

DAFTAR PUSTAKA

- Adams, M., Oesterwind, K. G., Bongartz, M., Zimmermann, S., & Seide, S. (2023). Effects of Physical Activity Interventions on Strength , Balance and Falls in Middle - Aged Adults : A Systematic Review and Meta - Analysis. *Sports Medicine - Open*. <https://doi.org/10.1186/s40798-023-00606-3>
- Agustiningsih, D. (2025). *Bergerak Yuuk!! Olahraga Bagi Pemula*. Yogyakarta: Sumber Aksara.
- American College of Sports Medicine. (2022). *ACSM'S Guideline for Exercise Testing and Prescription 11st edition* (Edited by G. Liguori, Y. Feito, C. Fountaine , and B.A. Roy). Philadelphia: Wolters Kluwer.
- American Thoracic Society. (2002). ATS: Guidelines for the six-Minute Walk Test. *American Thoracic Journal of Respiratory and Critical Care Medicine*, 166. pp. 111-117. DOI: 10.1164/rccm.166/1/111.
- Ambrose, A.F., Paul, G. and Hausdorff, J.M. (2013). Risk factors for falls among older adults: A review of the literature. *Maturitas*, 75(1), pp. 51-61. Available at: <https://doi.org/10.1016/j.maturitas.2013.02.009>.
- Arikunto, S. (2010). *Prosedur Penelitian Pendekatan Praktik*. Jakarta: PT. Bina Aksara.
- Bao, T. *et al.* (2022). Retention Effects of Long-Term Balance Training with Vibrotactile Sensory Augmentation in Healthy Older Adults. *Sensors*, 22, 3014. <https://doi.org/10.3390/s22083014>
- Bentzinger, C., von Maltzahn, J., Dumont, N., Stark, D., Wang, Y., Nhan, K. *et al.* (2014). Wnt7a stimulates myogenic stem cell motility and engraftment resulting in improved muscle strength. *The Journal of Cell Biology*. 205(1): 97-111.
- Bednarczuk, G. and Rutkowska, I. (2022). Factors of balance determining the risk of falls in physically active women aged over 50 years. *Peer J*, 10. Available at: <https://doi.org/10.7717/peerj.12952>.

- Boros, K. and Freemont, T. (2017). Physiology of ageing of the musculoskeletal system. *Best Practice and research: Clinical Rheumatology*, 31(2), pp. 203-217. Available at: <https://doi.org/10.1016/j.berh.2017.09.003>.
- Brognara, L., Luna, C.O., Traina, F. and Cauli, O. (2024). Inflammatory Biomarkers and Gait Impairment in Older Adults: A Systematic Review. *International Journal of Molecular Sciences*, 25, 1368. <https://doi.org/10.3390/ijms25031368>.
- Cadore, E.L., Rodriguez-Manas, L., Sinclair, A., Izquierdo, M. (2013). Effects of Different Exercise Interventions on Risk of Falls, Gait Ability, and Balance in Physically Frail Older Adults: A Systematic Review. *Rejuvenation Research*, 16(2). DOI:10.1089rej.2012.1397
- Cai, Y. *et al.* (2024). The impact of ageing mechanisms on musculoskeletal system diseases in the elderly. *Frontiers*, 1–15. <https://doi.org/10.3389/fimmu.2024.1405621>
- Carvalho, J., Marques, E., Soares, J. M. C., & Mota, J. (2010). Isokinetic strength benefits after 24 weeks of multicomponent exercise training and combined exercise training in older adults. *Aging Clinical and Experimental Research*, 22(1), 63–69. <https://doi.org/10.1007/BF03324817>
- Chang, Y.W., Wu, H.W., Hung, W., Yen, C., (2009). Postural responses in various bases of support and visual conditions in the subjects with functional ankle instability. *Journal of Sports Science*. 1(4): 87-92.
- Chen, L.K. *et al.* (2020). ‘Asian Working Group for sarcopenia: 2019 consensus update on Sarcopenia diagnosis and treatment’, *Journal of the American Medical Directors Association*, 21(3). doi:10.1016/j.jamda.2019.12.012.
- Chen, W., Datzkiw, D., Rudnicki, M. A. (2020). Satellite cells in ageing: Use it or lose it. *Open Biology* 10(5). <https://doi.org/10.1098/rsob.200048>
- Chittrakul, J., Siviroj, P., Sungkarat, S., & Saphamrer, R. (2020). Multi-System Physical Exercise Intervention for Fall Prevention and Quality of Life in Pre-Frail Older Adults: A Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*, 17(9). <https://doi.org/10.3390/ijerph17093102>

- Courel-ibáñez, J., Buendía-romero, Á., Pallarés, J. G., García-conesa, S., Martínez-cava, A., & Izquierdo, M. (2022). Impact of Tailored Multicomponent Exercise for Preventing Weakness and Falls on Nursing Home Residents ' Functional Capacity. *Journal of the American Medical Directors Association*, 23(1), 98-104.e3. <https://doi.org/10.1016/j.jamda.2021.05.037>
- Cruz-Jimenez, M. (2017). Normal Changes in Gait and Mobility Problems in the Elderly. *Physical Medicine and Rehabilitation Clinics of North America*, 28: 713-725. <http://dx.doi.org/10.1016/j.pmr.2017.06.005>
- Dahlan, M.S. (2010). *Besar Sampel dan Cara Pengambilan Sampel dalam Penelitian Kedokteran dan Kesehatan*. Jakarta: Salemba Medika.
- Darmojo. (2006). *Determinants of Active Vital Ageing and Active Ageing and Prevention of Disease in The Elderly*. Jakarta: Kongres Nasional Gerontologi.
- Dipietro, L. *et al.* (2019). *Physical Activity, Injurious Falls, and Physical Function in Aging: An Umbrella Review*. 1303–1313. <https://doi.org/10.1249/MSS.0000000000001942>
- Du Rietz, M., and Beischer, S. (2024). Assessment of Muscle Strength in Elderly as a Screening Method for Sarcopenia in Primary Care: a Scoping Review. *BMJ Open*, 14: e085190. doi:10.1136/bmjopen-2024-085190
- Dyussenbayev, A. (2017). Age Periods of Human Life. *Adv Soc Sci Res J*. <https://doi.org/10.14738/assrj.46.2924>
- Fahlman, M.M., Mc Nevin, N., Boardley, D., Morgan, A., Topp, R. (2011). Effects of Resistance Training on Functional Ability in Elderly Individuals. *American Journal of Health Promotion*, 25(4). DOI:10.4278/ajhp.081125-QUAN-292
- Ferrucci, M. *et al.* (2013). The neurobiology of the spinal cord in experimental parkinsonism and Parkinson's disease. *Archives Italiennes de Biologie*, 151(4), 219–234.
- Fry, C.S. *et al.* (2010). Blood flow restriction exercise stimulates mTORC1 signaling and muscle protein synthesis in older men. *Journal of Applied Physiology*, 108: 1199-1209. doi:10.1152/jappphysiol.01266.2009

- Fukuchi, A.C., Fukuchi, K.R. and Duarte, M. (2019). Effects of Walking speed on gait biomechanics in healthy participants: a systematic review and meta-analysis. *Systematic Reviews*, 8:153. <https://doi.org/10.1186/s13643-019-1063-z>.
- Garber, Carol Ewing. *et al.* (2011). Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory, Musculoskeletal, and Neuromotor Fitness in Apparently Healthy Adults: Guidance for Prescribing Exercise. *Med Sci Sports Exerc.* Jul;43(7):1334-59. doi: 10.1249/MSS.0b013e318213fefb
- Gopinath, B., Kifley, A., Flood, V. M., & Mitchell, P. (2018). Physical Activity as a Determinant of Successful Aging over Ten Years. *Scientific Reports*, 2–6. <https://doi.org/10.1038/s41598-018-28526-3>.
- Guimarães, D. S. P. S. F. *et al.* (2024). *Concerted regulation of skeletal muscle metabolism and contractile properties by the orphan nuclear receptor Nr2f6*. *April*, 1335–1347. <https://doi.org/10.1002/jcsm.1348>.
- Guo, J., Huang, X., Dou, L., Yan, M., Shen, T., Tang, W., Li, J. (2022). Aging and aging-related disease: from molecular mechanisms to interventions and treatments. *Signal Transduct target ther* 7, 391. <https://doi.org/10.1038/s41392-022-01251-0>
- Hafström, A., Malmström, E., Terdén, J., Fransson, P.A. and Magnusson, M. (2016). Improved Balance Confidence and Stability for Elderly After 6 weeks of a Multimodal Self-Administered Balance-Enhancing Exercise Program. *Gerontology and Geriatric Medicine*, 2, p. 233372141664414. Available at: <https://doi.org/10.1177/2333721416644149>.
- Huang, M. Z. *et al.* (2023). Effect of Multicomponent Home-Based Training on Gait and Muscle Strength in Older Adults After Hip Fracture Surgery: A Single Site Randomized Trial. *Archives of Physical Medicine and Rehabilitation*, 104(2), 169–178. <https://doi.org/10.1016/j.apmr.2022.08.974>
- Hurst, C. *et al.* (2022). Resistance exercise as a treatment for sarcopenia: prescription and delivery. *Age and Ageing*, 1–10.

- Hughes, V. A. *et al.* (2001). Longitudinal muscle strength changes in older adults: Influence of muscle mass, physical activity, and health. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, 56(5), B209–B217. <https://doi.org/10.1093/gerona/56.5.B209>
- Ikezoe, T. (2020). Age-Related Change in Muscle Characteristics and Resistance Training for Older Adults. *Physical Therapy Research*, 23(2), pp. 99-105. <https://doi.org/10.1298/ptr.r0009>
- Izquierdo, M., Casas-Herrero, A., Zambom-Ferraresi, F., Martinez-Velilla, N., Alonso-Bouzon, C., & Rodriguez-Manas, L. (2017). *Multi-Component Physical Exercise Program VIVIFRAIL*. Co-funded by the Erasmus+ Programme of the European Union.
- Jiang, G., Tan, X., Zou, J., Wu, X. (2025). A 24-Week Combined Resistance and Balance Training Program Improves Physical Function in Older Adults: A Randomized Controlled Trial. *Journal of Strength and Conditioning Research*, 39(1)/e62-e69
- Kaczmarek, A. *et al.* (2021). The role of satellite cells in skeletal muscle regeneration: the effect of exercise and age. *Biology* 10(10):1056. <https://doi.org/10.3390/biology10101056>
- Kampusch, S., Kaniusas, E., & Széles, J. C. (2015). Modulation of Muscle Tone and Sympathovagal Balance in Cervical Dystonia Using Percutaneous Stimulation of the Auricular Vagus Nerve. *Artificial Organs*, 39(10), E202-12. <https://doi.org/10.1111/aor.12621>
- Kannus, P., Sievänen, H., Palvanen, M., Järvinen, T. and Pakkari, J. (2005). Prevention of Falls and Consequent injuries in elderly people. *Lancet*, 366(9500), pp. 1885-1893. Available at: [https://doi.org/10.1016/S0140-6736\(05\)67604-0](https://doi.org/10.1016/S0140-6736(05)67604-0).
- Kenney, W. L., Wilmore, J.H., Costill, D.L. (2015). *Physiology of sports and exercise*. 6 ed. Human Kinetics, Champaign.
- Kementerian Kesehatan Republik Indonesia. (2013). *Profil Penduduk Lanjut Usia di Indonesia*. Jakarta: Pusat Data dan Informasi Kementerian Kesehatan RI.
- Kementerian Kesehatan Republik Indonesia. (2013). *Laporan Nasional Riset*

Kesehatan Dasar (Riskesdas) 2013. Jakarta: Badan Penelitian dan Pengembangan Kesehatan, Kemenkes RI. Diakses dari https://repository.badankebijakan.kemkes.go.id/id/eprint/4467/1/Laporan_riskesdas_2013_final.pdf.

Keputusan Menteri Kesehatan Republik Indonesia. (2021). *Pedoman Nasional Pelayanan Kedokteran Tata Laksana Hipertensi Dewasa*. Jakarta: Kementerian Kesehatan Republik Indonesia. https://kemkes.go.id/app_asset/file_content_download/1700108499655598d3c61e16.60954826.pdf

Kementerian Kesehatan Republik Indonesia. (2022). *Katalog Data – Survei Status Gizi Indonesia (SSGI) 2022* [Internet]. Jakarta: Kementerian Kesehatan Republik Indonesia; n.d. [cited 2025 July 28]. Available from: <https://layanandata.kemkes.go.id/katalog-data/ssgi/ketersediaan-data/ssgi-2022>

Khuzema, A., Brammatha, A., Arul Selvan, V. (2020). Effect of home-based Tai Chi, Yoga or conventional balance exercise on functional balance and mobility among persons with idiopathic Parkinson's disease: An experimental study. *Hong Kong Physiotherapy Journal*, 40(1), 39-49. doi: 10.1142/S1013702520500055

Kim, U., Lim, J., Park., & Bae, Y. (2025) Predicting fall risk through step width variability at increased gait speed in community dwelling older adults. *Scientific Reports*, 15, 16915. <https://doi.org/10.1038/s41598-025-02128-2>

Kim, S.W., Park, H.Y., Jung, W.S., Lim, K. (2022). Effects of Twenty-Four Weeks of Resistance Exercise Training on Body Composition, Bone Mineral Density, Functionak Fitness and Isokinetic Muscle Strength in Obese Older Women: A Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*, 19, 14554. <https://doi.org/10.3390/ijerph192114554>

Kulmala, J. et al. (2016). *Walking and Running Require Greater Effort from the Ankle than the Knee Extensor Muscles*. 2181–2189. <https://doi.org/10.1249/MSS.0000000000001020>

- Kwak, C., Kim, Y. L., & Lee, S. M. (2016). Effects of elastic-band resistance exercise on balance , mobility and gait function , flexibility and fall efficacy in elderly people. *The Journal of Physical Therapy Science*, 3189–3196.
- López-Otín C, Blasco MA, Partridge L, Serrano M, Kroemer G. (2013). The hallmarks of aging. *Cell*. Jun 6;153(6):1194-217. doi: 10.1016/j.cell.2013.05.039. PMID: 23746838; PMCID: PMC3836174.
- Lee, J. and Kim, H.J. (2022). Normal Aging Induces Changes in the Brain and Neurodegeneration Progress: Review of the Structural, Biochemical, Metabolic, Cellular and Molecular Changes. *Frontiers in Aging Neuroscience*. 14(June), pp. 1-15. Available at: <https://doi.org/10.3389/fnagi.2022.931536>.
- Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP). (2022). *E-katalog Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah (LKPP)*. LKPP [cited 2024 Dec 12] from: URL: <https://e-katalog.lkpp.go.id/katalog/produk/detail/73774635>
- Li Y., Yu N., Zhang C., Song Q., Wang J., & Sun W. (2023). Test–retest reliability of kinematic and kinetic parameters during dual-task stair walking in the elderly. *Frontiers in Physiology*, 14:1177159. doi: 10.3389/fphys.2023.1177159
- Lindle, R. S. *et al.* (1997). Age and gender comparisons of muscle strength in 654 women and men aged 20–93 yr. *Journal of Applied Physiology*, 83(5), 1581–1587. <https://doi.org/10.1152/jappl.1997.83.5.1581>
- Linhares, D. G. *et al.* (2022). Effects of Multicomponent Exercise Training on the Health of Older Women with Osteoporosis : A Systematic Review and. *International Journal of Environmental Research and Public Health*, 19(14195).
- Lysenko, E.A., Vinogradova, O.L., Popov, D. V. (2021). The mehanisms of muscle mass and strength increase during strength training. *Journal of Evolutionary Biochemistry and Physiology* 57(4): 862-75. <https://doi.org/10.1134/s0022093021040104>

- Maeda , N., Urabe, Y., Murakami, M., Itotani, K., & Kato, J. (2015). Discriminant analysis for predictor of falls in stroke patients by using the berg balance scale. *Singapore Medical Journal*, 280-283.
- Magon, S. *et al.* (2016). Striatal functional connectivity changes following specific balance training in elderly people: MRI results of randomized controlled pilot study. *Gait and Posture*, 334-339.
- Mahjur, M., & Norasteh, A. A. (2022). Effects of home-based specific and comprehensive balance-training programs on balance and functional status in healthy older adults. *Experimental Gerontology*, 159(December 2021), 111701. <https://doi.org/10.1016/j.exger.2022.111701>
- Maki, B.E. (1997). Gait Changes in Older Adults: Predictors of Falls or Indicators of Fear?. *American Geriatric Society*, 45(3):313-320
- Marques-sule, E., Deka, P., Almenar, L., Pathak, D., Raquel, L., & Klompstra, L. (2022). Physical Activity Readiness in Patients with Heart Failure. *International Journal of Environmental Research and Public Health*, 19, 16332. <https://doi.org/10.3390/ijerph192316332>
- Macedo-Santiago, L.A. *et al.* (2018). Effects of Resistance Training on Immunoinflammatory Response, TNF-Alpha Gene Expression and Body Composition in Elderly Woman. *Journal of Aging Research*, 10, 1467025. <https://doi.org/10.1155/2018/1467025>
- Musumeci, G., Imbesi, R., Szychlinska, M.A., Castrogiovani, P. (2015). Apoptosis and skeletal muscle in aging. *Open Journal of Apoptosis*, 4, 41-46. <http://dx.org/10.4236/ojapo.2015.42004>
- Morawin, B., Tylutka, A., Chmielowiec, J., Zembron-Lacny, A. (2021). Circulating Mediators of Apoptosis and Inflammation in Aging; Physical Exercise Intervention. *International Journal of Environmental Research and Public Health*, 18, 3165. <https://doi.org/10.3390/ijerph18063165>
- Narici, M.V., and Maffuli, N. (2010). Sarcopenia: Characteristic, mechanisms and functional significance. *British Medical Bulletin*, 95: 139-159. DOI:10.1093/bmb/Idq008
- Nelson, M. E. *et al.* (2007). Physical activity and public health in older adults:

- recommendation from the American College of Sports Medicine and the American Heart Association. *Medicine and Science in Sports and Exercise*, 39(8), 1435–1445. <https://doi.org/10.1249/mss.0b013e3180616aa2>
- Nicklas, B.J., and Brinkley, T.E. (2009). Exercise Training as Treatment for Chronic Inflammation in the Elderly. *Exercise and Sport Sciences Reviews*, 37(4): 165-170. doi:10.1097/JES.0b013e3181b7b3d9
- Parveen, A., Parveen, S., & Noohu, M. M. (2023). Effect of concurrent and multi-component training on balance, fear of falling, and muscle strength in older adults: a review. *Sport Sciences for Health*, 19(3), 733–742. <https://doi.org/10.1007/s11332-022-00990-5>
- Papalia, G.F. *et al.* (2020). The effects of physical exercise on balance and prevention of falls in older people: A systematic review and meta-analysis. *Journal of Clinical Medicine*, 9(8), pp. 1-19.
- Pollock, A.S., Durward, B.R., Rowe, P.J. and Paul, J.P., (2000). What is balance?. *Clinical Rehabilitation*, 14(4), pp. 402-406. <https://doi.org/10.1191/0269215500cr342oa>
- Pratt, J., Vito, G. De, Narici, M., & Boreham, C. (2021). Neuromuscular Junction Aging: A Role for Biomarkers and Exercise. *The Gerontological Society of America*, 76(4), 576–585. <https://doi.org/10.1093/gerona/glaa207>
- Pyykko, I., Jantti, P., Aalto, H. (1990). Postural Control in Elderly Subject. *Age and Ageing*, 19: 215-221.
- Rodríguez-gutiérrez, E., Torres-costoso, A., Pascual-morena, C., Pozuelo-Carrascosa, D. P., Garrido-Miguel, M., & Martínez-Vizcaino, V. (2023). Effects of Resistance Exercise on Neuroprotective Factors in Middle and Late Life: A Systematic Review and Meta-Analysis. *Ageing and Disease*, 14(4), 1264–1275.
- Rodríguez-mañas, L. *et al.* (2019). Effectiveness of a multimodal intervention in functionally impaired older people with type 2 diabetes mellitus. *Journal of Cachexia, Sarcopenia and Muscle*, 721–733. <https://doi.org/10.1002/jcsm.12432>
- Rodgers, J., King, K., Brett, J., Cromie, M., Charville, G., Maguire, K., *et al.* (2014).

mTORC1 controls the adaptive transition of quiescent stem cell from G0 to Galert. *Nature*, 510(7505): 393-396.

Rubenstein, L.Z. (2006). Falls in older people: Epidemiology, risk factors and strategies for prevention. *Age and Ageing*, 35(SUPPL.2), pp. 37-41.

Sadeghi, H. *et al.* (2021). Effects of 8 weeks of balance training, virtual reality training and combined exercise on lower limb muscle strength, balance and functional mobility among older men: a randomized controlled trial. *Sports Health*, 606–612. <https://doi.org/10.1177/1941738120986803>

Sadjapong, U., Yodkeeree, S., Sungkarat, S., & Siviroj, P. (2020). Multicomponent Exercise Program Reduces Frailty and Inflammatory Biomarkers and Improves Physical Performance in Community-Dwelling Older Adults: A Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*, 17(11). <https://doi.org/10.3390/ijerph17113760>

Schiaffino, S., Reggiani, C., Akimoto, T., & Blaauw, B. (2021). Molecular Mechanisms of Skeletal Muscle Hypertrophy. *Journal of Neuromuscular Diseases*, 8(2): 169–183. <https://doi.org/10.3233/JND-200568>

Scheffer, D. da L., & Latini, A. (2020). Exercise-induced immune system response: Anti-inflammatory status on peripheral and central organs. *Biochimica et Biophysica Acta - Molecular Basis of Disease*, 1866(10). <https://doi.org/10.1016/j.bbadis.2020.165823>

Seidler, R.D. *et al.* (2010). Motor control and aging: Links to age related brain structural, functional and biochemical effects. *Neuroscience and Biobehavioral Reviews*. 34(5), pp. 721-733. Available at: <https://doi.org/10.1016/j.neubiorev.2009.10.005>.

Seo, M.W., Jung, S.W., Kim, S.W., Lee, J.M., Jung, H.C., Song, J.K. (2021). Effects of 16 Weeks of Resistance Training on Muscle Quality and Muscle Growth Factors in Older Adult Women with Sarcopenia: A Randomized Controlled Trial. *International Journal of Environmental Research and Public Health*, 18, 6762. <https://doi.org/10.3390/ijerph18136762>

Serra-Rexach, J. A. *et al.* (2011). Short-term, light- to moderate-intensity exercise

- training improves leg muscle strength in the oldest old: a randomized controlled trial. *Journal of the American Geriatrics Society*, 59(4), 594–602. <https://doi.org/10.1111/j.1532-5415.2011.03356.x>
- Siregar, R., Gultom, R., & Sirait, I. I. (2020). Effects of Tandem Walking Exercise on Elderly Body Balance to reduce falling risk at UPT Binjai Elderly. *Journal of Healthcare Technology and Medicine*.
- Sluga, S.P., & Kozinc, Z. (2024). Sensorimotor and proprioceptive exercise programs to improve balance in older adults: a systematic review with meta-analysis. *European Journal of Translation Myology*, 34(1), 12010. doi: 10.4081/ejtm.12010
- Stotz, A., Hamacher, D. and Zech, A. (2023). Relationship between Muscle strength and Gait Parameters in Healthy Older Women and Men. *International Journal of Environmental Research and Public Health*, 20, 5362. <https://doi.org/10.3390/ijerph20075362>.
- Thomas, E., Battaglia, G., Patti, A., Brusa, J., Leonardi, V., Palma, A., & Bella, M. (2019). Physical activity programs for balance and fall prevention in elderly. *Medicine*, 98:27.
- Tiggemann, C.L., Pietta-Dias, C., Wolf-Schoenell, M.C., Noll, M., Alberton, C.L., Pinto, R.S., Krueel, L.F.M. (2021). Rating of Perceived Exertion as a Method to Determine Training Loads in Strength Training in Elderly Women: A Randomized Controlled study. *International Journal of Environmental Research and Public Health*, 18, 7892. <https://doi.org/10.3390/ijerph18157892>
- Torres-Castro, R. *et al.* (2023). Assessment of Exercise Capacity in Post-COVID-19 Patients: How Is the Appropriate Test Chosen?. *Life*, 13, 621. <https://doi.org/10.3390/life13030621>
- Tjenstörn, F. (2009). Adaptation and Learning in Postural control [dissertation]. Sweden: Lund University.
- Vikberg, S. *et al.* (2019). Effects of Resistance Training on Functional Strength and Muscle Mass in 70-Year-Old Individuals With Pre-sarcopenia: A Randomized Controlled Trial. *Journal of the American Medical Directors*

- Association*, 20(1), 28–34. <https://doi.org/10.1016/j.jamda.2018.09.011>
- Vaishya, R. and Vaish, A. (2020). Falls in Older Adults are Serious. *Indian Journal of Orthopaedics*, 54(1), pp. 69-74.
- Wang, D. X. M., Yao, J., Zirek, Y., Reijnierse, E. M., & Maier, A. B. (2020). Muscle mass , strength , and physical performance predicting activities of daily living : a meta-analysis. *Journal of Cachexia, Sarcopenia and Muscle*, April 2019, 3–25. <https://doi.org/10.1002/jcsm.12502>
- Wang, R.Y., Wang, Y.L., Cheng, F.Y., Chao, Y.H., Chen, C.L., Yang, Y.R. (2015). Effects of combined exercise on gait variability in community-dwelling older adults. *American Aging Association*, 37:40. DOI:10.1007/s11357-015-9780-2
- Weidmer, P. *et al.* (2021). Sarcopenia: Molecular Mechanisms and open questions. *Ageing Research Reviews*, 65, 101200. <https://doi.org/10.1016/j.arr.2020.101200>
- Williams, N. (2017). The Borg Rating of Perceived Exertion (RPE) scale. *Occupational Medicine*, 67, 5: 404-405. <https://doi.org/10.1093/occmed/kqx063>
- Winter, D.A., Patla, A.E., Frank, J.S., Walt, S.E. (1990). Biomechanical Walking Pattern Changes in the Fit and Healthy Elderly. *Physical Therapy*, 70(6).
- World Health Organization. (2007). WHO Global Report on Falls Prevention in Older Age, pp. 1-47.
- World Health Organization. (2021). *Falls*. [online] available at: <https://www.who.int/news-room/fact-sheets/detail/falls> [Accessed 7 October 2024]
- World Health Organization. (2018, February 28). *Ageing*. Retrieved from World Health Organization: <https://www.who.int>
- Yang, C., Mo, Y., Cao, X., Zhu, S., Wang, Xiuhua and Wang, Xiaoqing. (2023). Reliability and Validity of the Tinetti performance oriented mobility assessment in Chinese community-dwelling older adults. *Geriatric Nursing*, 53, pp. 85-89. <https://doi.org/10.1016/j.gerinurse.2023.06.020>
- Zech, A., Hendrich, S., & Pfeifer, K. (2015). Association Between Exercise

Therapy Dose and Functional Improvements in the Early Postoperative phase after hip and knee arthroplasty: An observational study. *Physical Medicine & Rehabilitation Journal*, 1064-1072.

Zhai, M. *et al.* (2023). Effects of age-related changes in trunk and lower limb range of motion on gait. *BMC Musculoskeletal disorder*, 1–9.

Zhou, J. *et al.* (2025). Home-based strength and balance exercise for fall prevention among older individuals of advance age: a randomized controlled single-blind study. *Annals of Medicine*, 57, 2459818. <https://doi.org/10.1080/07853890.2025.2459818>

Zouita, S. *et al.* (2020). Effects of Combined Balance and Strength Training on Measures of Balance and Muscle Strength in Older Women With a History of Falls. *Frontiers in Physiology*, 11, 619016. <https://doi.org/10.3389/fphys.2020.619016>