

DAFTAR PUSTAKA

1. Irawati N, Kasakeyan E, Rusmono N. Rinitis Alergi. In: Buku ajar Ilmu kesehatan telinga hidung tenggorok kepala & leher. 7th ed. Jakarta: Badan Penerbit Fakultas Kedokteran Universitas Indonesia; 2012. p. 106–12.
2. Yepes-nuñez JJ, Cardenas EM. Classic test and generalizability theories are both useful for cross-cultural adaptation of an allergic rhinitis health-related quality of life questionnaire. *World Allergy Organ J.* 2021;14(12):100612.
3. Demoly P. Perception and control of allergic rhinitis in primary care. *npj Prim Care Respir Med.* 2020;1–6.
4. Brożek JL, Bousquet J, Agache I, Agarwal A, Bachert C, Bosnic-Anticevich S, et al. Allergic rhinitis and its impact on asthma (ARIA) guidelines—2016 revision. *J Allergy Clin Immunol.* 2017;140(4):950–8.
5. Demoly P, Calderon MA, Casale T, Scadding G, Annesi-maesano I, Braun J jacques, et al. Assessment of disease control in allergic rhinitis. *Clin Transl Allergy.* 2013;3(7):1–7.
6. Bauchau V, Durham SR. Prevalence and rate of diagnosis of allergic rhinitis in Europe. *Eur Respir J.* 2004;24:758–64.
7. Wise SK, Lin SY, Toskala E, Orlandi RR, Akdis CA, Alt JA, et al. International consensus statement on allergy and rhinology: allergic rhinitis. *Int Forum Allergy Rhinol.* 2018;8(2):108–352.
8. Kalmarzi RN, Khazaei Z, Shahsavari J. The impact of allergic rhinitis on quality of life : a study in western Iran. *Biomed Res Ther.* 2017;4(9):1629–37.
9. Szeinbach SL, Seoane-vazquez EC, Beyer A, Williams PB. The impact of allergic rhinitis on work productivity. *Nat Publ Gr.* 2007;16:98–105.
10. Henrique C, Estevão T, Morales NMO, Karla P. Quality of life in children and adolescents with allergic rhinitis. *Braz J Otorhinolaryngol.* 2009;75(5):642–9.
11. Laporan nasional riset kesehatan dasar (RISKESDAS) 2007. Jakarta; 2008.
12. Laporan hasil riset kesehatan dasar (RISKESDAS) provinsi sumatera barat tahun 2007. Jakarta; 2009.
13. Zuleika P, Adelién. Pemeriksaan eosinofil kerokan mukosa hidung pada penderita rinitis alergi. *J Kesehat Univ Lampung.* 2018;2:151–6.
14. Wheatley LM, Togias A. Allergic rhinitis. *N Engl J Med.* 2015;372(5):456–63.
15. Moeis RM, Sudiro M, Herdiningrat RS. Allergic rhinitis patient characteristics in Dr. Hasan Sadikin general hospital Bandung Indonesia. *Althea Med J.* 2014;1(2):70–4.

16. Suyuti MS. Karakteristik penderita rhinitis alergi dengan hasil uji tusuk kulit positif (skripsi). Universitas Hasanudin; 2021.
17. Alawiyah T. Gambaran jenis alergen pada penderita rinitis alergi berdasarkan pemeriksaan skin prick test di RSUP Dr. M. Djamil tahun 2010-2014 (skripsi). Universitas Andalas; 2016.
18. Khairani A. Hubungan derajat rinitis alergi dengan hasil skin prick test terhadap tungau debu rumah (skripsi). Universitas Andalas; 2017.
19. Zawawi NIM. Gambaran karakteristik penderita rinitis alergi di bagian poliklinik THT-KL RSUP Dr. M. Djamil Padang tahun 2016-2018 (skripsi). Universitas Andalas; 2019.
20. Bonds RS, Midoro-Horiuti T. Estrogen effects in allergy and asthma. *Curr Opin Allergy Clin Immunol*. 2013;13(1):92–9.
21. Kasim M, Fitriyani N, Buchori RM. Hubungan rinosinusitis kronik dengan rinitis alergi. *J Ilm Kesehat Sandi Husada*. 2020;11(1):271–7.
22. Naclerio RM, Bachert C, Baraniuk JN. Pathophysiology of nasal congestion. *Int J Gen Med*. 2010;3:47–57.
23. Corboz MR, Mutter JC, Rivelli MA, Mingo GG, McLeod RL, Varty L, et al. A2-Adrenoceptor agonists as nasal decongestants. Vol. 20, *Pulmonary Pharmacology and Therapeutics*. 2007. p. 149–56.
24. Wallace D V, Amrol DJ, Baroody FM, Bernstein JA, Craig TJ, Dinakar DOC, et al. Rhinitis 2020: a practice parameter update. *J Allergy Clin Immunol*. 2022;146(4):2022.
25. Bjermer L, Westman M, Holmström M, Wickman MC. The complex pathophysiology of allergic rhinitis: scientific rationale for the development of an alternative treatment option. *Allergy, Asthma Clin Immunol*. 2019;15(1):1–15.
26. Scadding GK, Lund VJ. Airways test. In: *Investigative rhinology*. London: Taylor & Francis; 2004. p. 69–81.
27. Budiman BJ, Asyari A. Pengukuran sumbatan hidung pada deviasi septum nasi. *J Kesehat Andalas*. 2012;1(1):16–21.
28. Kumar V, Harshvradhan, Bhavana K, Bharti B. Peak nasal inspiratory flow: a comparative study in our day to day practice. *Int J Otorhinolaryngol Head Neck Surg*. 2018;4(5):1293.
29. Ottaviano G, Fokkens WJ. Measurements of nasal airflow and patency : a critical review with emphasis on the use of peak nasal inspiratory flow in daily practice. 2016;71:162–74.
30. Ozkul HM, Balikci HH, Gurdal MM, Celebi DS, Yasar H, Karakas M, et al. Normal range of peak nasal inspiratory flow and its role in nasal septal surgery. 2013;24(3):900–2.
31. Mousumi D, Sabui, Kumar T, Ahuja, Neha. Reference value of nasal peak inspiratory flow rate in indian children : a cross-sectional study. *J Clin Diagnostic Res*. 2021;15(7):5–7.

32. Tsounis M, Swart KMA, Georgalas C, Markou K, Menger DJ. The clinical value of peak nasal inspiratory flow , peak oral inspiratory flow , and the nasal patency index. 2014;124:2665–9.
33. Dor-Wojnarowska A, Rabski M, Fal AM, Liebhart J, Panaszek B, Samoliński B. An attempt to estimate parameters useful for establishing a normal range for peak nasal inspiratory flow. *Pneumonol Alergol Pol.* 2011;79(5):320–4.
34. Peake HL, Salome CM, Toelle BG, Ng KW, Marks GB, Lean ML, et al. Repeatability of peak nasal inspiratory flow measurements and utility for assessing the severity of rhinitis. *Allergy.* 2005;60:795–800.
35. Ubiratan R, Teixeira F, Eduardo C, Zappelini M. Peak nasal inspiratory flow evaluation as an objective method of measuring nasal airflow. *Braz J Otorhinolaryngol.* 2011;77(4):473–80.
36. Nagaraju MK. Peak nasal inspiratory flow levels in children with allergic rhinitis and their health related quality of life (HRQL). *World Allergy Organ J.* 2012;(32):S28.
37. Bousquet J, Khaltaev N, Cruz AA, Denburg J, Fokkens WJ, Togias A, et al. Allergic rhinitis and its impact on asthma (ARIA) 2008. *Eur J Allergy Clin Immunol.* 2008;63:8–160.
38. Sitompul MND. Hubungan rinitis alergi dengan kualitas hidup mahasiswa fakultas kedokteran universitas sumatera utara (skripsi). Universitas Sumatera Utara; 2016.
39. Becker D, Guyuron B. Plastic and reconstructive surgery. In: Siemionow MZ, Eisenman-Klein M, editors. *Plastic and Reconstructive Surgery.* London: Springer; 2010. p. 313–24.
40. Patel RG. Nasal anatomy and function. *Facial Plast Surg.* 2017;33(1):3–8.
41. Hsu DW, Suh JD. Anatomy and physiology of nasal obstruction. *Otolaryngol Clin North Am.* 2018;51(5):853–65.
42. Anderson KJ, Henneberg M, Norris RM. Anatomy of the nasal profile. *J Anat.* 2008;213(2):210–6.
43. Oneal RM, Beil RJ. Surgical anatomy of the nose. *Clin Plast Surg.* 2010;37(2):191–211.
44. Elad D, Wolf M, Keck T. Air-conditioning in the human nasal cavity. *Respir Physiol Neurobiol.* 2008;163(1–3):121–7.
45. Kef K, Güven S. The prevalence of allergic rhinitis and associated risk factors among university students in anatolia. *J Asthma Allergy.* 2020;13:589–97.
46. Janson C, Anto J, Burney P, Chinn S, Marco R De, Heinrich J, et al. The european community respiratory health survey : what are the main results so far? *Eur Respir Journa.* 2001;18:598–611.
47. Hossenbaccus L, Linton S, Garvey S, Ellis AK. Towards definitive management of allergic rhinitis : best use of new and established therapies.

- Allergy, Asthma Clin Immunol. 2020;1–17.
48. An S youn, Choi HG, Kim SW, Park B, Lee JS, Jang JH. Analysis of various risk factors predisposing subjects to allergic rhinitis. *Asian Pacific J Allergy Immunol.* 2015;33:143–51.
 49. Alsowaidi S, Abdulle A, Shehab A, Zuberbier T, Bernsen R. Allergic rhinitis: prevalence and possible risk factors in a Gulf Arab population. *Eur J Allergy Clin Immunol.* 2010;65:208–12.
 50. Min Y gi. The pathophysiology, diagnosis and treatment of allergic rhinitis. *Allergy, Asthma ft Immunol Res.* 2010;2(2):65–76.
 51. Blumenthal MN. Kelainan alergi pada pasien THT. In: Boies buku ajar penyakit THT. 6th ed. Jakarta: EGC; 2014. p. 190–8.
 52. Jenerowicz D, Silny W, Dańczak-pazdrowska A, Polańska A, Osmola-mańkowska A, Olek-hrab K. Environmental factors and allergic diseases. *Ann Agric Environ Med.* 2012;19(3):475–81.
 53. Senior BA, editor. Rhinology and allergy. In: *Otolaryngology lifelong learning manual.* 3rd ed. New York: Thieme; 2015. p. 535–42.
 54. Setiawan B, Irfandy D, Budiman BJ, Rinologi S, Andalas T kl U. Posterior Nasal Neurektomi pada Rinitis Alergi. *Maj Kedokt Andalas.* 2022;45(2):196–207.
 55. Sudewi NP, Kurniati N, Munasir Z. Berbagai teknik pemeriksaan untuk menegakkan diagnosis penyakit alergi. *Sari Pediatr.* 2009;11(3):174–8.
 56. Heinzerling L, Mari A, Bergmann KC, Bresciani M, Burbach G, Darsow U, et al. The skin prick test - european standards. *Clin Transl Allergy.* 2013;3(1):1–10.
 57. Didier A, Klossek M, Chanal I, Moreau D, Bousquet J. The score for allergic rhinitis (SFAR): a simple and valid assessment method in population studies. *Eur J Allergy Clin Immunol.* 2002;57(2):107–14.
 58. Ologe FE, Adebola SO, Dunmade AD, Adeniji KA, Oyejola BA. Symptom score for allergic rhinitis. *Otolaryngol Neck Surg.* 2013;148(4):557–63.
 59. Piau JP, Massot C, Moreau D, Bouayad Z, Mohammad Y, Khaldi F, et al. Assessing allergic rhinitis in developing countries. *Int J Tuberc Lung Dis.* 2010;14(4):506–12.
 60. Devi S. Sensitivitas dan spesifisitas kuesioner score for allergic rhinitis (SFAR) sebagai alat uji diagnostik pada pasien rinitis alergi di RSUP H. Adam Malik Medan (tesis). Universitas Sumatera Utara; 2018.
 61. Mlynski GH. Physiology and pathophysiology of nasal breathing. In: Onerci TM, editor. *Nasal physiology and pathophysiology of nasal disorders.* Heidelberg: Springer; 2013. p. 257–72.
 62. Zhao K, Scherer PW, Hajiloo SA, Dalton P, Hall RMH, Walk S. Effect of anatomy on human nasal air flow and odorant transport patterns: implications for olfaction. *Chem Senses.* 2004;29(5):365–79.

63. Chandra RK, Patadia MO, Raviv J. Diagnosis of nasal airway obstruction. *Otolaryngol Clin North Am.* 2009;42(2):207–25.
64. Eccles R. Nasal airflow in health and disease. *Acta Otolaryngol.* 2000;120:580–95.
65. Rhee JS, Weaver EM, Park SS, Baker SR, Hilger PA, Kriet JD. Clinical consensus statement: diagnosis and management of nasal valve compromise. 2017;176(3):139–48.
66. Ottaviano G, Scadding GK, Coles S, Lund VJ. Peak nasal inspiratory flow; normal range in adult population. *Rhinol J.* 2006;44:32–5.
67. Ichimura K. Mechanism of nasal obstruction in patients with allergic rhinitis. *Clin Exp Allergy Rev.* 2010;10(1):20–7.
68. Bloching MB. Disorders of the nasal valve area. *Ger Soc Otorhinolaryngol Head Neck Surg.* 2007;6:1–13.
69. Freeman BS. Flow and velocity. In: *Anesthesiology core art one: basic exam.* New York: McGraw-Hill Education; 2014. p. 11–3.
70. Geddam L, Sankar J. Anesthesia breathing system: physical principles. In: *Anesthesiology core part one: basic exam.* New York: McGraw-Hill Education; 2014. p. 37–8.
71. Dilaver E, Ak KB, Suzen M, Altin G, Uckan S. Evaluation of internal nasal valve using computed tomography after le fort I osteotomy: a cross-sectional study from a tertiary center. *Med Bull Haseki.* 2021;59:400–4.
72. Klangkalya N, Manuyakorn W, Benjaponpitak S, Kamchaisatian W. Correlation of symptom scores, nasal airflow, and nasal resistance in dust mite sensitized allergic rhinitis children. *J Allergy Clin Immunol.* 2015;137(2).
73. Krasilnikova S V., Khramov AA, Khramova RN, Ovsyannikov DY, Daniel-Abu MI, Novozhilov A, et al. The relationship between indicators of nasal respiratory function and spirometric parameters in children with bronchial asthma. *J Assoc Physicians India.* 2020;68(3):43–7.
74. Cole P, Forsyth R, Haight JSJ. Effects of cold air and exercise on nasal patency. *Ann Otol Rhinol Laryngol.* 1983;92:196–8.
75. Ohki M, Ishibashi M, Inoue R, Usui N. Comparison between normal subjects and patients with allergic rhinitis in the curve of acoustic rhinometry. *Nihon Bika Gakkai Kaishi (Japanese J Rhinol.* 2000;39(1):7–11.
76. Lai VWS, Corey JP. The objective assessment of nasal patency. *Ear, Nose Throat J.* 1993;72(6):395–400.
77. Ng C, Steacy L, Van Den Ende G, Ellis A. The correlation between objective peak nasal inspiratory flow measurements (PNIF) and subjective allergy symptom assessments in the environmental exposure unit (EEU). *J Allergy Clin Immunol.* 2020;145(2):AB152.
78. Utomo BSR, Marlina L, Foluan F, Falorin J, Luhulima D, Sitompul

- YRMB. Profile of allergic rhinitis based on nasal eosinophil count, total nasal symptoms score and peak nasal inspiratory flow. *Maj Kedokt UKI*. 2019;35:1–13.
79. Dahlan MS. Besar sampel dan cara pengambilan sampel dalam penelitian kedokteran dan kesehatan. 3rd ed. Jakarta: Salemba Medika; 2009. 208 p.
 80. Sikorska-Szaflik H, Sozańska B. Peak nasal inspiratory flow in children with allergic rhinitis. Is it related to the quality of life? *Allergol Immunopathol (Madr)*. 2020;48(2):187–93.
 81. Digheari A, Digheari A Al, Mahboub B, Tarraf H, Yucel T, Maesano IA, et al. The clinical burden of allergic rhinitis in five Middle Eastern countries : results of the SNAPSHOT program. *Allergy, Asthma Clin Immunol*. 2018;14(63):1–14.
 82. Drazdauskait G, Layhadi JA, Shamji MH. Mechanisms of allergen immunotherapy in allergic rhinitis. Vol. 21. 2021.
 83. Guilemany JM, García-Piñero A, Alobid I, Cardelús S, Centellas S, Bartra J, et al. Persistent allergic rhinitis has a Moderate impact on the sense of smell, depending on both nasal congestion and inflammation. *Laryngoscope*. 2009;119(2):233–8.
 84. de Oliveira GMM, Júnior MA de VC, Costa EC, Lira GV de AG, Rizzo JÁ, Hunter S, et al. Accuracy of peak nasal flow to determine nasal obstruction in patients with allergic rhinitis. *Acta Otorhinolaryngol Ital*. 2022;42(2):155–61.
 85. Tantilipikorn P, Nattavit M, Triphoom S, Assanasen P, Bunnag C, Thinkhamrop B. Peak nasal inspiratory flow: reference values for thais. *Siriraj Med journaledical J*. 2015;2(67):267–72.
 86. Blomgren K, Simola M, Hytönen M, Pitkäranta A. Peak nasal inspiratory and expiratory flow measurements - practical tools in primary care ? *Rhinol J*. 2003;206–10.
 87. Ottaviano G, Pendolino AL, Scarpa B, Torsello M, Sartori D, Savietto E, et al. Correlations between peak nasal inspiratory flow, acoustic rhinometry, 4-phase rhinomanometry and reported nasal symptoms. *J Pers Med*. 2022;12(9).
 88. Timperley D, Srubisky A, Stow N, Marcells GN, Harvey RJ. Minimal clinically important differences in nasal peak inspiratory flow. *Rhinol J*. 2011;49:37–40.
 89. Ng CC, Romaikin D, Steacy LM, Stevens DA, Walker TJ, Adams DE, et al. Comparative nasal airflow with loratadine-pseudoephedrine and fluticasone nasal spray for allergic rhinitis. Vol. 127, *Annals of Allergy, Asthma and Immunology*. 2021. p. 342–348.e2.
 90. Kristian H, Pelealu OCP, Mengko SK. Efek olahraga terhadap perbaikan gejala rinitis alergi. *J Biomedik*. 2022;14(1):46–54.
 91. Chanta A, Klaewsongkram J, Mickleborough TD, Tongtako W. Effect of hatha yoga training on rhinitis symptoms and cytokines in allergic rhinitis

patients. *Asian Pacific J Allergy Immunol.* 2022;40(2):126–33.

92. Janyacharoen T, Kunbootsri N, Arayawichanon P. Responses of six-weeks aquatic exercise on the autonomic nervous system , peak nasal inspiratory flow and lung functions in young adults with allergic rhinitis. *Iran J Allergy, Asthma Immunol.* 2015;14(June):280–6.

