

DAFTAR PUSTAKA

- Annurullah, G., Jasmin, M. S., Saraswati, N. A., Rizka, Y. 2021. Faktor Risiko Obesitas pada Pekerja Kantoran: A Systematic Review. 2(2).
- Arifani, S. dan Setiyaningrum, Z. 2021. Faktor Perilaku Berisiko yang Berhubungan dengan Kejadian Obesitas pada Usia Dewasa di Provinsi Banten Tahun 2018. *Jurnal Kesehatan*. 14(2):160–168.
- Bae, J. Y., Woo, J., Roh, H. T., Lee, Y. H., Ko, K., Kang, S., Shin, K. O. 2017. The Effects of Detraining on Adipose Tissue Lipid Droplet in Obese Mice After Chronic High-Fat Diet. *Lipids in Health and Disease*. 16:13.
- Baharuddin. 2019. Steatosis pada Hepar dan Fruktosa Dosis Tinggi pada Penelitian Fruktosa. *Jurnal Kesehatan dan Kedokteran*. 1(1):26-29.
- Bakma, I., Yaswir, R., Desywar., Efrida. 2020. Korelasi Kadar Adiponektin dengan Kadar Glukosa Puasa pada Penyandang Obesitas. *Jurnal Kesehatan Andalas*. 9(3).
- Banjarnahor, R. O., Banurea, F. F., Panjaitan, J. O., Pasaribu, R. S. P., Hafni, I. 2022. Faktor-Faktor Risiko Penyebab Kelebihan Berat Badan dan Obesitas pada Anak dan Remaja: *Studi Literatur*. *Tropical Public Health Journal Faculty of Public Health*. 2(1):35-45.
- Bezzera, M. A., and Cohen, D. E. 2019. Triglyceride Metabolism in the Liver. *Compr Physiol*. 8(1):1-8.
- Borén, J., et al. 2013. Ectopic Lipid Storage and Insulin Resistance: A Harmful Relationship. *Journal Of Internal Medicine*. 25–40.
- Coelho, D. F., Pereira, L. L. O., Chaves, D. S., et al. 2011. Effects of High Fructose Diet on Body Composition, Lipid Metabolism and Insulin Sensitivity, and The Role of Exercise on These Paramaters. *Journal of Medical and Biological Research*. 10(44):966-972.
- Eroschenko, V. P. 2013. Atlas Histologi di Fiore dengan Korelasi Fungsional. EGC: Jakarta.
- Fadhilah, Y. N., Tanuwidjaja, S., Saepulloh, A. 2021. Hubungan Aktivitas Fisik dengan Kejadian Obesitas pada Anak Sekolah Dasar Negeri 113 Banjarsari Kota Bandung Tahun 2019-2020. *Jurnal Riset Kedokteran*. 1(2):80–84.
- Filali-Mouncef, Y. et al. 2022. The Ménage À Trois of Autophagy, Lipid Droplets and Liver Disease. *Autophagy*. Taylor And Francis Ltd., 50–72.
- Fluente, F. P., Quezada, L., Sepulveda C., Alvares, M. M., Rodriguez, J. M., Sacristan, C., Chiong, M., et al. 2019. Exercise Regulates Lipid Droplet Dynamics in Normal and Fatty Liver. *Biochemica et Biophysica Acta (BBA) – Molecular and Cell Biology of Lipids*. 1864(12).
- Fojt, E., Ekelund, L. G., Hulman, E. 1976. Enzyme Activities in Hepatic Venous Blood Under Strenuous Physical Exercise. *Pflugers Arch*. 361(3): 287-296.
- Getiye, Y., Rice, T. A., Phillips, B. D., Carillo, D. F., He, G. 2022. Dysregulated Lipolysis and Lipophagy in Lipid Droplets of Macrophages from High Fat

- Diet-Fed Obese Mice. *J Cell Mol Med.* 26:4825-4836.
- Gluchowski, N. L. *et al.* 2017. Lipid Droplets and Liver Disease: From Basic Biology to Clinical Implications. *Nature Reviews Gastroenterology and Hepatology.* Nature Publishing Group. 343–355.
- Godoy-Matos, A. F., Silva Júnior, W. S., Valerio, C. M. 2020. NAFLD as a Continuum: From Obesity to Metabolic Syndrome and Diabetes. *Diabetology and Metabolic Syndrome.* Biomed Central.
- Greenberg, A. S., Coleman, R. A., Kraemer, F. B., McManaman, J. L., Obin, M. S., Puri, V., Yan, Q. W., *et al.* 2011. The Role of Lipid Droplets in Metabolic Disease in Rodents and Humans. *The Journal of Clinical Investigation.* 121(6):2102-2110.
- Gusdon, A. M., Song, K. X., Qu, S. 2014. Nonalcoholic Fatty Liver Disease: Pathogenesis and Therapeutics from a Mitochondria-Centric Perspective. *Oxidative Medicine and Cellular Longevity.* Hindawi Publishing Corporation.
- Hamdani, R. dan Hasye, F.A. 2019. Efek Latihan Fisik Terhadap Remodeling Jantung. *Jurnal Kesehatan Andalas.*
- Hita, I. P. A. D. 2020. Efektivitas Metode Latihan Aerobik dan Anaerobik untuk Menurunkan Tingkat Overweight dan Obesitas. *Jurnal Penjakora.* 7(2):135-142.
- Hu, Y., Gursoy, E., Cardounel, A., Kalimi, M. 2000. Biological Effects of Single and Repeated Swimming Stress in Male Rats: Beneficial Effects of Glucocorticoids. *Endocrine.* 13(1):123-130.
- Hu, Y., Wang, R., Liu, J., Wang, Y., Dong, J. 2023. Lipid Droplet Deposition in the Regenerating Liver: A promoter, inhibitor, or bystander?. *American Association for the Study of Liver Diseases.*
- Hsu, Y. J., Lee, M. C., Huang, C. C., Ho, C. S. 2021. The Effects of Different Types of Aquatic Exercise Training Interventions on a High Fructose Diet Fed Mice. *International Journal of Medical Sciences.* 18(3):695-705.
- Ibrahim, Annisa, N. 2016. Pengaruh Aktivitas Fisik Menggunakan Treadmill terhadap Aktivitas Kreatin Kinase dan Gambaran Histopatologi Otot Bisep Femoris Tikus *Rattus norvegicus* Model Obesitas Induksi High Fructose Diet (HFD). Universitas Brawijaya Malang.
- Indanah., Sukasih., Fairuzza., dan Khoiriyah. 2021. Obesitas Pada Balita. *Jurnal Ilmu Keperawatan dan Kebidanan.* 12(2):242-248.
- Isdadiyanto, S., Pratiwi, A. R., Mardiaty, S. M. 2022. Indeks Hepatosomatic *Rattus norvegicus* Hiperlipidemia Setelah Paparan Ekstrak Etanol Daun Azadirachta Indica Hepatosomatic. *Buletin Anatomi dan Fisiologi.* 7(2).
- Itabe, H., Yamaguchi, T., Sasabe, N. 2017. Perilipins: A Diversity of Intracellular Lipid Droplet Proteins. *Lipid in Health and Disease.* 83.
- Jameson, *et al.* 2020. *Chapter 175: Obesity. Harrison's Manual of Medicine.* 20e. McGraw Hill.
- Jannah, D.R., dan Budijastuti, W. 2022. Gambaran Histopatologi Toksisitas

- Ginjal Tikus Jantan *Rattus Norvegicus* yang Diberi Sirup Umbi Yakon (*Smallanthus sonchifolius*). *LenteraBio*. 11(2):238–246.
- Khanna, D., Khanna, S., Khanna, P., Kahar, P., dan Patel, B. M. 2022. Obesity: A Chronic Low-Grade Inflammation and Its Markers. *Cureus*. 14(2).
- Kirwan, J. P., Sacks, J., Nieuwoudt, S. 2017. The Essential Role of Exercise in the Management of Type 2 Diabetes. *Cleveland Clinic Journal of Medicine*. 84(7 suppl 1): 15-21.
- Kitada, M., Koya, D. 2013. SIRT 1 in Type 2 Diabetes: Mechanism and Therapeutic Potential. *Diabetes Metab J*. 37(5):315-325.
- Koutsari, C. and Jensen, M.D. 2006. Free Fatty Acid Metabolism in Human Obesity. *Journal Of Lipid Research*. 1643–1650.
- Krahmer, N., Farese, R. V. And Walther, T.C. 2013. Balancing The Fat: Lipid Droplets and Human Disease. *Embo Molecular Medicine*. Blackwell Publishing Ltd,. 973–983.
- Krinke, G., J. 2000. The Laboratory Rat. *The Handbook of Experimental Animals*. Academic Press.
- Lee, B.-A. and Oh, D.-J. 2014. The Effects of Aquatic Exercise on Body Composition, Physical Fitness, and Vascular Compliance of Obese Elementary Students. *Journal of Exercise Rehabilitation*. 10(3):184–190.
- Li, H., Dun, Y., Zhang, W., You, B., Liu, Y., Qiu, L., Cheng, J., *et al.* 2021. Exercise Improves Lipid Droplet Metabolism Disorder Through Activation of AMPK-mediated Lipophagy in NAFLD. *Life Sciences*. 273.
- Li, J. *et al.* 2020. High Fat Diet Induced Obesity Model Using Four Strains of Mice: Kunming. *Experimental Animals*. 69(3):326–335.
- Li, X. *et al.* 2019. Skeletal Muscle Lipid Droplets and The Athlete's Paradox', *Cells*.
- Lin, X. and Li, H. 2021. Obesity: Epidemiology, Pathophysiology and Therapeutics. *Frontiers In Endocrinology*.
- Listyana, E. E. P., dan Roepajadi, J. 2021. Efektifitas Metode Latihan Gerak Dasar Renang Bagi Kelompok Renang Pemula. *Jurnal Kesehatan Olahraga*. 9(3): 231-240.
- Makiyah, A. dan Khumaisah, L.L. 2018. Studi Gambaran Histopatologi Hepar Tikus Putih Strain Wistar Yang Diinduksi Aspirin Pascapemberian Ekstrak Etanol Umbi Iles-Iles (*Amorphophallus Variabilis Bl.*) Selama 7 Hari. *Majalah Kedokteran Bandung*. 50(2):93–101.
- Malafaia, A. B., Afonso, P., Nassif, N., Marcondes, P., Ariede, B. L., Sue, K. N., *et al.* 2013. Obesity Induction with High Fat Sucrose in Rats. *Arquivos Brasileiros de Cirurgia Digestiva*. 26(1):17-21.
- Maulana, R., dan Rochmania, A. 2018. Hubungan Intensitas Latihan Dengan Imunitas. *Jurnal Pendidikan Keplatihan Olahraga*. 4(4):20-35
- Maulina, M. 2018. Zat-zat yang Mempengaruhi Histopatologi Hepar. Unimal Press.

- Muntiha, M. 2001. Teknik Pembuatan Preparat Histopatologi dari Jaringan Hewan dengan Pewarnaan Hematoksilin dan Eosin (HE). *Prosiding Temu Teknis Fungsional Non Peneliti*. 156 – 163.
- Nagle, E. F., Robertson, R. K., Jakicic, J. J., Otto, A. D., Ranalli, J. R., Chiapetta, L. B. 2017. Effects of a Combined Aquatic Exercise and Walking in Sedentary Obese Females Undergoing a Behavioral Weight-Loss Intervention. *International Journal of Aquatic Research and Education*. 1(1):43-56.
- Nogueira, P. A. S., Pereira, M. P., Soares, J. J. G., Filho, A. F. N., Tanimoto, I. M. F., Fonseca, I. A. T., Avelar, H. O., *et al.* 2017. Physiological Adaptations Ibduced by Swimming in Mice Fed a High Fat Diet. *Journal of Exercise Rehabilitation*. 13(3):284-291.
- Nuridin, N. M., Rimbawan., Marliyati, S. A. 2016. Akumulasi Lipid Hati dan Profil Lipid Darah Tikus Sprague Dawley yang Diintervensi Minyak Super Olein dan Olein. 11(1):67-74.
- Olzmann, J.A. and Carvalho, P. 2019. Dynamics and Functions of Lipid Droplets. *Nature Reviews Molecular Cell Biology*. Nature Publishing Group. 137–155.
- Perez, P., Ramirez, L. C., Gutierrez, J. A., Balcazar, N. 2020. High Fructose Diet-Induced Obesity Worsens Post Ischemic Brain Injury in the Hippocampus of Female Rats. *An International Journal on Nutrition, Diet, and Nervous System*. 25(2):1-15.
- Pranata, D. 2022. Pengaruh Olahraga Dan Model Latihan Fisik Terhadap Kebugaran Jasmani Remaja: *Literature Review*.
- Prasetyo, A., Handoko, W., Ilmiawan, M. I. 2016. Pengaruh Beban Latihan Renang Tunggal dan Berulang yang Berlebihan Terhadap Gambaran Histopatologi Hepar pada Tikus (*Rattus norvegicus*) Jantan Galur Wistar.
- Putra, M.M., Saraswati, N.N.I. and Raningsih, N.M. 2022. Pola Hidup dengan Kejadian Obesitas: Literature Review. *Jurnal Ilmu Keperawatan Medikal Bedah*. 5(1):15–35.
- Rasyid, M. F. A. 2021. Pengaruh Asupan Kalsium Terhadap Indeks Massa Tubuh. *Jurnal Medika Hutama*. 2(4):1094-1097.
- Riset Kesehatan Dasar. 2019. *Laporan Nasional Riskesdas 2018*. Kementerian Kesehatan Republik Indonesia, Badan Penelitian dan Pengembangan Kesehatan (LPB), Jakarta.
- Romadhoni, W. N., *et al.* 2022. Aktivitas Fisik Mahasiswa Pendidikan Kepelatihan Olahraga Selama Pandemi Covid-19. *Gelanggang Olahraga: Jurnal Pendidikan Jasmani Dan Olahraga*. 5(2). 200–207.
- Saely, C. H., Geiger, K., Drexel H. 2012. Brown versus White Adipose Tissue: A Mini Review. *Gerontology*. 58(1):15-23.
- Sanjabi, B., Dasthy, M., Ozcan, B., Akbarkhanzadeh, V., Rahimi, M., Vinciguerra, M., *et al.* 2015. Lipid Droplet Hyperthropy: A Crucial Determining Factor in Insulin Regulation by Adipocytes. *Scientific Reports*. 5:8816.

- Saraswati, S. K., *et al.* 2021. Literature Review: Faktor Risiko Penyebab Obesitas. *Media Kesehatan Masyarakat Indonesia*. 20(1):70–74.
- Seibert, J. T., *et al.* 2020. Muscle Lipid Droplets: Cellular Signaling to Exercise Physiology and Beyond. *Trends In Endocrinology and Metabolism*. Elsevier Inc., 928–938.
- Septiyanti, S. dan Seniwati, S. 2020. Obesity and Central Obesity in Indonesian Urban Communities. *Jurnal Ilmiah Kesehatan*. 2(3):118–127.
- Sholikhah, A. M. dan Ridwan, M. 2021. Swimming Training on Moderate Intensity Significantly Reduces Total Cholesterol and Bodyweight on Hypercholesterolemic Rat Model. *Jurnal Keolahragaan*. 9(1).
- Sijid, S. A., Muthiadin, C., Hidayat, Z. A. S., Amelia, R. R. 2020. Pengaruh Pemberian Tuak Terhadap Gambaran Histopatologi Hati Mencit (*Mus musculus*) ICR Jantan. *Jurnal Pendidikan Matematika dan IPA*. 11(2):193-205.
- Sobarna, A. *et al.* 2021. Analisis Aktivitas Fisik Pada Penyandang Obesitas Menggunakan Smartwatch. *Jurnal Penelitian Pendidikan Indonesia*. 7(1):28–34.
- Stevanović, J., Beleza, J., Coxito, P., Ascensao, A., Magalhaes, J. 2020. Physical Exercise and Liver “Fitness”: Role Of Mitochondrial Function and Epigenetics-Related Mechanisms in Non-Alcoholic Fatty Liver Disease. *Molecular Metabolism*. Elsevier GMPH. 1–14.
- Straub, B. K., Stoeffel, P., Heid, H., Zimbelmann, R., Schirmacher, P. 2008. Differential Pattern of Lipid Droplet-Associated Proteins and de novo Perilipin Expression in Hepatocyte Steatogenesis. *Hepatology*. 47(6):1936-1946.
- Szczepan, S., Michalik, K., Borkowski, J., Zaton, K. 2020. Effects of Swimming with Added Respiratory Dead Space on Cardiorespiratory Fitness and Lipid Metabolism. *Journal of Sports Science & Medicine*. 19(1):95-101.
- Tan, B. L., Norhaizan, M. E., and Liew, W. P. P. 2018. Nutrients and Oxidative Stress: Friend or Foe?. *Oxidative Medicine and Cellular Longevity*.
- Walther, T.C. and Farese, R. V. 2012. Lipid Droplets and Cellular Lipid Metabolism. *Annual Review Of Biochemistry*. 81:687–714.
- Wharton, S., Lau, D. C. W., Vallis, M., Sharma, A. M., Biertho, L., Scherer, D. C., *et al.* 2020. Obesity In Adults: A Clinical Practice Guideline. *CMAJ*, 192(31):875–891.
- WHO. 2023. Obesity and Overweight. <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>. Diakses pada 1 November 2023.
- Wirth, K., Keiner, M., Fuhrmann, S., Nimmerichter, A., Haff, G. G. 2022. Strength Training In Swimming. *International Journal Of Environmental Research And Public Health*. 19(9).
- Wungow, L., *et al.* 2021. Tingkat Aktivitas Fisik Mahasiswa Program Studi Ilmu Kesehatan Masyarakat Universitas Negeri Manado Saat Masa Pandemi Covid-19. 02(03):22–27.

- Yang, Y., Li, X., Ruan, X., Wang, H., Zhang, Q., Cao, L., et al. 2022. Moderate Treadmill Exercise Alleviates NAFLD by Regulating the Biogenesis and Autophagy of Lipid Droplet. *Nutrients*. 14(22):4910.
- Zahary, M. N., Harun, N. S., Yahaya, R., Him, N. A. S. N., Rohin, M. A. K. R., Ridzwan, N. H., et al. 2019. Serum Adiponectin and Resistin: Correlation with Metabolic Syndrome and Its Associated Criteria Among Temiar Subtribe in Malaysia. *Diabetes and Metabolic Syndrome: Clinical Research & Reviews*. 13: 2015-2019.
- Zapata, R. C., Carretero, M., Reis, F. C. G., Chaudry, B. S., Ofrecio, J., Zhang, D., Sasik, R., et al. 2022. Adipocytes Control Food Intake and Weight Regain Via Vacuolar-type H⁺ ATPase. *Nature Communications*. 13(5092).
- Zhang, Y., Szramowski, M., Sun, S., Henderson, G. C. 2023. Combining Albumin Deficiency and Acute Exercise Reduces Hepatic Lipid Droplet Size in Mice. *Lipids in Health and Disease*. 22(1):78.

