

DAFTAR PUSTAKA

- Anand, P.K. (2025). From fat to fire : The lipid – inflammasome connection. *Immunol. Rev.* 1–12. Available at: <https://doi.org/10.1111/imr.13403>
- Anonim (2021). Trigliserida Package Insert Cobas®.
- Appiah, M.G., Park, E.J., Akama, Y., Nakamori, Y., Kawamoto, E., Gaowa, A., *et al.* (2021). Cellular and Exosomal Regulations of Sepsis-Induced Metabolic Alterations. Available at: <https://doi.org/10.3390/ijms22158295>
- Arora, J., Mendelson, A.A., & Fox-Robichaud, A. (2023). Sepsis: network pathophysiology and implications for early diagnosis. *Am. J. Physiol. Integr. Comp. Physiol.* 324 : R613–R624. Available at: <https://doi.org/10.1152/ajpregu.00003.2023>
- Ayene Mekuria, T., Liyew Wudu, B., Zegeye, A.F., Eshete Tadesse, E., & Demis Nimani, T. (2024). Incidence of mortality and its predictors among septic shock patients admitted to the intensive care unit of comprehensive specialized hospitals in the northwest of Amhara, Ethiopia. *Front. Disaster Emerg. Med.* 2. Available at: <https://doi.org/10.3389/femer.2024.1405753>
- Blumenthal, R.S., & Stone, N.J. (2016). Fasting or Nonfasting Lipid Measurements to. *J Am Coll Cardiol* 67.
- Chen, Y.L., Xie, Y.J., Liu, Z.M., Chen, W.B., Zhang, R., Ye, H.X., *et al.* (2022). Omega - 3 fatty acids impair miR - 1 - 3p - dependent Notch3 down - regulation and alleviate sepsis - induced intestinal injury. *Mol. Med.* Available at: <https://doi.org/10.1186/s10020-021-00425-w>
- Chrostek, L., Supronowicz, L., Panasiuk, A., Cylwik, B., Gruszewska, E., & Flisiak, R. (2014). The effect of the severity of liver cirrhosis on the level of lipids and lipoproteins. *Clin. Exp. Med.* 14 : 417–21. Available at: <https://doi.org/10.1007/s10238-013-0262-5>
- Daniel, M., Bedoui, Y., Vagner, D., Raffray, L., Ah-Pine, F., Doray, B., *et al.* (2022). Pathophysiology of Sepsis and Genesis of Septic Shock: The Critical Role of Mesenchymal Stem Cells (MSCs). *Int. J. Mol. Sci.* 23 : 9274. Available at: <https://doi.org/10.3390/ijms23169274>
- Delirrad, M., Gharebaghi, N., Mobarhan, S., & Nejadrahim, R. (2020). Relationship Between Lipid Profile and Sepsis Outcome in Intensive Care Unit. *Arch. Clin. Infect. Dis.* 15. Available at: <https://doi.org/10.5812/archcid.93533>
- Fadrian, F., Decroli, E., Ahmad, A., Kam, A., Muharramah, D.H., Pradana, G., *et al.* (2025). In-hospital mortality and its determinant factors among patients with sepsis. *Universa Med.* 44 : 3–15. Available at: <https://doi.org/10.18051/UnivMed.2025.v44.3-15>
- Fahila, R., Kembaren, T., & Rahimi, A. (2018). The effect of bacterial sepsis severity on triglyceride value. *IOP Conf. Ser. Earth Environ. Sci.* 125 : 012074. Available at: <https://doi.org/10.1088/1755-1315/125/1/012074>
- Felici, N., Liu, D., Maret, J., Restrepo, M., & Borovskiy, Y. (2021). Long-Term Abnormalities of Lipid Profile After a Single Episode of Sepsis 8 : 1–14. Available at: <https://doi.org/10.3389/fcvm.2021.674248>

- Feng, Z., Wang, L., Yang, J., Li, T., Liao, X., Kang, Y., *et al.* (2025). Sepsis: the evolution of molecular pathogenesis concepts and clinical management. *MedComm* 6. Available at: <https://doi.org/10.1002/mco2.70109>
- Filippas-Ntekouan, S., Liberopoulos, E., & Elisaf, M. (2017). Lipid testing in infectious diseases: possible role in diagnosis and prognosis. *Infection* 45 : 575–588. Available at: <https://doi.org/10.1007/s15010-017-1022-3>
- Fujishima, S. (2016). Organ dysfunction as a new standard for defining sepsis. *Inflamm. Regen.* 36 : 24. Available at: <https://doi.org/10.1186/s41232-016-0029-y>
- Genga, K.R., & Russell, J.A. (2017). Update of Sepsis in the Intensive Care Unit. *J. Innate Immun.* 9 : 441–455. Available at: <https://doi.org/10.1159/000477419>
- Golucci, A.P.B.S., Marson, F.A.L., Ribeiro, A.F., & Nogueira, R.J.N. (2018). Lipid profile associated with the systemic inflammatory response syndrome and sepsis in critically ill patients. *Nutrition* 55–56 : 7–14. Available at: <https://doi.org/10.1016/j.nut.2018.04.007>
- Gyawali, B., Ramakrishna, K., & Dhamoon, A.S. (2019). Sepsis: The evolution in definition, pathophysiology, and management. *SAGE Open Med.* 7 : 2050312119835043. Available at: <https://doi.org/10.1177/2050312119835043>
- Harr, K.E., Flatland, B., Nabity, M., & Freeman, K.P. (2013). ASVCP guidelines: allowable total error guidelines for biochemistry. *Vet. Clin. Pathol.* 42 : 424–436. Available at: <https://doi.org/10.1111/vcp.12101>
- Huang, Y., & Sun, Z. (2024). Triglyceride levels are associated with 30-day mortality in intensive care patients: a retrospective analysis in the MIMIC-IV database. *Eur. J. Med. Res.* 29 : 561. Available at: <https://doi.org/10.1186/s40001-024-02159-x>
- Jacobson, T.A., Ito, M.K., Maki, K.C., Orringer, C.E., Bays, H.E., Jones, P.H., *et al.* (2014). National Lipid Association recommendations for patient-centered management of dyslipidemia : Part 1 – executive summary *. *J. Clin. Lipidol.* 8 : 473–488. Available at: <https://doi.org/10.1016/j.jacl.2014.07.007>
- Juneja, D. (2012). Severe sepsis and septic shock in the elderly: An overview. *World J. Crit. Care Med.* 1 : 23. Available at: <https://doi.org/10.5492/wjccm.v1.i1.23>
- Kaga, A.K., Barbanera, P.O., Orleanne, N., Rodolfo, L., Rosa, D.O., Angélica, A., *et al.* (2018). Effect of N-Acetylcysteine on Dyslipidemia and Carbohydrate Metabolism in STZ-Induced Diabetic Rats. *Int. J. Vasc. Med. Diabet.* 2018. Available at: <https://doi.org/10.1155/2018/6428630>
- Karampela, I., Chrysanthopoulou, E., Skyllas, G., Simitsis, P., Christodoulatos, G.S., Kandri, E., *et al.* (2020). Alterations in serum lipid profile in critically ill septic patients: a prospective study. *Eur. Respir. J.* 56 : 2753. Available at: <https://doi.org/10.1183/13993003.congress-2020.2753>
- Kementerian Kesehatan Republik (2017). Pedoman Nasional Pelayanan Kedokteran Tata Laksana Sepsis. Jakarta: Kementerian Kesehatan RI : .
- Kollu, K., & Kızıllarslanoğlu, M.C. (2024). The relationship between lipid levels and clinical outcomes in sepsis patients in the intensive care unit : a

- retrospective study. *J Heal. Sci Med.* 7 : 615–620. Available at: <https://doi.org/10.32322/jhsm.1507962>
- Kramarow, Y.G.E.A. (2023). QuickStats: Sepsis-Related* Death Rates† Among Persons Aged ≥ 65 Years, by Age Group and Sex - National Vital Statistics System, United States, 2021., MMWR. Morbidity and mortality weekly report. US Department of Health and Human Services | : . Available at: <https://doi.org/10.15585/mmwr.mm7238a5>
- Kumar, B.G. V, Prasad, K., Singh, D., & Sethy, P.C. (2022). Hypertriglyceridemia induced acute pancreatitis: 4 years' experience from a tertiary care institute and quick literature review. *J. Fam. Med. Prim. Care* 11 : 3360–3367. Available at: https://doi.org/10.4103/jfmpe.jfmpe_1426_21
- La Via, L., Sangiorgio, G., Stefani, S., Marino, A., Nunnari, G., Cocuzza, S., *et al.* (2024). The Global Burden of Sepsis and Septic Shock. *Epidemiologia* 5 : 456–478. Available at: <https://doi.org/10.3390/epidemiologia5030032>
- Landry, D.W., & Oliver, J.A. (2001). The Pathogenesis of Vasodilatory Shock. *N. Engl. J. Med.* 345 : 588–595. Available at: <https://doi.org/10.1056/NEJMra002709>
- Lanier, J.B., Army, M., Hospital, C., & Benning, F. (2007). Management of Hypertriglyceridemia. *Am. Fam. Physician.*
- Lauwers, C., Bruyn, L. De, & Langouche, L. (2023). Impact of critical illness on cholesterol and fatty acids: insights into pathophysiology and therapeutic targets. *Intensive Care Med. Exp.* Available at: <https://doi.org/10.1186/s40635-023-00570-y>
- Lee, K.-T., Jones, K.C., & Foglia, T.A. (2002). Separation of structured lipids by high performance liquid chromatography. *Chromatographia* 55 : 197–201. Available at: <https://doi.org/10.1007/BF02492142>
- LSBio Inc (2018). Triglyceride (TG) Assay Kit (Fluorometric) 100.
- Malick, A.A., Manavalan, J., Murugiah, V., Bose, M., Alexander, H., & Nadu, T. (2024). The Utility of Serial Lipid Measurements as a Potential Predictor of Sepsis Outcome: A Prospective Observational Study in a Tertiary Care Hospital 10 : 139–146. Available at: <https://doi.org/10.2478/jccm-2024-0015>
- McPherson, R. A. & Pincus, M.R. (2022). Henry's Clinical Diagnosis and Management by Laboratory Methods, 24th ed. Canada : Elsevier Inc.
- McPherson RA, P.M. (2021). Henry's clinical diagnosis and management by laboratory methods., 24th ed. Philadelphia : Elsevier.
- Mehdi, S.F., Qureshi, M.H., Pervaiz, S., Kumari, K., Saji, E., Shah, M., *et al.* (2025). Endocrine and metabolic alterations in response to systemic inflammation and sepsis: a review article. *Mol. Med.* 31 : 16. Available at: <https://doi.org/10.1186/s10020-025-01074-z>
- Mendenhall, C.L., & Mortiaux, A. (1962). Alterations in Serum Triglyceride Levels in Liver Disease. *Gastroenterology* 42 : 684–685. Available at: [https://doi.org/10.1016/S0016-5085\(62\)80119-X](https://doi.org/10.1016/S0016-5085(62)80119-X)
- Mostafa, M., Hamed, L., Mokhtar, S., & Arafa, M. (2025). Analysis of mortality factors in ICU patients with sepsis and septic shock: a retrospective study. *Egypt. J. Crit. Care Med.* 12 : 1. Available at: <https://doi.org/10.1007/s44349-024-00012-y>

- Muniz-Santos, R., Lucieri-Costa, G., Almeida, M.A.P. de, Moraes-de-Souza, I., Brito, M.A.D.S.M., Silva, A.R., *et al.* (2023). Lipid oxidation dysregulation: an emerging player in the pathophysiology of sepsis. *Front. Immunol.* 14. Available at: <https://doi.org/10.3389/fimmu.2023.1224335>
- Narayan, S. (1996). Pre and Post Analytical Errors in Lipid Determination. *Indian J. Clin. Biochem.* 11 : 12–16.
- Nasa, P., Juneja, D., & Singh, O. (2012). Severe sepsis and septic shock in the elderly: An overview. *World J Crit Care Med* 1 : 23–30. Available at: <https://doi.org/10.5492/wjccm.v1.i1.23>
- Nduka, O.O., & Parrillo, J.E. (2009). The Pathophysiology of Septic Shock. *Crit. Care Clin.* 25 : 677–702. Available at: <https://doi.org/10.1016/j.ccc.2009.08.002>
- Obaseki, E., Adebayo, D., Bandyopadhyay, S., & Hariri, H. (2024). Lipid droplets and fatty acid-induced lipotoxicity : in a nutshell 598 : 1207–1214. Available at: <https://doi.org/10.1002/1873-3468.14808>
- Oh, R.C., Trivette, E.T., & Westerfield, K.L. (2020). Management of Hypertriglyceridemia: Common Questions and Answers. *Am. Fam. Physician* 102 : 347–354.
- Pangerang, A.M.N., & Madjid, A.S. (2020). De-Resusitasi pada Sepsis Induced-Acute Respiratory Distress Syndrome De-Resuscitation on Sepsis Induced-Acute Respiratory Distress Syndrome. *Anesth. Crit. Care* 38 : 15–23.
- Panggabean, M.S. (2019). Tinjauan atas Norepinephrine – First Line Vasopressor for Septic Shock. *Med. Dep. PT Kalbe Farma Tbk* 46 : 708–711.
- Peraturan Menteri Kesehatan Republik Indonesia (2013). Cara Penyelenggaraan Laboratorium Klinik Yang Baik. Jakarta: Kementerian Kesehatan Republik Indonesia : .
- Preau, S., Vodovar, D., Jung, B., Lancel, S., Zafrani, L., Flatres, A., *et al.* (2021). Correction to: Energetic dysfunction in sepsis: a narrative review. *Ann. Intensive Care* 11 : 185. Available at: <https://doi.org/10.1186/s13613-021-00970-x>
- Purba, A.K.R., Mariana, N., Aliska, G., Wijaya, S.H., Wulandari, R.R., Hadi, U., *et al.* (2020). The burden and costs of sepsis and reimbursement of its treatment in a developing country: An observational study on focal infections in Indonesia. *Int J Infect Dis* 96 : 211–218. Available at: <https://doi.org/10.1016/j.ijid.2020.04.075>
- Rashwan, D., Al Kassem Rashwan, S.A., Hassan, W.F., & Moaz Sayem, D. (2019). Prognostic Value of Serum Cholesterol and Triglyceride in Septic and Non-septic Patients: Randomized Double-blinded Study. *J. Intensive Crit. Care* 05. Available at: <https://doi.org/10.21767/2471-8505.100120>
- Reinhart, K., Daniels, R., Kisson, N., Machado, F.R., Schachter, R.D., & Finfer, S. (2017). Recognizing Sepsis as a Global Health Priority — A WHO Resolution. *N. Engl. J. Med.* 377 : 414–417. Available at: <https://doi.org/10.1056/NEJMp1707170>
- Rudd, K.E., Johnson, S.C., Agesa, K.M., Shackelford, K.A., Tsoi, D., Kievlan, D.R., *et al.* (2020). Global, regional, and national sepsis incidence and mortality, 1990–2017: analysis for the Global Burden of Disease Study.

- Lancet* 395 : 200–211. Available at: [https://doi.org/10.1016/S0140-6736\(19\)32989-7](https://doi.org/10.1016/S0140-6736(19)32989-7)
- Sakr, Y., Elia, C., Mascia, L., Barberis, B., Cardellino, S., Livigni, S., *et al.* (2013). The influence of gender on the epidemiology of and outcome from severe sepsis. *Crit. Care* 17 : R50. Available at: <https://doi.org/10.1186/cc12570>
- Saraswati, E., Singh, B., Singh, A., & Mahajan, S. (2024). The Association of Lipid Abnormalities with Complications in. *J. Assoc. Physicians India* 72 : 17–21. Available at: <https://doi.org/10.59556/japi.72.0746>
- Septian, D., & Oktaliansah, E. (2024). Continous Renal Replacement Therapy Pada Pasien Sepsis, Respiratory Failure, Acute Kidney Injury, Dan Asidosis Metabolik. *J. Komplikasi Anestesi* 11 : 322–329. Available at: <https://doi.org/10.22146/jka.v11i3.15136>
- Shemesh, E., & Zafrir, B. (2019). Hypertriglyceridemia-Related Pancreatitis In Patients With Type 2 Diabetes: Links And Risks. *Diabetes, Metab. Syndr. Obes. Targets Ther.* Volume 12 : 2041–2052. Available at: <https://doi.org/10.2147/DMSO.S188856>
- Singer, M., Deutschman, C.S., Seymour, C., Shankar-Hari, M., Annane, D., Bauer, M., *et al.* (2016). The third international consensus definitions for sepsis and septic shock (sepsis-3). *JAMA - J. Am. Med. Assoc.* 315 : 801–810. Available at: <https://doi.org/10.1001/jama.2016.0287>
- Srdić, T., Đurašević, S., Lakić, I., Ružičić, A., Vujović, P., Jevđović, T., *et al.* (2024). From Molecular Mechanisms to Clinical Therapy: Understanding Sepsis-Induced Multiple Organ Dysfunction. *Int. J. Mol. Sci.* 25 : 7770. Available at: <https://doi.org/10.3390/ijms25147770>
- Sunayana, P., B. Renymol, B., & NRAMbili (2017). Fasting Lipid Profile and Disease Severity in Sepsis Patients. *J. Clin. Diagnostic Res.* 18–20. Available at: <https://doi.org/10.7860/JCDR/2017/30268.10820>
- Sundvall, J., Laatikainen, T., Hakala, S., Leiviskä, J., & Alfthan, G. (2008). Clinica Chimica Acta Systematic error of serum triglyceride measurements during three decades and the effect of fasting on serum triglycerides in population studies. *Clin. Chim. Acta* 397 : 55–59. Available at: <https://doi.org/10.1016/j.cca.2008.07.015>
- Tang, A., Shi, Y., Dong, Q., Wang, S., Ge, Y., Wang, C., *et al.* (2023). Prognostic differences in sepsis caused by gram-negative bacteria and gram-positive bacteria: a systematic review and meta-analysis. *Crit. Care* 27 : 467. Available at: <https://doi.org/10.1186/s13054-023-04750-w>
- Tietzt, N.W., Burtis, C.A., Ashwood, E.R., & Bruns, D.E. (2012). Tietz textbook of clinical chemistry and molecular diagnostics, 5th ed. ed. St. Louis, Mo., Elsevier/Saunders. : Elsevier/Saunders.
- Van den Berghe, G., Téblick, A., Langouche, L., & Gunst, J. (2022). The hypothalamus-pituitary-adrenal axis in sepsis- and hyperinflammation-induced critical illness: Gaps in current knowledge and future translational research directions. *eBioMedicine* 84 : 104284. Available at: <https://doi.org/10.1016/j.ebiom.2022.104284>
- Vincent, J.-L., Sakr, Y., Singer, M., Martin-Loeches, I., Machado, F.R., Marshall,

- J.C., *et al.* (2020). Prevalence and Outcomes of Infection Among Patients in Intensive Care Units in 2017. *JAMA - J. Am. Med. Assoc.* 323 : 1478. Available at: <https://doi.org/10.1001/jama.2020.2717>
- Vincent, J. (2023). Sepsis and infection : Two words that should not be confused. *Front. Med.* 1–5. Available at: <https://doi.org/10.3389/fmed.2023.1156732>
- Wang, C., Han, D., Feng, X., & Wu, J. (2020). Omega-3 fatty acid supplementation is associated with favorable outcomes in patients with sepsis : an updated meta-analysis. *J. Int. Med. Res.* Available at: <https://doi.org/10.1177/0300060520953684>
- Wasyluk, W., Wasyluk, M., & Zwolak, A. (2021). Sepsis as a Pan-Endocrine Illness — Endocrine Disorders in Septic Patients. *J. Clin. Med.*
- Wasyluk, W., & Zwolak, A. (2021). Metabolic Alterations in Sepsis. *J. Clin. Med.* 10 : 2412. Available at: <https://doi.org/10.3390/jcm10112412>
- White, B.N., Carter, B.L., & Bradford, J.L. (2023). Analysis of Intravenous Insulin Dosing Requirements for Treatment of Severe Hypertriglyceridemia. *Hosp Pharm.* Available at: <https://doi.org/10.1177/00185787221126339>
- World Health Organization (2020). Global report on the epidemiology and burden of sepsis: current evidence, identifying gaps and future directions, World Health Organization. Geneva: .
- Wynge, L. Van, Vandewalle, J., & Libert, C. (2018). Reprogramming of basic metabolic pathways in microbial sepsis : therapeutic targets at last? 1–18. Available at: <https://doi.org/10.15252/emmm.201708712>
- Xavier, F., & Lisboa, C.H. De (2017). Dear Sepsis-3 , we are sorry to say that we don ' t like you * 29 : 4–8. Available at: <https://doi.org/10.5935/0103-507X.20170002>
- Xiao, M., Deng, H., Mao, W., Liu, Yang, Yang, Q., Liu, Yuxiu, *et al.* (2023). U-shaped association between serum triglyceride levels and mortality among septic patients: An analysis based on the MIMIC-IV database. *PLoS One* 18 : e0294779. Available at: <https://doi.org/10.1371/journal.pone.0294779>
- Yadav, S., Verma, T., Pathak, S., & Nandi, D. (2019). Understanding the Roles of Nitric Oxide During Sepsis, an Inflammatory Disorder, Therapeutic Application of Nitric Oxide in Cancer and Inflammatory Disorders. Elsevier Inc. Available at: <https://doi.org/10.1016/B978-0-12-816545-4.00013-X>
- Zhang, T., Chen, L., Kueth, G., Shao, E., Wang, X., Ha, T., *et al.* (2024). Lactate's impact on immune cells in sepsis: unraveling the complex interplay. *Front. Immunol.* 15. Available at: <https://doi.org/10.3389/fimmu.2024.1483400>
- Zhu, Y., Zhu, H., Dang, Q., Yang, Q., Huang, D., Zhang, Y., *et al.* (2021). Changes in serum TG levels during pregnancy and their association with postpartum hypertriglyceridemia : a population-based prospective cohort study. *BMC* 1–10.