

DAFTAR PUSTAKA

1. Frontera WR, Ochala J. Skeletal Muscle: A Brief Review of Structure and Function. *Behav Genet.* 2015;45(2):183–95.
2. Mukund K, Subramaniam S. Skeletal muscle: A review of molecular structure and function, in health and disease. *Wiley Interdiscip Rev Syst Biol Med.* 2020;12(1):1–46.
3. Lipina C, Hundal HS. Lipid modulation of skeletal muscle mass and function. *J Cachexia Sarcopenia Muscle.* 2017;8(2):190–201.
4. Park CH, Yi Y, Do JG, Lee YT, Yoon KJ. Relationship between skeletal muscle mass and lung function in Korean adults without clinically apparent lung disease. *Med (United States).* 2018;97(37):1–10.
5. Jaitovich A, Barreiro E. Skeletal muscle dysfunction in chronic obstructive pulmonary disease what we know and can do for our patients. *Am J Respir Crit Care Med.* 2018;198(2):175–86.
6. Barreiro E, Jaitovich A. Muscle atrophy in chronic obstructive pulmonary disease: Molecular basis and potential therapeutic targets. *J Thorac Dis.* 2018;10(5):S1415–24.
7. Ponce MC. Pulmonary Function Tests. In: NCBI Bookshelf [Internet]. StatPearls Publishing; 2022. p. 1–7. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK482339/>
8. David S, Edwards CW. Forced Expiratory Volume Definition. In: NCBI Bookshelf [Internet]. StatPearls Publishing; 2022. p. 1–3. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK540970/>
9. Komici K, D’Amico F, Verderosa S, Piomboni I, D’Addona C, Picerno V, et al. Impact of Body Composition Parameters on Lung Function in Athletes. *Nutrients.* 2022;14(18):1–11.

10. Hall JE. Respiration. In: Guyton and Hall Textbook of Medical Physiology. 12th ed. Saunders; 2010. p. 469.
11. Matarese A, Sardu C, Shu J, Santulli G. Why is chronic obstructive pulmonary disease linked to atrial fibrillation? A systematic overview of the underlying mechanisms. *Int J Cardiol.* 2019 Feb;276:149–51.
12. Hirai T. Pulmonary Function Tests. In: *Medical Radiology.* 2021. p. 11–20.
13. David S, Edwards CW. Forced Expiratory Volume. In: StatPearls [Internet]. Treasure Island (FL) : StatPearls Publishing; 2022.
14. CDC. Reference Value of Predicted FEV1 and FVC. The National Institute for Occupational Safety and Health (NIOSH). 2011.
15. Carsin AE, Fuertes E, Schaffner E, Jarvis D, Antó JM, Heinrich J, et al. Restrictive spirometry pattern is associated with low physical activity levels. A population based international study. *Respir Med.* 2019 Jan;146:116–23.
16. Devasahayam J, LaFreniere K, Naik R. Chronic Emphysema. StatPearls. 2022. 2–3 p.
17. Pierce RJ, Hillman D, Young IH, O'Donoghue F, Zimmerman P V, West S, et al. Respiratory function tests and their application. *Respirology.* 2005 Nov;10(s2):S1–19.
18. Mcculler C, Jessu R, Callahan AL. Physiology , Skeletal Muscle. In: StatPearls [Internet]. Treasure Island (FL) : StatPearls Publishing; 2022.
19. Mescher AL. Muscle Tissue. In: *Histology Text and Atlas Junqueira's 15th Edition.* 15th ed. McGraw-Hill Education; 2018. p. 194–5.
20. Schiaffino S, Dyar KA, Ciciliot S, Blaauw B, Sandri M. Mechanisms regulating skeletal muscle growth and atrophy. *FEBS J.* 2013 Sep;280(17):4294–314.
21. Mavalli MD, DiGirolamo DJ, Fan Y, Riddle RC, Campbell KS, van Groen T, et al. Distinct growth hormone receptor signaling modes regulate skeletal muscle development and insulin sensitivity in mice. *J Clin Invest.* 2010

Nov;120(11):4007–20.

22. Schiaffino S, Mammucari C. Regulation of skeletal muscle growth by the IGF1-Akt/PKB pathway: insights from genetic models. *Skelet Muscle*. 2011;1(1):4.
23. Bentzinger CF, Romanino K, Cloëtta D, Lin S, Mascarenhas JB, Oliveri F, et al. Skeletal Muscle-Specific Ablation of raptor, but Not of rictor, Causes Metabolic Changes and Results in Muscle Dystrophy. *Cell Metab*. 2008 Nov;8(5):411–24.
24. Laplante M, Sabatini DM. mTOR Signaling in Growth Control and Disease. *Cell*. 2012 Apr;149(2):274–93.
25. Bodine SC. mTOR Signaling and the Molecular Adaptation to Resistance Exercise. *Med Sci Sport Exerc*. 2006 Nov;38(11):1950–7.
26. Bodine SC, Stitt TN, Gonzalez M, Kline WO, Stover GL, Bauerlein R, et al. Akt/mTOR pathway is a crucial regulator of skeletal muscle hypertrophy and can prevent muscle atrophy in vivo. *Nat Cell Biol*. 2001 Nov;3(11):1014–9.
27. Abmayr SM, Pavlath GK. Myoblast fusion: lessons from flies and mice. *Development*. 2012 Feb;139(4):641–56.
28. Guerci A, Lahoute C, Hébrard S, Collard L, Graindorge D, Favier M, et al. Srf-Dependent Paracrine Signals Produced by Myofibers Control Satellite Cell-Mediated Skeletal Muscle Hypertrophy. *Cell Metab*. 2012 Jan;15(1):25–37.
29. McCarthy JJ, Mula J, Miyazaki M, Erfani R, Garrison K, Farooqui AB, et al. Effective fiber hypertrophy in satellite cell-depleted skeletal muscle. *Development*. 2011 Sep;138(17):3657–66.
30. Sandri M. Signaling in Muscle Atrophy and Hypertrophy. *Physiology*. 2008 Jun;23(3):160–70.
31. Satchek JM, Hyatt JK, Raffaello A, Thomas Jago R, Roy RR, Reggie Edgerton V, et al. Rapid disuse and denervation atrophy involve

transcriptional changes similar to those of muscle wasting during systemic diseases. *FASEB J.* 2007 Jan;21(1):140–55.

32. Lee SW, Dai G, Hu Z, Wang X, Du J, Mitch WE. Regulation of Muscle Protein Degradation. *J Am Soc Nephrol.* 2004 Jun;15(6):1537–45.
33. Stitt TN, Drujan D, Clarke BA, Panaro F, Timofeyva Y, Kline WO, et al. The IGF-1/PI3K/Akt Pathway Prevents Expression of Muscle Atrophy-Induced Ubiquitin Ligases by Inhibiting FOXO Transcription Factors. *Mol Cell.* 2004 May;14(3):395–403.
34. Sandri M, Sandri C, Gilbert A, Skurk C, Calabria E, Picard A, et al. Foxo Transcription Factors Induce the Atrophy-Related Ubiquitin Ligase Atrogin-1 and Cause Skeletal Muscle Atrophy. *Cell.* 2004 Apr;117(3):399–412.
35. Cong H, Sun L, Liu C, Tien P. Inhibition of Atrogin-1/MAFbx Expression by Adenovirus-Delivered Small Hairpin RNAs Attenuates Muscle Atrophy in Fasting Mice. *Hum Gene Ther.* 2011 Mar;22(3):313–24.
36. Baehr LM, Furlow JD, Bodine SC. Muscle sparing in muscle RING finger 1 null mice: response to synthetic glucocorticoids. *J Physiol.* 2011 Oct;589(19):4759–76.
37. Tintignac LA, Lagirand J, Batonnet S, Sirri V, Leibovitch MP, Leibovitch SA. Degradation of MyoD Mediated by the SCF (MAFbx) Ubiquitin Ligase. *J Biol Chem.* 2005 Jan;280(4):2847–56.
38. Polge C, Heng A, Jarzaquet M, Ventadour S, Claustre A, Combaret L, et al. Muscle actin is polyubiquitinated in vitro and in vivo and targeted for breakdown by the E3 ligase MuRF1. *FASEB J.* 2011 Nov;25(11):3790–802.
39. Frontera WR, Ochala J. Skeletal Muscle: A Brief Review of Structure and Function. *Calcif Tissue Int.* 2015 Mar;96(3):183–95.
40. Fukuoka Y, Narita T, Fujita H, Morii T, Sato T, Sassa MH, et al. Importance of physical evaluation using skeletal muscle mass index and body fat percentage to prevent sarcopenia in elderly Japanese diabetes patients. *J Diabetes Investig.* 2019 Mar;10(2):322–30.

41. Park CH, Yi Y, Do JG, Lee YT, Yoon KJ. Relationship between skeletal muscle mass and lung function in Korean adults without clinically apparent lung disease. *Medicine (Baltimore)*. 2018 Sep;97(37):e12281.
42. Bahat G, Tufan A, Ozkaya H, Tufan F, Akpınar TS, Akin S, et al. Relation between hand grip strength, respiratory muscle strength and spirometric measures in male nursing home residents. *Aging Male*. 2014 Sep;17(3):136–40.
43. Bano G, Trevisan C, Carraro S, Solmi M, Luchini C, Stubbs B, et al. Inflammation and sarcopenia: A systematic review and meta-analysis. *Maturitas*. 2017 Feb;96:10–5.
44. Byun MK, Cho EN, Chang J, Ahn CM, Kim HJ. Sarcopenia correlates with systemic inflammation in COPD. *Int J Chron Obstruct Pulmon Dis*. 2017 Feb;Volume 12:669–75.
45. Moore VC. Spirometry: step by step. *Breathe*. 2012 Mar;8(3):232–40.
46. Lamb K, Theodore D, Bhutta BS. Spirometry. In: *StatPearls - NCBI Bookshelf*. Treasure Island (FL): StatPearls Publishing; 2022. p. 1–6.
47. Gnoevykh V V., Smirnova AY, Shorokhova YA, Gening TP, Abakumova T V. The risk of bronchial asthma exacerbations among smokers with asthma-chronic obstructive pulmonary disease overlap after inpatient treatment. *Ter Arkh*. 2020 Mar;92(3):25–9.
48. Spiesshoefer J, Orwat S, Henke C, Kabitz HJ, Katsianos S, Borrelli C, et al. Inspiratory muscle dysfunction and restrictive lung function impairment in congenital heart disease: Association with immune inflammatory response and exercise intolerance. *Int J Cardiol*. 2020 Nov;318:45–51.
49. Khalil S, Mohktar M, Ibrahim F. The Theory and Fundamentals of Bioimpedance Analysis in Clinical Status Monitoring and Diagnosis of Diseases. *Sensors*. 2014 Jun;14(6):10895–928.
50. Ward LC. Bioelectrical impedance analysis for body composition assessment: reflections on accuracy, clinical utility, and standardisation. *Eur*

J Clin Nutr. 2019 Feb;73(2):194–9.

51. Walter-Kroker A, Kroker A, Mattiucci-Guehlke M, Glaab T. A practical guide to bioelectrical impedance analysis using the example of chronic obstructive pulmonary disease. *Nutr J*. 2011 Dec;10(1):35.
52. Coppini LZ, Waitzberg DL, Campos ACL. Limitations and validation of bioelectrical impedance analysis in morbidly obese patients. *Curr Opin Clin Nutr Metab Care*. 2005 May;8(3):329–32.
53. Wasyluk W, Wasyluk W, Wasyluk M, Zwolak A, Łuczyk RJ. Limits of body composition assessment by bioelectrical impedance analysis (BIA). *J Educ Heal Sport*. 2019;9(8):35–44.
54. Sillanpää E, Stenroth L, Bijlsma AY, Rantanen T, McPhee JS, Maden-Wilkinson TM, et al. Associations between muscle strength, spirometric pulmonary function and mobility in healthy older adults. *Age (Omaha)*. 2014 Aug;36(4):9667.
55. Nemish I, Stupnytska G, Fediv O, Nesterovska O. Correlation between body mass index and spirometry parameters in chronic obstructive pulmonary disease patients with ischemic heart disease and obesity. In: *Monitoring airway disease*. European Respiratory Society; 2019. p. PA2660.
56. Bakhtiar A, Tantri RIE. Faal Paru Dinamis. *J Respirasi*. 2017;3(3):89–96.
57. Yu S, Park S, Park CS, Kim S. Association between the ratio of fev1 to fvc and the exposure level to air pollution in never-smoking adult refractory asthmatics using data clustered by patient in the soonchunhyang asthma cohort database. *Int J Environ Res Public Health*. 2018;15(11):1–11.
58. Koop BE, Reckert A, Becker J, Han Y, Wagner W, Ritz-Timme S. Epigenetic clocks may come out of rhythm—implications for the estimation of chronological age in forensic casework. *Int J Legal Med*. 2020;134(6):2215–28.
59. Lindqvist A, Sendén MG, Renström EA. What is gender, anyway: a review of the options for operationalising gender. *Psychol Sex*. 2021;12(4):332–44.

60. Dahlan MS. Besar Sampel dan Cara Pengambilan Sampel dalam Penelitian Kedokteran dan Kesehatan. Garut: Salemba Medika; 2010. 74–75 p.
61. World Health Organization. Obesity and Overweight [Internet]. 2020 [cited 2023 Jun 19].
62. Sharma G, Goodwin J. Effect of aging on respiratory system physiology and immunology. *Clin Interv Aging*. 2006;1(3):253-60. doi: 10.2147/ciia.2006.1.3.253. PMID: 18046878; PMCID: PMC2695176.
63. Petersen AM, Magkos F, Atherton P, Selby A, Smith K, Rennie MJ, et al. Smoking impairs muscle protein synthesis and increases the expression of myostatin and MAFbx in muscle. *Am J Physiol Endocrinol Metab*. 2007;293(3):E843-8.
64. O'Donnell DE, Aaron S, Bourbeau J, Hernandez P, Marciniuk DD, Balter M, et al. Canadian Thoracic Society recommendations for management of chronic obstructive pulmonary disease - 2007 update. *Can Respir J*. 2007;14(Suppl B):5B-32B.
65. Steiner MC, Barton RL, Singh SJ, Morgan MD. Nutritional enhancement of exercise performance in chronic obstructive pulmonary disease: a randomised controlled trial. *Thorax*. 2003;58(9):745-51.
66. WHO Report on the Global Tobacco Epidemic, 2019: Offer help to quit tobacco use. Geneva: World Health Organization; 2019.