

DAFTAR PUSTAKA

- Adams, J.S., & Hewison, M., 2010. Update in vitamin D. *J. Clin. Endocrinol. Metab.* 95: 471–478. doi:10.1210/jc.2009-1773
- Al-Matary, A., AlMalki, Y., Khalil, S., & AlHulaimi, E., 2021. The potential effects of vitamin D deficiency on respiratory distress syndrome among preterm infants. *Clin. Nutr. ESPEN* 44: 243–246. doi:10.1016/j.clnesp.2021.06.009
- Ardastani, A.G., Hashemi, E., Beheshtinejad, M., & Dorostkar, R., 2020. Comparison of 25- hydroxy Vitamin D levels in premature infants with and without respiratory distress. *Iran. J. Neonatol.* 11: 109–114. doi:10.22038/ijn.2020.42523.1705
- Aslamzai, M., Froogh, B.A., Mukhlis, A.H., Faizi, O.A., Sajid, S.A., & Hakimi, Z., 2023. Factors associated with respiratory distress syndrome in preterm neonates admitted to a tertiary hospital in Kabul city: A retrospective cross-sectional study. *Glob. Pediatr.* 3: 100035. doi:10.1016/j.gped.2023.100035
- Atar, H.Y., Baatz, J.E., & Ryan, R.M., 2021. Molecular mechanisms of maternal diabetes effects on fetal and neonatal surfactant. *Children* 8: 1–10. doi:10.3390/children8040281
- Baker, A., Haeri, S., Camargo, C., Stuebe, A., & Boggess, K., 2011. A Nested Case-Control Study of First-Trimester Maternal Vitamin D Status and Risk for Spontaneous Preterm Birth. *Am J Perinatol* 28: 667–672. doi:10.1055/s-0031-1276731.A
- Barker, D.J.P., Eriksson, J.G., Forsén, T., & Osmond, C., 2002. Fetal origins of adult disease: Strength of effects and biological basis. *Int. J. Epidemiol.* 31: 1235–1239. doi:10.1093/ije/31.6.1235
- Basta, M., & Lipsett, B.J., 2023. Anatomy, Abdomen and Pelvis: Umbilical Cord [WWW Document]. *StatPearls [Internet]. Treasure Isl. StatPearls.*
- Bodnar, L.M., Simhan, H.N., Powers, R.W., Frank, M.P., Cooperstein, E., & Roberts, J.M., 2007. High Prevalence of Vitamin D Insufficiency in Black and White Pregnant Women Residing in the Northern United States and Their Neonates. *J. Nutr.* 137: 447–452. doi:https://doi.org/10.1093/jn/137.2.447
- Borel, P., Caillaud, D., & Cano, N.J., 2015. Vitamin D Bioavailability: State of the Art. *Crit. Rev. Food Sci. Nutr.* 55: 1193–1205. doi:10.1080/10408398.2012.688897
- Boskabadi, H., Mamoori, G., Khatami, S.F., & Faramarzi, R., 2018. Serum level of vitamin D in preterm infants and its association with premature-related respiratory complications: a case-control study. *Electron. Physiciane* 10: 6208–6214. doi:10.19082/6208
- Burris, H.H., Van Marter, L.J., McElrath, T.F., Tabatabai, P., Litonjua, A.A., Weiss, S.T., et al., 2014. Vitamin D status among preterm and full-term infants at birth. *Pediatr. Res.* 75: 75–80. doi:10.1038/pr.2013.174
- Chen, C., Tian, T., Liu, L., Zhang, J., & Fu, H., 2018. Gender-related efficacy of

pulmonary surfactant in infants with respiratory distress syndrome. *Med. (United States)* 97: 1–6. doi:10.1097/MD.00000000000010425

- Dahlan, M.S., 2013. Besar Sampel dan Cara Pengambilan Sampel, Tiga. ed. Salemba Medika, Jakarta.
- Downes, J., Vidyasagar, D., Morrow, G., & Boggs, T., 1970. Respiratory Distress Syndrome in Newborn Infants. *Clin Pediatr* 20: 167–180. doi:10.1177/000992287000900609
- Fang, K., Yue, S., Wang, S., Wang, M., Yu, X., Ding, Y., et al., 2024. The association between sex and neonatal respiratory distress syndrome. *BMC Pediatr*. 24: 1–7. doi:10.1186/s12887-024-04596-3
- Fettah, N.D., Zenciroğlu, A., Dilli, D., Beken, S., & Okumuş, N., 2015. Is higher 25-hydroxyvitamin D level preventive for respiratory distress syndrome in preterm infants? *Am. J. Perinatol*. 32: 247–250. doi:10.1055/s-0034-1383849
- Fort, P., Salas, A.A., Nicola, T., Craig, C.M., Carlo, W.A., & Ambalavanan, N., 2016. A Comparison of 3 Vitamin D Dosing Regimens in Extremely Preterm Infants: A Randomized Controlled Trial. *J. Pediatr*. 174: 132-138.e1. doi:10.1016/j.jpeds.2016.03.028
- Haksari, E.L., Hakimi, M., & Ismail, D., 2022. Respiratory distress in small for gestational age infants based on local newborn curve prior to hospital discharge. *Front. Pediatr*. 10: 1–10. doi:10.3389/fped.2022.986695
- Hartmann, B., Heine, G., Babina, M., Steinmeyer, A., Zügel, U., Radbruch, A., et al., 2011. Targeting the vitamin D receptor inhibits the B cell-dependent allergic immune response. *Allergy Eur. J. Allergy Clin. Immunol*. 66: 540–548. doi:10.1111/j.1398-9995.2010.02513.x
- Hensel, K.J., Randis, T.M., Gelber, S.E., & Ratner, A.J., 2011. Pregnancy-specific association of vitamin D deficiency and bacterial vaginosis. *Am. J. Obstet. Gynecol*. 204: 41.e1-41.e9. doi:10.1016/j.ajog.2010.08.013
- Hewison, M., 2012. Vitamin D and the Immune System: New Perspectives on an Old Theme. *Rheum. Dis. Clin. North Am*. 38: 125–139. doi:10.1016/j.rdc.2012.03.012
- Holick, M.F., 2011. Vitamin D: A D-lightful solution for health. *J. Investig. Med*. 59: 872–880. doi:10.2310/JIM.0b013e318214ea2d
- Holick, M.F., 2007. Vitamin D deficiency. *N. Engl. J. Med*. 357: 266–81. doi:10.1016/B978-1-4377-0987-2.00009-1
- Holick, M.F., Binkley, N.C., Bischoff-Ferrari, H.A., Gordon, C.M., Hanley, D.A., Heaney, R.P., et al., 2011. Evaluation, treatment, and prevention of vitamin D deficiency: An endocrine society clinical practice guideline. *J. Clin. Endocrinol. Metab*. 96: 1911–1930. doi:10.1210/jc.2011-0385
- Javier Cepeda, S., Daniel Zenteno, A., Claudia Fuentes, S., & Raúl Bustos, B., 2019. Vitamin D and pediatrics respiratory diseases. *Rev. Chil. Pediatr*. 90: 94–101. doi:10.32641/rchped.v90i1.747
- Kazzi, S.N.J., Karnati, S., Puthuraya, S., & Thomas, R., 2018. Vitamin D deficiency and respiratory morbidity among African American very low birth weight infants. *Early Hum. Dev*. 119: 19–24. doi:10.1016/j.earlhumdev.2018.02.013
- Kho, A.T., Bhattacharya, S., Tantisira, K.G., Carey, V.J., Gaedigk, R., Leeder, J.S., et

- al., 2010. Transcriptomic analysis of human lung development. *Am. J. Respir. Crit. Care Med.* 181: 54–63. doi:10.1164/rccm.200907-1063OC
- Kim, I., Kim, S.S., Song, J.I., Yoon, S.H., Park, G.Y., & Lee, Y.W., 2019. Association between vitamin D level at birth and respiratory morbidities in very-low-birth-weight infants. *Korean J. Pediatr.* 62: 166–172. doi:10.3345/kjp.2018.06632
- Kim, J.H., Lee, S.M., & Lee, Y.H., 2018. Risk factors for respiratory distress syndrome. *Yeungnam Univ J Med* 35: 187–191. doi:10.12701/yujm.2018.35.2.187
- Kim, Y.J., Lim, G., Lee, R., Chung, S., Son, J.S., & Park, H.W., 2023. Association between vitamin D level and respiratory distress syndrome: A systematic review and meta-analysis. *PLoS One* 18: 1–12. doi:10.1371/journal.pone.0279064
- Leksomono, N., Haksari, E.L., & Sutomo, R., 2019. Predictors of early growth failure in preterm, very low birth weight infants during hospitalization. *Paediatr. Indones. Indones.* 59: 44–50. doi:10.14238/pi59.1.2019.44-50
- Leung-Pineda, V., & Gronowski, A.M., 2010. Biomarker tests for fetal lung maturity. *Biomark. Med.* 4: 849–857. doi:10.2217/bmm.10.109
- Li, Y., Wang, W., & Zhang, D., 2019a. Maternal diabetes mellitus and risk of neonatal respiratory distress syndrome: a meta-analysis. *Acta Diabetol.* 56: 729–740. doi:10.1007/s00592-019-01327-4
- Li, Y., Zhang, C., & Zhang, D., 2019b. Cesarean section and the risk of neonatal respiratory distress syndrome: a meta-analysis. *Arch. Gynecol. Obstet.* 300: 503–517. doi:10.1007/s00404-019-05208-7
- Littner, Y., Volinsky, C., Kuint, J., Yekutieli, N., Borenstein-Levin, L., Dinur, G., et al., 2021. Respiratory morbidity in very low birth weight infants through childhood and adolescence. *Pediatr. Pulmonol.* 56: 1609–1616. doi:10.1002/ppul.25329
- Liu, J., Yang, N., & Liu, Y., 2014. High-risk factors of respiratory distress syndrome in term neonates: A retrospective case-control study. *Balkan Med. J.* 31: 64–68. doi:10.5152/balkanmedj.2014.8733
- Liu, S.Y., Yang, H.I., Chen, C.Y., Chou, H.C., Hsieh, W.S., Tsou, K.I., et al., 2020. The gestational effect of antenatal corticosteroids on respiratory distress syndrome in very low birth weight infants: A population-based study. *J. Formos. Med. Assoc.* 119: 1267–1273. doi:10.1016/j.jfma.2019.11.002
- Lykkedegn, S., Sorensen, G.L., Beck-Nielsen, S.S., & Christesen, H.T., 2015. The impact of vitamin D on fetal and neonatal lung maturation. A systematic review. *Am. J. Physiol. - Lung Cell. Mol. Physiol.* 308: L587–L602. doi:10.1152/ajplung.00117.2014
- Mahumud, R.A., Sultana, M., & Sarker, A.R., 2017. Distribution and determinants of low birth weight in developing countries. *J. Prev. Med. Public Heal.* 50: 18–28. doi:10.3961/jpmph.16.087
- Mansur, J.L., Oliveri, B., Giacoia, E., Fusaro, D., & Costanzo, P.R., 2022. Vitamin D: Before, during and after Pregnancy: Effect on Neonates and Children.

- Nutrients* 14: 1–18. doi:10.3390/nu14091900
- Marsubrin, P.M.T., Firmansyah, A., Rohsiswatmo, R., Purwosunu, Y., Munasir, Z., & Yuniati, T., 2021. Vitamin D and T regulator cells are not independent factors for RDS in premature neonates. *Paediatr. Indones.* 61: 192–197. doi:10.14238/pi61.4.2021.192-7
- Matejek, T., Zemankova, J., Malakova, J., Cermakova, E., Skalova, S., & Palicka, V., 2022. Severe vitamin D deficiency in preterm infants: possibly no association with clinical outcomes? *J. Matern. Neonatal Med.* 35: 1562–1570. doi:10.1080/14767058.2020.1762560
- McGrath, J.J., Burne, T.H., Féron, F., MacKay-Sim, A., & Eyles, D.W., 2010. Developmental vitamin D deficiency and risk of schizophrenia: A 10-year update. *Schizophr. Bull.* 36: 1073–1078. doi:10.1093/schbul/sbq101
- Merewood, A., Mehta, S.D., Chen, T.C., Bauchner, H., & Holick, M.F., 2009. Association between vitamin D deficiency and primary cesarean section. *J. Clin. Endocrinol. Metab.* 94: 940–945. doi:10.1210/jc.2008-1217
- Metcalfe, A., Lisonkova, S., Sabr, Y., Stritzke, A., & Joseph, K.S., 2017. Neonatal respiratory morbidity following exposure to chorioamnionitis. *BMC Pediatr.* 17: 1–7. doi:10.1186/s12887-017-0878-9
- Minuye Birihane, B., Alebachew Bayih, W., Yeshambel Alemu, A., Belay, D.M., & Demis, A., 2021. The burden of hyaline membrane disease, mortality and its determinant factors among preterm neonates admitted at Debre Tabor General Hospital, North Central Ethiopia: A retrospective follow up study. *PLoS One* 16: e0249365. doi:10.1371/journal.pone.0249365
- Mirzaei, F., Michels, K.B., Munger, K., O'Reilly, E., Chitnis, T., Forman, M.R., et al., 2011. Gestational vitamin D and the risk of multiple sclerosis in offspring. *Ann. Neurol.* 70: 30–40. doi:10.1002/ana.22456
- Mitchell, S.M., Rogers, S.P., Hicks, P.D., Hawthorne, K.M., Parker, B.R., & Abrams, S.A., 2009. High frequencies of elevated alkaline phosphatase activity and rickets exist in extremely low birth weight infants despite current nutritional support. *BMC Pediatr.* 9: 1–7. doi:10.1186/1471-2431-9-47
- Mogire, R.M., Mutua, A., Kimita, W., Kamau, A., Bejon, P., Pettifor, J.M., et al., 2020. Prevalence of vitamin D deficiency in Africa: a systematic review and meta-analysis. *Lancet Glob. Heal.* 8: e134–e142. doi:10.1016/S2214-109X(19)30457-7
- Monangi, N., Slaughter, J.L., Dawodu, A., Smith, C., & Akinbi, H.T., 2014. Vitamin D status of early preterm infants and the effects of vitamin D intake during hospital stay. *Arch. Dis. Child. Fetal Neonatal Ed.* 99: 2013–2015. doi:10.1136/archdischild-2013-303999
- Morales, E., Romieu, I., Guerra, S., Ballester, F., Rebagliato, M., Vioque, J., et al., 2012. Maternal vitamin D status in pregnancy and risk of lower respiratory tract infections, wheezing, and asthma in offspring. *Epidemiology* 23: 64–71. doi:10.1097/EDE.0b013e31823a44d3
- Mwita, S., Kamala, B., Konje, E., Katabalo, D., Msanga, D.R., Marwa, K.J., et al.,

2023. Antenatal corticosteroid therapy, delivery intervals and perinatal mortality in low-resource settings. *J. Trop. Pediatr.* 69. doi:10.1093/tropej/fmad037
- Ncayiyana, J.R., Martinez, L., Goddard, E., Myer, L., & Zar, H.J., 2021. Prevalence and correlates of vitamin d deficiency among young South African infants: A birth cohort study. *Nutrients* 13: 1–12. doi:10.3390/nu13051500
- Nguyen, T.M., Guillozo, H., Marin, L., Tordet, C., Koite, S., & Garabedian, M., 1996. Evidence for a vitamin D paracrine system regulating maturation of developing rat lung epithelium. *Am. J. Physiol. - Lung Cell. Mol. Physiol.* 271. doi:10.1152/ajplung.1996.271.3.l392
- Nimitphong, H., & Holick, M.F., 2013. Prevalence of Vitamin D Deficiency in Asia Vitamin D Status and Sun Exposure in Southeast Asia. *Dermato-endocrinology J.* 5: 34–37.
- Oktaria, V., Graham, S.M., Triasih, R., Soenarto, Y., Bines, J.E., Ponsonby, A.L., et al., 2020. The prevalence and determinants of vitamin D deficiency in indonesian infants at birth and six months of age. *PLoS One* 15: 1–15. doi:10.1371/journal.pone.0239603
- Onwuneme, C., Martin, F., McCarthy, R., Carroll, A., Segurado, R., Murphy, J., et al., 2015. The association of vitamin d status with acute respiratory morbidity in preterm infants. *J. Pediatr.* 166: 1175–1180.e1. doi:10.1016/j.jpeds.2015.01.055
- Papalia, H., Samonini, A., Buffat, C., Gras, E., des Robert, C., Landrier, J.F., et al., 2022. Low Vitamin D Levels at Birth and Early Respiratory Outcome in Infants With Gestational Age Less Than 29 Weeks. *Front. Pediatr.* 9: 1–7. doi:10.3389/fped.2021.790839
- Pérez-López, F.R., Pasupuleti, V., Mezones-Holguin, E., Benites-Zapata, V.A., Thota, P., Deshpande, A., et al., 2015. Effect of vitamin D supplementation during pregnancy on maternal and neonatal outcomes: A systematic review and meta-analysis of randomized controlled trials. *Fertil. Steril.* 103: 1278–1288.e4. doi:10.1016/j.fertnstert.2015.02.019
- Permana, I., Judistiani, R.T.D., Bakhtiar, B., Alia, A., Yuniati, T., & Setiabudiawan, B., 2022. Incidence of Respiratory Distress Syndrome and Its Associated Factors among Preterm Neonates: Study from West Java Tertiary Hospital. *Int. J. Trop. Vet. Biomed. Res.* 7: 1–7. doi:10.21157/ijtvbr.v7i1.27043
- Pourbadakhshan, N., Boskabadi, H., Nakhaei, M.H.A., Darabi, A., & Sani, M.R., 2023. The Effect of Maternal Vitamin D Intake on the Incidence of Nonspecific Respiratory Distress in Infants: A Randomized Clinical Trial. *Clin. Exp. Obstet. Gynecol.* 50. doi:10.31083/j.ceog5004078
- Qari, S.A., Alsufyani, A.A., & Muathin, S.H., 2018. Prevalence of Respiratory Distress Syndrome in Neonates. *Egypt. J. Hosp. Med.* 70: 257–264. doi:10.12816/0043086
- Rigo, J., Pielain, C., Salle, B., & Senterre, J., 2007. Enteral calcium, phosphate and vitamin D requirements and bone mineralization in preterm infants. *Acta Paediatr. Int. J. Paediatr.* 96: 969–974. doi:10.1111/j.1651-2227.2007.00336.x
- Rosen, C.J., 2011. Vitamin D insufficiency. *N. Engl. J. Med.* 364: 248–254.

doi:10.4065/mcp.2010.0567

- Sastroasmoro, S., & Ismael, S., 2014. Dasar – Dasar Metodologi Penelitian Klinis, Edisi ke-5. ed. Yogyakarta: Sagung Seto.
- Seto, T.L., Tabangin, M.E., Langdon, G., Mangeot, C., Dawodu, A., Steinhoff, M., et al., 2016. Racial disparities in cord blood Vitamin D levels and its association with small-for-gestational-age infants. *J. Perinatol.* 36: 623–628. doi:10.1038/jp.2016.64
- Smith, P.B., Ambalavanan, N., Li, L., Cotten, C.M., Laughon, M., Walsh, M.C., et al., 2012. Approach to infants born at 22 to 24 weeks' gestation: Relationship to outcomes of more-mature infants. *Pediatrics* 129. doi:10.1542/peds.2011-2216
- Sørensen, I.M., Joner, G., Jenum, P.A., Eskild, A., Torjesen, P.A., & Stene, L.C., 2012. Maternal serum levels of 25-hydroxy-vitamin D during pregnancy and risk of type 1 diabetes in the offspring. *Diabetes* 61: 175–178. doi:10.2337/db11-0875
- Spurway, J., Logan, P., & Pak, S., 2012. The development, structure and blood flow within the umbilical cord with particular reference to the venous system. *Australas. J. Ultrasound Med.* 15: 97–102. doi:10.1002/j.2205-0140.2012.tb00013.x
- Stanford Medicine Children's Health, 2024. Blood Circulation in the Fetus and Newborn [WWW Document]. URL <https://www.stanfordchildrens.org/en/topic/default?id=blood-circulation-in-the-fetus-and-newborn-90-P02362>
- Thandrayen, K., & Pettifor, J.M., 2012. Maternal Vitamin D Status: Implications for the Development of Infantile Nutritional Rickets. *Rheum. Dis. Clin. North Am.* 38: 61–79. doi:10.1016/j.rdc.2012.03.007
- Thiele, D.K., Senti, J.L., & Anderson, C.M., 2013. Maternal vitamin D supplementation to meet the needs of the breastfed infant: A systematic review. *J. Hum. Lact.* 29: 163–170. doi:10.1177/0890334413477916
- Treiber, M., Mujezinović, F., Pečovnik Balon, B., Gorenjak, M., Maver, U., & Dovnik, A., 2020. Association between umbilical cord vitamin D levels and adverse neonatal outcomes. *J. Int. Med. Res.* 48. doi:10.1177/0300060520955001
- Ullberg, U., Sandstedt, B., & Lingman, G., 2001. Hyrtl's anastomosis, the only connection between the two umbilical arteries. A study in full term placentas from AGA infants with normal umbilical artery blood flow. *Acta Obstet. Gynecol. Scand.* 80: 1–6. doi:10.1034/j.1600-0412.2001.800101.x
- Wagner, C.L., Hulsey, T.C., Fanning, D., Ebeling, M., & Hollis, B.W., 2006. High-dose vitamin D3 supplementation in a cohort of breastfeeding mothers and their infants: a 6-month follow-up pilot study. *Breastfeed. Med.* 1: 59–70. doi:10.1089/bfm.2006.1.59
- Westgate, J.A., Lindsay, R.S., Beattie, J., Pattison, N.S., Gamble, G., Mildenhall, L.F.J., et al., 2006. Hyperinsulinemia in cord blood in mothers with type 2 diabetes and gestational diabetes mellitus in New Zealand. *Diabetes Care* 29:

- 1345–1350. doi:10.2337/dc05-1677
- Whitehouse, A.J.O., Holt, B.J., Serralha, M., Holt, P.G., Kusel, M.M.H., & Hart, P.H., 2012. Maternal serum vitamin D levels during pregnancy and offspring neurocognitive development. *Pediatrics* 129: 485–493. doi:10.1542/peds.2011-2644
- Wibowo, T., Anggraini, A., Safrida, E.N., Wandita, S., & Haksari, E.L., 2024. Maternal and perinatal factors affecting vitamin D status of very low birth weight infants hospitalized in neonatal intensive care unit. *J. Gizi Klin. Indones.* 20: 89–94. doi:10.22146/ijcn.91172
- Wondie, W.T., Legesse, B.T., Mekonnen, G.B., Degaga, G.T., Zemariam, A.B., Gedefaw, G.D., et al., 2023. Incidence and predictors of respiratory distress syndrome among low birth weight neonates in the first seven days in Northwest Ethiopia Comprehensive Specialized Hospitals, 2023: A retrospective follow-up study, *BMJ Open*. doi:10.1136/bmjopen-2023-079063
- Wong, R.S., Tung, K.T.S., Mak, R.T.W., Leung, W.C., Yam, J.C., Chua, G.T., et al., 2022. Vitamin D concentrations during pregnancy and in cord blood: a systematic review and meta-analysis. *Nutr. Rev.* 80: 2225–2236. doi:10.1093/nutrit/nuac023
- World Health Organization. 2010. Born too soon: the global action report on preterm birth. Available from: <https://www.who.int/publications/i/item/9789241503433>
- World Health Organization. 2014. Preterm birth fact sheet. Available from: <https://www.who.int/mediacentre/factsheets/fs363/en/>
- Zang, R., Zhang, Y., Zhang, H., Zhang, X., Lv, Y., & Li, D., 2022. Association Between Vitamin D Level and Neonatal Respiratory Distress Syndrome: A Systematic Review and Meta-Analysis. *Front. Pediatr.* 9: 1–9. doi:10.3389/fped.2021.803143
- Zelzer, S., Goessler, W., & Herrmann, M., 2018. Measurement of vitamin D metabolites by mass spectrometry, an analytical challenge. *J. Lab. Precis. Med.* 3: 99–99. doi:10.21037/jlpm.2018.11.06