

## DAFTAR PUSTAKA

1. McCartney CR, Marshall JC. Polycystic ovary syndrome. *N Engl J Med*. 2016;375(1):54–64.
2. Dunaif A, Chang RJ, Franks S, Legro RS. Polycystic ovary syndrome: current controversies, from the ovary to the pancreas. Springer Science & Business Media; 2008.
3. Cozzolino M, Vitagliano A, Pellegrini L, Chiurazzi M, Andriasani A, Ambrosini G, et al. Therapy with probiotics and synbiotics for polycystic ovarian syndrome: a systematic review and meta-analysis. *Eur J Nutr*. 2020;59(7):2841–56.
4. Jabeen A, Yamini V, Amberina AR, Eshwar MD, Vadakedath S, Begum GS, et al. Polycystic Ovarian Syndrome: Prevalence, Predisposing Factors, and Awareness Among Adolescent and Young Girls of South India. *Cureus*. 2022;14(8).
5. Deswal R, Narwal V, Dang A, Pundir CS. The Prevalence of Polycystic Ovary Syndrome: A Brief Systematic Review. *J Hum Reprod Sci*. 2020;13(4):261–71.
6. Pamungkas DT. Assessment of the Quality of Internet-Based Health Information in the Indonesian Language about Polycystic Ovarian Syndrome. *Indones J Obstet Gynecol*. 2020;222–7.
7. Wahyuni M, Decroli E, Lasmini PS. Hubungan Resistensi Insulin dengan Gambaran Klinis Sindrom Ovarium Polikistik. *J Kesehat andalas*. 2015;4(3).
8. Hestiantoro A, Wiweko B, Harzif AK. Konsensus tata laksana sindrom ovarium polikistik. *Himpun Endokrinol Reproduksi dan Fertil Indones Perkumpulan Obstet dan Ginekolog Indones*. 2016;
9. Giampaolino P, Foreste V, Di Filippo C, Gallo A, Mercorio A, Serafino P, et al. Microbiome and PCOS: State-of-art and future aspects. *Int J Mol Sci*. 2021;22(4):1–16.
10. Yurtdaş G, Akdevelioğlu Y. A New Approach to Polycystic Ovary Syndrome: The Gut Microbiota. *J Am Coll Nutr*. 2020;39(4):371–82.
11. Sun Y, Gao S, Ye C, Zhao W. Gut microbiota dysbiosis in polycystic ovary syndrome: Mechanisms of progression and clinical applications. *Front Cell Infect Microbiol*. 2023;13(February):1–7.
12. Aburjaile FF, de Jesus LCL, da Silva TF, Drumond MM, de Oliveira Carvalho RD, Azevedo V, et al. Chapter 12 - Lactic acid bacteria in gut microbiota, probiotics and disease prevention. In: Ray RC, Paramithiotis S, de Carvalho

Azevedo VA, Montet DBTLAB in FB, editors. Applied Biotechnology Reviews. Elsevier; 2022. p. 207–19.

13. Berstad A, Raa J, Midtvedt T, Valeur J. Probiotic lactic acid bacteria - the fledgling cuckoos of the gut? *Microb Ecol Health Dis*. 2016;27:31557.
14. Simbolon P, Sukohar A, Ariwibowo C, Susianti. Hubungan Indeks Massa Tubuh Dengan Lama Siklus Menstruasi Pada Mahasiswi Angkatan 2016 Fakultas Kedokteran Universitas Lampung. *Majority*. 2018;7(2):164–70.
15. Coffin T, Wray J, Sah R, Maj M, Nath R, Nauhria S, et al. A Review and Meta-Analysis of the Prevalence and Health Impact of Polycystic Ovary Syndrome Among Medical and Dental Students. *Cureus*. 2023;15(6).
16. Hoffman B, Schorge J, Bradsgaw K, Halvorson L, Schaffer J, Corton M. *Williams Gynecology*. 4th ed. United States: McGraw-Hill Education; 2020.
17. Mogili KD, Karuppusami R, Thomas S, Chandy A, Kamath MS, Aleyamma TK. Prevalence of vitamin D deficiency in infertile women with polycystic ovarian syndrome and its association with metabolic syndrome—A prospective observational study. *Eur J Obstet Gynecol Reprod Biol*. 2018;229:15–9.
18. Gaze DC. *Pathophysiology: Altered Physiological States*. BoD—Books on Demand; 2018.
19. Balen AH. Polycystic ovary syndrome (PCOS). *Obstet Gynaecol*. 2017;19(2):119–29.
20. Witchel SF, Oberfield SE, Peña AS. Polycystic Ovary Syndrome: Pathophysiology, Presentation, and Treatment with Emphasis on Adolescent Girls. *J Endocr Soc*. 2019;3(8):1545–73.
21. Rosenfield RL, Ehrmann DA. The Pathogenesis of Polycystic Ovary Syndrome (PCOS): The hypothesis of PCOS as functional ovarian hyperandrogenism revisited. *Endocr Rev*. 2016;37(5):467–520.
22. Owens LA, Kristensen SG, Lerner A, Christopoulos G, Lavery S, Hanyaloglu AC, et al. Gene Expression in Granulosa Cells from Small Antral Follicles from Women with or without Polycystic Ovaries. *J Clin Endocrinol Metab*. 2019;104(12):6182–92.
23. Ahmadi S, Jamilian M, Karamali M, Tajabadi-Ebrahimi M, Jafari P, Taghizadeh M, et al. Probiotic supplementation and the effects on weight loss, glycaemia and lipid profiles in women with polycystic ovary syndrome: a randomized, double-blind, placebo-controlled trial. *Hum Fertil*. 2017;20(4):254–61.
24. Edmonds DK. *Dewhurst's textbook of obstetrics & gynaecology*. Wiley Online Library; 2007.

25. El-Bahya AAZ, Radwanb RA, Gadcz MZ, Abdel SM. A closer insight into the role of vitamin D in polycystic ovary syndrome (Pcos). *Glob J Pharm Pharm Sci.* 2018;6(4):79–87.
26. Taylor HS, Pal L, Sell E. *Speroff's clinical gynecologic endocrinology and infertility.* Lippincott Williams & Wilkins; 2019.
27. Rodriguez Paris V, Bertoldo MJ. The mechanism of androgen actions in PCOS etiology. *Med Sci.* 2019;7(9):89.
28. Ndefo UA, Eaton A, Green MR. Polycystic ovary syndrome: A review of treatment options with a focus on pharmacological approaches. *P T.* 2013;38(6):336–55.
29. Lucidi RS. Polycystic ovarian syndrome. *Polycystic Ovarian Syndr Emedicine medscape com, nd Web(retrieved Dec 23, 2013).* 2015;
30. Ashraf S, Nabi M, Rasool S ul A, Rashid F, Amin S. Hyperandrogenism in polycystic ovarian syndrome and role of CYP gene variants: a review. *Egypt J Med Hum Genet.* 2019;20(1).
31. P. K, A. H. The cut off of Ferriman Gallwey score for PCOS in Asia and the degree of hyperandrogenism indicator. *KnE Med.* 2017;1(1):186.
32. Teede H, Moran L, Deeks A, Chambers D. Polycystic ovary syndrome. *Aust Dr.* 2008;(29/AUG.):25–32.
33. Keen MA, Shah IH, Sheikh G. Cutaneous manifestations of polycystic ovary syndrome: A cross-sectional clinical study. *Indian Dermatol Online J.* 2017;8(2):104.
34. Rehman R, Mehmood M, Ali R, Shaharyar S, Alam F. Influence of body mass index and polycystic ovarian syndrome on ICSI/IVF treatment outcomes: A study conducted in Pakistani women. *Int J Reprod Biomed.* 2018;16(8):529–34.
35. Wang F, Dai W, Yang X hong, Guo Y hong, Sun Y pu. Analyses of optimal body mass index for infertile patients with either polycystic or non-polycystic ovary syndrome during assisted reproductive treatment in China. *Sci Rep.* 2016;6(1):1–9.
36. Bani Mohammad M, Majdi Seghinsara A. Polycystic Ovary Syndrome (PCOS), Diagnostic Criteria, and AMH. *Asian Pac J Cancer Prev.* 2017 Jan;18(1):17–21.
37. Lanzo E, Monge M, Trent M. Diagnosis and management of polycystic ovary syndrome in adolescent girls. *Pediatr Ann.* 2015;44(9):e223–30.
38. Lua ACY, How CH, King TFJ. Managing polycystic ovary syndrome in primary care. *Singapore Med J.* 2018 Nov;59(11):567–71.



39. Lizneva D, Suturina L, Walker W, Brakta S, Gavrilova-Jordan L, Azziz R. Criteria, prevalence, and phenotypes of polycystic ovary syndrome. *Fertil Steril*. 2016;106(1):6–15.
40. Christakou C, Diamanti-Kandarakis E. Polycystic ovary syndrome—phenotypes and diagnosis. *Scand J Clin Lab Invest*. 2014;74(sup244):18–22.
41. Norman RJ, Dewailly D, Legro RS, Hickey TE. Polycystic ovary syndrome. *Lancet*. 2007;370(9588):685–97.
42. Gu Y, Zhou G, Zhou F, Li Y, Wu Q, He H, et al. Gut and Vaginal Microbiomes in PCOS: Implications for Women’s Health. *Front Endocrinol (Lausanne)*. 2022;13(February):1–9.
43. Thursby E, Juge N. Introduction to the human gut microbiota. *Biochem J*. 2017;474(11):1823–36.
44. Rinninella E, Raoul P, Cintoni M, Franceschi F, Miggiano GAD, Gasbarrini A, et al. What is the healthy gut microbiota composition? A changing ecosystem across age, environment, diet, and diseases. *Microorganisms*. 2019;7(1).
45. Valdes AM, Walter J, Segal E, Spector TD. Role of the gut microbiota in nutrition and health. *BMJ*. 2018;361:36–44.
46. Khosravi A, Mazmanian SK. Disruption of the gut microbiome as a risk factor for microbial infections. *Curr Opin Microbiol*. 2013 Apr;16(2):221–7.
47. Brestoff JR, Artis D. Commensal bacteria at the interface of host metabolism and the immune system. *Nat Immunol*. 2013 Jul;14(7):676–84.
48. Laterza L, Rizzatti G, Gaetani E, Chiusolo P, Gasbarrini A. The gut microbiota and immune system relationship in human graft-versus-host disease. *Mediterr J Hematol Infect Dis*. 2016;8(1).
49. Arumugam M, Raes J, Pelletier E, Le Paslier D, Yamada T, Mende DR, et al. Enterotypes of the human gut microbiome. *Nature*. 2011 May;473(7346):174–80.
50. Martinez JE, Kahana DD, Ghuman S, Wilson HP, Wilson J, Kim SCJ, et al. Unhealthy Lifestyle and Gut Dysbiosis: A Better Understanding of the Effects of Poor Diet and Nicotine on the Intestinal Microbiome. *Front Endocrinol (Lausanne)*. 2021;12(June):1–13.
51. Batra M, Bhatnager R, Kumar A, Suneja P, Dang AS. Interplay between PCOS and microbiome: The road less travelled. *Am J Reprod Immunol*. 2022;88(2):20–2.
52. Sherman SB, Sarsour N, Salehi M, Schroering A, Mell B, Joe B, et al. Prenatal androgen exposure causes hypertension and gut microbiota dysbiosis. *Gut*

Microbes. 2018;9(5):400–21.

53. Insenser M, Murri M, Del Campo R, Martinez-Garcia MA, Fernandez-Duran E, Escobar-Morreale HF. Gut microbiota and the polycystic ovary syndrome: influence of sex, sex hormones, and obesity. *J Clin Endocrinol Metab.* 2018;103(7):2552–62.
54. Gibson GR, Scott KP, Rastall RA, Tuohy KM, Hotchkiss A, Dubert-Ferrandon A, et al. Dietary prebiotics: current status and new definition. *Food Sci Technol Bull Funct Foods.* 2010;7(1):1–19.
55. Lindheim L, Bashir M, Münzker J, Trummer C, Zachhuber V, Leber B, et al. Alterations in gut microbiome composition and barrier function are associated with reproductive and metabolic defects in women with polycystic ovary syndrome (PCOS): A pilot study. *PLoS One.* 2017;12(1):1–20.
56. Tremellen K, Pearce K. Dysbiosis of Gut Microbiota (DOGMA) - A novel theory for the development of Polycystic Ovarian Syndrome. *Med Hypotheses.* 2012;79(1):104–12.
57. He Y, Jin X, Wang H, Dai H, Lu X, Zhao J, et al. The emerging role of the gut microbiome in polycystic ovary syndrome. *F&S Rev.* 2021;2(3):214–26.
58. Thackray VG. Sex, microbes, and polycystic ovary syndrome. *Trends Endocrinol Metab.* 2019;30(1):54–65.
59. Pellock SJ, Redinbo MR. Glucuronides in the gut: Sugar-driven symbioses between microbe and host. *J Biol Chem.* 2017;292(21):8569–76.
60. Zhao X, Jiang Y, Xi H, Chen L, Feng X. Exploration of the Relationship between Gut Microbiota and Polycystic Ovary Syndrome (PCOS): A Review. *Geburtshilfe Frauenheilkd.* 2020;80(2):161–71.
61. Wang Y, Wu J, Lv M, Shao Z, Hungwe M, Wang J, et al. Metabolism Characteristics of Lactic Acid Bacteria and the Expanding Applications in Food Industry. *Front Bioeng Biotechnol.* 2021;9.
62. Hatti-Kaul R, Chen L, Dishisha T, Enshasy H El. Lactic acid bacteria: from starter cultures to producers of chemicals. *FEMS Microbiol Lett.* 2018 Oct;365(20):fny213.
63. Li H, Fang Z. Lactic Acid Bacteria and Gut Health. In: *Lactic Acid Bacteria.* Springer; 2019. p. 239–60.
64. Masood MI, Qadir MI, Shirazi JH, Khan IU. Beneficial effects of lactic acid bacteria on human beings. *Crit Rev Microbiol.* 2011;37(1):91–8.
65. Prawiroharjo S. *Imu kebidanan Sarwono Prawirohardjo.* Jakarta: PT. Bina Pustaka Sarwono Prawirohardjo; 2016.

66. Manzanares J, Sala F, Gutiérrez MSG, Rueda FN. 2.30 - Biomarkers. In: Kenakin TBTCP, editor. Oxford: Elsevier; 2022. p. 693–724.
67. Indonesia kementrian kesehatan republik. epidemi obesitas. 2000.
68. Rosenberg SL, Rosenberg SL. The Relationship Between PCOS and Obesity: Which Comes First? *Coll Arts Sci* [Internet]. 2019;13(1). Available from: <https://touro scholar.touro.edu/>
69. Barber TM, Hanson P, Weickert MO, Franks S. Obesity and Polycystic Ovary Syndrome: Implications for Pathogenesis and Novel Management Strategies. *Clin Med Insights Reprod Heal*. 2019;13:117955811987404.
70. Dadachanji R, Shaikh N, Mukherjee S. Genetic Variants Associated with Hyperandrogenemia in PCOS Pathophysiology. *Genet Res Int*. 2018;2018.
71. Shivaprakash G, Basu A, Kamath A, Shivaprakash P, Adhikari P, Rathnakar UP, et al. Acanthosis nigricans in PCOS patients and its relation with type 2 diabetes mellitus and body mass at a tertiary care hospital in Southern India. *J Clin Diagnostic Res*. 2013;7(2):317–9.
72. Harris HR, Titus LJ, Cramer DW, Terry KL. Long and irregular menstrual cycles, polycystic ovary syndrome, and ovarian cancer risk in a population-based case-control study. *Int J Cancer*. 2017;140(2):285–91.
73. Jacewicz-święcka M, Wolczyński S, Kowalska I. The effect of ageing on clinical, hormonal and sonographic features associated with pcos—a long-term follow-up study. *J Clin Med*. 2021;10(10):1–19.
74. Azziz R, Carmina E, Dewailly D, Diamanti-Kandarakis E, Escobar-Morreale HF, Futterweit W, et al. The Androgen Excess and PCOS Society criteria for the polycystic ovary syndrome: the complete task force report. Vol. 91, *Fertility and Sterility*. 2009. 456–488 p.
75. He Y, Wang Q, Li X, Wang G, Zhao J, Zhang H, et al. Lactic acid bacteria alleviate polycystic ovarian syndrome by regulating sex hormone related gut microbiota. *Food Funct*. 2020;11(6):5192–204.
76. Corrie L, Awasthi A, Kaur J, Vishwas S, Gulati M, Kaur IP, et al. Interplay of Gut Microbiota in Polycystic Ovarian Syndrome: Role of Gut Microbiota, Mechanistic Pathways and Potential Treatment Strategies. *Pharmaceuticals*. 2023;16(2).
77. Guo Y, Qi Y, Yang X, Zhao L, Wen S, Liu Y, et al. Association between polycystic ovary syndrome and gut microbiota. *PLoS One*. 2016;11(4):1–15.
78. Dempsey E, Corr SC. *Lactobacillus* spp. for Gastrointestinal Health: Current and Future Perspectives. *Front Immunol*. 2022;13(April):1–15.
79. Drissi F, Merhej V, Angelakis E, Kaoutari A El, Carrière F, Henrissat B, et al.

Comparative genomics analysis of *Lactobacillus* species associated with weight gain or weight protection. *Nutr Diabetes*. 2014;4(2).

80. Crovesy L, Ostrowski M, Ferreira DMTP, Rosado EL, Soares-Mota M. Effect of *Lactobacillus* on body weight and body fat in overweight subjects: A systematic review of randomized controlled clinical trials. *Int J Obes* [Internet]. 2017;41(11):1607–14. Available from: <http://dx.doi.org/10.1038/ijo.2017.161>
81. Visuthranukul C, Sriswasdi S, Tepasamordech S, Joyjinda Y, Saengpanit P, Kwanbunbumpen T, et al. Association of Human Intestinal Microbiota with Lifestyle Activity, Adiposity, and Metabolic Profiles in Thai Children with Obesity. *J Nutr Metab*. 2022;2022.
82. Oerlemans E, Ahannach S, Wittouck S, Dehay E, De Boeck I, Ballet N, et al. Impacts of Menstruation, Community Type, and an Oral Yeast Probiotic on the Vaginal Microbiome. *mSphere*. 2022;7(5).
83. Rizk MG, Thackray VG. Intersection of polycystic ovary syndrome and the gut microbiome. *J Endocr Soc*. 2021;5(2):1–16.
84. Guo Y, Qi Y, Yang X, Zhao L, Wen S, Liu Y, et al. (2016) Association between Polycystic Ovary Syndrome and Gut Microbiota. *PLoS ONE* 11(4): e0153196. doi:10.1371/journal.pone.0153196
85. Million M, Maraninchi M, Henry M, Armougom F, Richet H, Carrieri P, Valero R, Raccach D, Vialettes B, Raoult D. Obesity-associated gut microbiota is enriched in *Lactobacillus reuteri* and depleted in *Bifidobacterium animalis* and *Methanobrevibacter smithii*. *Int J Obes (Lond)*. 2012 Jun;36(6):817-25. doi: 10.1038/ijo.2011.153. Epub 2011 Aug 9. PMID: 21829158; PMCID: PMC3374072.
86. Jiang T, Wu H, Yang X, Li Y, Zhang Z, Chen F, Zhao L, Zhang C. *Lactobacillus Mucosae* Strain Promoted by a High-Fiber Diet in Genetic Obese Child Alleviates Lipid Metabolism and Modifies Gut Microbiota in ApoE<sup>-/-</sup> Mice on a Western Diet. *Microorganisms*. 2020; 8(8):1225. <https://doi.org/10.3390/microorganisms8081225>