull JF, et al. 2001. Atmospheric movements of lindane (γ -hexachlorocyclohexane) from canola fields planted with treated seed. *J Environ Qual* 30:768-775.
- Waite DT, Cabalo E, Chau D, et al. 2007. A comparison of flux chambers and ambient air sampling to measure γ -hexachlorocyclohexane volatilisation from canola (*Brassica napus*) fields. *Chemosphere* 68(6):1074-1081. <https://doi.org/10.1016/j.chemosphere.2007.01.085>.
- Waliszewski SM. 1993. Residues of lindane, HCH isomers and HCB in the soil after lindane application. *Environ Pollut* 82:289-292.
- Waliszewski SM, Bermudez MT, Infanzon RM, et al. 2005. Persistent organochlorine pesticide levels in breast adipose tissue in women with malignant and benign breast tumors. *Bull Environ Contam Toxicol* 75(4):752-759. <https://doi.org/10.1007/s00128-005-0815-8>.

8. REFERENCES

- Waliszewski SM, Melo-Santiesteban G, Villalobos-Pietrini R, et al. 2009. Breast milk excretion kinetic of β -HCH, pp'DDE and pp'DDT. *Bull Environ Contam Toxicol* 83(6):869-873. <https://doi.org/10.1007/s00128-009-9796-3>.
- Wang TC, Hoffman ME, David J, et al. 1992. Chlorinated pesticide residue occurrence and distribution in mosquito control impoundments along the Florida Indian River Lagoon. *Bull Environ Contam Toxicol* 49:217-223.
- Wang F, Xu ZR, Sun JH. 2006. Effect of HCH contamination of diet on the growth performance and immune and antioxidant ability in growing/finishing pigs. *Vet Res Commun* 30(6):645-654. <https://doi.org/10.1007/s11259-006-3327-z>.
- Wang X, Gao M, Tan Y, et al. 2021a. Associations of dietary exposure to organochlorine pesticides from plant-origin foods with lipid metabolism and inflammation in women: A multiple follow-up study in North China. *Bull Environ Contam Toxicol* 107(2):289-295. <https://doi.org/10.1007/s00128-021-03224-5>.
- Wang S, Hu C, Lu A, et al. 2021b. Association between prenatal exposure to persistent organic pollutants and neurodevelopment in early life: A mother-child cohort (Shanghai, China). *Ecotoxicol Environ Saf* 208:111479. <https://doi.org/10.1016/j.ecoenv.2020.111479>.
- Wang SS, Lu AX, Cao LL, et al. 2022a. Effects of prenatal exposure to persistent organic pollutants on neonatal outcomes: A mother-child cohort (Shanghai, China). *Environ Res* 203:111767. <https://doi.org/10.1016/j.envres.2021.111767>.
- Wang J, Cao LL, Gao ZY, et al. 2022b. Relationship between thyroid hormone parameters and exposure to a mixture of organochlorine pesticides, mercury and nutrients in the cord blood of newborns. *Environ Pollut* 292(Pt A):118362. <https://doi.org/10.1016/j.envpol.2021.118362>.
- Ward E, Sheulte P, Grajewski B, et al. 2000. Serum organochlorine levels with breast cancer: A nested case-control study of Norwegian women. *Cancer Epidemiol Biomarkers Prev* 9:1357-1367.
- Warembourg C, Debost-Legrand A, Bonvallot N, et al. 2016. Exposure of pregnant women to persistent organic pollutants and cord sex hormone levels. *Hum Reprod* 31(1):190-198. <https://doi.org/10.1093/humrep/dev260>.
- Warner M, Rauch S, Coker ES, et al. 2018. Obesity in relation to serum persistent organic pollutant concentrations in CHAMACOS women. *Environ Epidemiol* 2(4):e032. <https://doi.org/10.1097/ee9.0000000000000032>.
- Watanabe KH, Desimone FW, Thiyagarajah A, et al. 2003. Fish tissue quality in the lower Mississippi River and health risks from fish consumption. *Sci Total Environ* 302(1-3):109-126. [https://doi.org/10.1016/s0048-9697\(02\)00396-0](https://doi.org/10.1016/s0048-9697(02)00396-0).
- Wattigney WA, Irvin-Barnwell E, Li Z, et al. 2022. Biomonitoring of toxic metals, organochlorine pesticides, and polybrominated biphenyl 153 in Michigan urban anglers. *Environ Res* 203:111851. <https://doi.org/10.1016/j.envres.2021.111851>.
- Weber L, Song K, Boyle T, et al. 2018. Organochlorine levels in plasma and risk of multiple myeloma. *J Occup Environ Med* 60(10):911-916. <https://doi.org/10.1097/jom.0000000000001387>.
- Weiss G. 1986. Benzene hexachloride. In: *Hazardous chemicals data book*. 2nd ed. Park Ridge, NJ: Noyes Data Corporation, 153.
- Weisse I, Herbst M. 1977. Carcinogenicity study of lindane in the mouse. *Toxicology* 7(2):233-238. [https://doi.org/10.1016/0300-483x\(77\)90069-5](https://doi.org/10.1016/0300-483x(77)90069-5).
- Wheatley GA, Hardman JA. 1965. Indications of the presence of organochlorine insecticides in rainwater in Central England. *Nature* 207(4996):486-487. <https://doi.org/10.1038/207486a0>.
- Wheeler M. 1977. Gamma benzene hexachloride (Kwell) in a child. *Western Journal of Medicine* 127(6):518-521.
- Whitehead TP, Crispo Smith S, Park JS, et al. 2015. Concentrations of persistent organic pollutants in California women's serum and residential dust. *Environ Res* 136:57-66. <https://doi.org/10.1016/j.envres.2014.10.009>.
- WHO. 2010. Guidelines for indoor air quality: Selected pollutants. World Health Organization. <https://www.who.int/publications/i/item/9789289002134>. July 16, 2023.

8. REFERENCES

- WHO. 2022. Guidelines for drinking-water quality. Fourth edition incorporating the first and second addenda. World Health Organization. <https://www.who.int/publications/i/item/9789240045064>. July 16, 2023.
- Wiberg K, Brorstrom-Lunden E, Wangberg I, et al. 2001. Concentrations and fluxes of hexachlorocyclohexanes and chiral composition of α -HCH in environmental samples from Southern Baltic Sea. *Environ Sci Technol* 35(24):4739-4746.
- Wielsoe M, Kern P, Bonefeld-Jorgensen EC. 2017. Serum levels of environmental pollutants is a risk factor for breast cancer in Inuit: a case control study. *Environ Health* 16(1):56. <https://doi.org/10.1186/s12940-017-0269-6>.
- Wild SR, Jones KC. 1992. Organic chemicals entering agricultural soils in sewage sludges: Screening for their potential to transfer to crop plants and livestock. *Sci Total Environ* 119:85-119.
- Wiles DA, Russell JL, Olson KR, et al. 2015. Massive lindane overdose with toxicokinetics analysis. *J Med Toxicol* 11(1):106-109. <https://doi.org/10.1007/s13181-014-0403-6>.
- Wittlinger R, Ballschmiter K. 1990. Studies of the global baseline pollution. XIII. C6-C14 organohalogenes (α - and γ -HCH, HCB, PCB 4,4'-DDT, 4,4'-DDE, cis- and trans-chlordane, trans-nonachlor, anisols) in the lower troposphere of the southern Indian Ocean. *Fresenius J Anal Chem* 336:193-200.
- Wolff G, Roberts D, Morrissey R, et al. 1987. Tumorigenic responses to lindane in mice: Potentiation by a dominant mutation. *Carcinogenesis* 8(12):1889-1897. <https://doi.org/10.1093/carcin/8.12.1889>.
- Wong F, Hung H, Dryfhout-Clark H, et al. 2021. Time trends of persistent organic pollutants (POPs) and chemicals of emerging Arctic concern (CEAC) in Arctic air from 25 years of monitoring. *Sci Total Environ* 775:145109. <https://doi.org/10.1016/j.scitotenv.2021.145109>.
- Woodliff HJ, Connor PM, Scopa J. 1966. Aplastic anemia associated with insecticides. *Med J Aust* 1:628-629.
- Woolley DE, Griffith JA. 1989. Kinetics and thresholds of several indices of lindane-induced toxicity. *Pharmacol Biochem Behav* 33:787-792. [https://doi.org/10.1016/0091-3057\(89\)90471-1](https://doi.org/10.1016/0091-3057(89)90471-1).
- WQP. 2023. Water Quality Portal data: alpha-Hexachlorocyclohexane, beta-hexachlorocyclohexane, 1,2,3,4,5,6 -Hexachlorocyclohexane. National Water Quality Monitoring Council. <https://www.waterqualitydata.us/portal/>. May 6, 2021.
- Wu WZ, Xu Y, Schramm KW, et al. 1997. Study of sorption, biodegradation, and isomerization of HCH in stimulated sediment/water system. *Chemosphere* 35(9):1887-1894.
- Wu Z, Lin T, Hu L, et al. 2020. Atmospheric legacy organochlorine pesticides and their recent exchange dynamics in the Northwest Pacific Ocean. *Sci Total Environ* 727:138408. <https://doi.org/10.1016/j.scitotenv.2020.138408>.
- Xu X, Dailey AB, Talbott EO, et al. 2010. Associations of serum concentrations of organochlorine pesticides with breast cancer and prostate cancer in U.S. adults. *Environ Health Perspect* 118(1):60-66. <https://doi.org/10.1289/ehp.0900919>.
- Xu S, Yang X, Qian Y, et al. 2022. Analysis of serum levels of organochlorine pesticides and related factors in Parkinson's disease. *Neurotoxicology* 88:216-223. <https://doi.org/10.1016/j.neuro.2021.12.001>.
- Xue M, Shen G, Yu J, et al. 2010. Dynamic changes of α -hexachlorocyclohexane and its enantiomers in various tissues of Japanese Rabbits (*Oryctolagus cuniculus*) after oral or dermal exposure. *Chemosphere* 81(11):1486-1491. <https://doi.org/10.1016/j.chemosphere.2010.08.046>.
- Yaduvanshi SK, Srivastava N, Marotta F, et al. 2012. Evaluation of micronuclei induction capacity and mutagenicity of organochlorine and organophosphate pesticides. *Drug Metab Lett* 6(3):187-197. <https://doi.org/10.2174/1872312811206030006>.
- Yalcin SS, Orun E, Yalcin S, et al. 2015. Organochlorine pesticide residues in breast milk and maternal psychopathologies and infant growth from suburban area of Ankara, Turkey. *Int J Environ Health Res* 25(4):364-372. <https://doi.org/10.1080/09603123.2014.945515>.
- Yamazaki K, Itoh S, Araki A, et al. 2020. Associations between prenatal exposure to organochlorine pesticides and thyroid hormone levels in mothers and infants: The Hokkaido study on environment

8. REFERENCES

- and children's health. *Environmental Research* 189:109840.
<https://doi.org/10.1016/j.envres.2020.109840>.
- Yang X, Jiang X, Yu G, et al. 2007. Leaf-air transfer of organochlorine pesticides from three selected vegetables. *Environ Pollut* 148(2):555-561. <https://doi.org/10.1016/j.envpol.2006.11.029>.
- Yang D, Li X, Tao S, et al. 2010. Enantioselective behavior of α -HCH in mouse and quail tissues. *Environ Sci Technol* 44(5):1854-1859. <https://doi.org/10.1021/es9030134>.
- Yang Y, Zhang YB, Sheng W, et al. 2014. Influence of soy isoflavone on lindane cumulant in Sprague-Dawley rats. *Biomed Environ Sci* 27(8):637-640. <https://doi.org/10.3967/bes2014.097>.
- Yang X, Zhang M, Lu T, et al. 2020. Metabolomics study and meta-analysis on the association between maternal pesticide exposome and birth outcomes. *Environ Res* 182:109087.
<https://doi.org/10.1016/j.envres.2019.109087>.
- Yang C, Fang J, Sun X, et al. 2021a. Prenatal exposure to organochlorine pesticides and infant growth: A longitudinal study. *Environ Int* 148:106374. <https://doi.org/10.1016/j.envint.2020.106374>.
- Yang W, Ni W, Jin L, et al. 2021b. Determination of organochlorine pesticides in human umbilical cord and association with orofacial clefts in offspring. *Chemosphere* 266:129188.
<https://doi.org/10.1016/j.chemosphere.2020.129188>.
- Yin S, Zhang J, Guo F, et al. 2019. Transplacental transfer of organochlorine pesticides: Concentration ratio and chiral properties. *Environ Int* 130:104939. <https://doi.org/10.1016/j.envint.2019.104939>.
- Yin S, Zhang J, Guo F, et al. 2020. Transplacental transfer mechanism of organochlorine pesticides: An in vitro transcellular transport study. *Environ Int* 135:105402.
<https://doi.org/10.1016/j.envint.2019.105402>.
- Yin S, Sun Y, Yu J, et al. 2021. Prenatal exposure to organochlorine pesticides is associated with increased risk for neural tube defects. *Sci Total Environ* 770:145284.
<https://doi.org/10.1016/j.scitotenv.2021.145284>.
- Yousefi F, Asadikaram G, Karamouzian S, et al. 2022. Organochlorine and organophosphorus pesticides may induce brain cancer through oxidative stress. *Toxicol Ind Health* 38(11):717-732.
<https://doi.org/10.1177/07482337221125954>.
- Yu Y, Wang B, Wang X, et al. 2013. Hexachlorocyclohexanes (HCHs) in placenta and umbilical cord blood and dietary intake for women in Beijing, China. *Environ Pollut* 179:75-80.
<https://doi.org/10.1016/j.envpol.2013.03.056>.
- Yu Y, Hung H, Alexandrou N, et al. 2015. Multiyear measurements of flame retardants and organochlorine pesticides in air in Canada's Western sub-Arctic. *Environ Sci Technol* 49(14):8623-8630. <https://doi.org/10.1021/acs.est.5b01996>.
- Yuksel H, Karadas E, Keles H, et al. 2009. Effects of hexachlorocyclohexane (HCH- γ -isomer, lindane) intoxication on the proliferation and apoptosis in rat testes. *Acta Vet Brno* 78(4):615-620.
<https://doi.org/10.2754/avb200978040615>.
- Zeng JY, Miao Y, Liu C, et al. 2022. Serum multiple organochlorine pesticides in relation to testosterone concentrations among Chinese men from an infertility clinic. *Chemosphere* 299:134469. <https://doi.org/10.1016/j.chemosphere.2022.134469>.
- Zesch A, Nitzsche K, Lange M. 1982. Demonstration of the percutaneous resorption of a lipophilic pesticide and its possible storage in the human body. *Arch Dermatol Res* 273:43-49.
- Zhang N, Bashir S, Qin J, et al. 2014. Compound specific stable isotope analysis (CSIA) to characterize transformation mechanisms of α -hexachlorocyclohexane. *J Hazard Mater* 280:750-757.
<https://doi.org/10.1016/j.jhazmat.2014.08.046>.
- Zhang Y, Guo J, Zhang X, et al. 2016. Interaction effects between organochlorine pesticides and isoflavones in vitro and in vivo. *Biomed Res Int* 2016:6861702.
<https://doi.org/10.1155/2016/6861702>.
- Zhang X, Wu X, Lei B, et al. 2018. Transplacental transfer characteristics of organochlorine pesticides in paired maternal and cord sera, and placentas and possible influencing factors. *Environ Pollut* 233:446-454. <https://doi.org/10.1016/j.envpol.2017.10.075>.

8. REFERENCES

- Zhang J, Li C, Yin S, et al. 2021. Environmental exposure to organochlorine pesticides and its association with the risk of hearing loss in the Chinese adult population: A case-control study. *Sci Total Environ* 767:145153. <https://doi.org/10.1016/j.scitotenv.2021.145153>.
- Zhang M, Wang L, Li X, et al. 2023. Individual and mixtures of polychlorinated biphenyls and organochlorine pesticides exposure in relation to metabolic syndrome among Chinese adults. *Sci Total Environ* 877:162935. <https://doi.org/10.1016/j.scitotenv.2023.162935>.
- Zhao B, Shen H, Liu F, et al. 2012. Exposure to organochlorine pesticides is an independent risk factor of hepatocellular carcinoma: a case-control study. *J Expo Sci Environ Epidemiol* 22(6):541-548. <https://doi.org/10.1038/jes.2011.29>.
- Zoeteman BCJ, Harmsen K, Linders JBHJ, et al. 1980. Persistent organic pollutants in river water and ground water of the Netherlands. *Chemosphere* 9:231-249.
- Zong G, Valvi D, Coull B, et al. 2018. Persistent organic pollutants and risk of type 2 diabetes: A prospective investigation among middle-aged women in Nurses' Health Study II. *Environ Int* 114:334-342. <https://doi.org/10.1016/j.envint.2017.12.010>.