Introduction Aquatic Therapy References

Arnold CM, Busch AJ, Schachter CL, Harrison EL, Olszynski WP. (2008) A randomized clinical trial of aquatic versus land exercise to improve balance, function and quality of life in older women with osteoporosis. *Physiotherapy Canada.* 60:296-306.

Arnold CM, Faulkner RA. (2010) The effect of aquatic exercise and education on lowering fall risk in older adults with hip osteoarthritis. *Journal Aging Phys Act.* 18(3)245-60.

Arundale A, et all. Exercise-based knee and ACL injury prevention. clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. J Orthop Sports Phys Ther. 2018;48:A1-A42

Asimenia G, Paraskevi M, Polina S, Anastasia B, Kyriakos T, Georgios G. Aquatic Training for Ankle Instability. Foot Ankle Spec. 2013;6(5):346-351. doi:10.1177/1938640013493461

Bates, A., & Hanson, N. (1996). Aquatic Exercise Therapy. Philadelphia: W.B. Saunders Company.

Barone and Gangaway (2007) Barone, D., & Gangaway , J. MK (2007). Aquatic physical therapy for low back pain: what are the outcomes? The Journal of Aquatic Physical Therapy , 15(2), 18-24.

Batterham SI, Heywood S, Keating JL. Systematic review and meta-analysis comparing land and aquatic exercise for people with hip or knee arthritis on function, mobility and other health outcomes. *BMC Musculoskelet Disord*. 2011;12:123. Published 2011 Jun 2. doi:10.1186/1471-2474-12-123

Bidonde J et al. *Cochrane* Database of Systematic Reviews. Aquatic exercise training for fibromyalgia Cochrane Systematic Review - Intervention Version published: 28 October 2014

Biscarini A, Cerulli G. (2007).Modeling of the knee joint load in rehabilitative knee extension exercises under water. *Journal of Biomechanics;* 40(2):345-55

Bressel E, Dolny DG, Vandenberg C, Cronin JB. (2012) Trunk muscle activity during spine stabilization exercises performed in a pool. *Physical Therapy in Sport.*13: 67-72.

Chi D, Back Y, Park G, Ju S, Jang H. (2011) The effect of aquatic exercise on peak torque and stability of knee joints of elderly women. *J. Phys. Ther. Sci.* 23 (6): 871-873

Cibulka MT, Bloom NJ, Enseki KR, et al. Hip pain and mobility deficits—hip osteoarthritis: revision 2017: clinical practice guidelines linked to the International Classification of Functioning, Disability, and Health from the Orthopaedic Section of the American Physical Therapy Association. J Orthop Sports Phys Ther. 2017;47:A1-A37. https://doi.org/10.2519/jospt.2017.0301

Cibulka, MT.(2009) Hip pain and mobility deficits- hip osteoarthritis: clinical practice guidelines linked to the international classification of functioning disability, and health from the orthopedic section of the American physical therapy association. Jorunal of Orthopedic and Sports Physical Therapy, 39(4)A1-A25.

Colado, JC, Tella, V, Triplet, NT. (2008) A method for monitoring intensity during aquatic resistance exercise. Journal of Strength and Conditioning Research, 22(6): 2045-2049.
Danner C, Freeman K. (2018) Are aquatic aerobic exercise programs effective in decreasing pain levels in patients with fibromyalgia? Evidence-Based Practice: January 2018 - Volume 21 - Issue 1 - p E9

Corvillo, I., Armijo, F., Álvarez-Badillo, A. et al. Efficacy of aquatic therapy for neck pain: a systematic review Int J Biometeorol (2019). https://doi.org/10.1007/s00484-019-01738-6

Deacon R,[a]Noronha M[b]Shanley L[a]Young K[a] (2019) Does the speed of aquatic therapy exercise alter arm volume in women with breast cancer related lymphoedema? A cross-over randomized controlled trial. Brazilian Journal of Physical Therapy Volume 23, Issue 2, March–April 2019, Pages 140-147 https://doi.org/10.1016/j.bjpt.2018.11.004

Degani, A. M., & Danna-dos-Santos, A. (2006). Spatio-temporal parameters and interlimb coordination for older adults when walking in shallow water. The Journal of Aquatic Physical Therapy, 14(1), 2-6.

Denning W, Bressel E, Dolny D, Bressel M, Seeley K. (2012) A review of biophysical differences between aquatic and land-based exercise. *International journal of Aquatic Research and Education.* 6. 46-67.

Donoghue OA, Shimojo H, Takagi H. Impact forces of plyometric exercises performed on land and in water. *Sports Health*. 2011;3(3):303-9.x

Dundar U, S. O., Yigit I, E. D., & V, K. (2009). Clinical Effectiveness of aqautic exercise to treat chronic low back pain: a randomized controlled clinical trial. *Spine* , 1436-40.

Fappiano, M., Gangaway, JMK. (2008). Aquatic physical therapy improves joint mobility, strength and edema in lower extremity orthopedic injuries. Journal of Aquatic Physical Therapy, 16(1):10-15.

Ferreira, C., Driusso, P., & Bø, K. (2019). The Brazilian Journal of Physical Therapy (BJPT) Special Issue on Women's Health Physical Therapy. *Brazilian journal of physical therapy*, *23*(2), 77–78. doi:10.1016/j.bjpt.2019.02.015

Foley, A., Hewitt, J., & Crotty, M. (2003). Does hydrotherapy improve strength and physical function in patients with osteoarthritis- a randomized controlled trial comparing a gym based and a hydrotherapy based strengthening programme. Annals of the Rheumatic Diseases. 62, 1162-1167.

Fowler-Home , A. (2000). Walking parameters when walking in water. The Journal of Aquatic Physical Therapy, 8(1), 6-9.

Fuller, R.A., Dye, K.K., Cook, N.R., & Awbrey, B.J. (1999). The activity levels of the vastus medialis oblique muscle during a single leg squat on the land and at varied water depths. Journal of Aquatic Physical Therapy, 7(1): 13-18.

Geigle P.R. (2018) What dosage do U prescribe for exercise and therapy in the aquatic environment. *Journal of Aquatic Therapy* Vol 26 (2) pg 5-8.

Geigle, P. (2001). The effects of a supplemental aquatic physical therapy program on balance and girth for NCAA division III athletes with grade I or II lateral ankle sprain. Journal of Aquatic Physical Therapy, 9(1):13-20

Gulick, D. T., Libert, C., O'Melia, M., & Taylor, L. (2007). Comparison of aquatic and land plyometric training on strength, power and agility. The Journal of Aquatic Physical Therapy, 15(1), 11-18.

Harrison , R., & Bulstrode, S. (1987). Percentage weight-bearing during partial immersion in the hydrotherapy pool. Physiotherapy Practice, 3, 60-63.

Harrison, R. A., Hillman, M., & Bulstrode, S. (1992). Loading of the lower limb when walking partially immersed: implications for clinical practice. Physiotherapy.

Heiliane de Brito Fontana, Alessandro Haupenthal, Caroline Ruschel, Marcel Hubert, Colette Ridehalgh, and Helio Roesler Effect of Gender, Cadence, and Water Immersion on Ground Reaction Forces During Stationary RunningJournal of Orthopaedic & Sports Physical Therapy 2012 42:5, 437-443

Hinman, R. S., Heywood, S.E., & Day, A.R. (2007) Aquatic physical therapy for hip and knee osteoarthritis: results of a single-blind randomized controlled trial. Physical Therapy, 87(1), 1-12.

Mehdi Kargarfard, Ardalan Shariat, Lee Ingle, Joshua A. Cleland, Mina Kargarfard, Randomized Controlled Trial to Examine the Impact of Aquatic Exercise Training on Functional Capacity, Balance, and Perceptions of Fatigue in Female Patients With Multiple Sclerosis, Archives of Physical Medicine and Rehabilitation, Volume 99, Issue 2, 2018, Pages 234-241, ISSN 0003-9993,
https://doi.org/10.1016/j.apmr.2017.06.015.
(http://www.sciencedirect.com/science/article/pii/S0003999317304719)

Kim, YS, Park, J, Shim, JK. (2010) Effects of aquatic backward locomotion exercise and progressive resistance exercise on lumbar extension strength in patients who have undergone lumbar disectomy. *Archives of Physical Rehabilitation.* 91(2): 208-214.

Kim E, Kim T, Kang H, Lee J, Childers MK. Aquatic Versus Land-based Exercises as Early Functional Rehabilitation for Elite Athletes with Acute Lower Extremity Ligament Injury: A Pilot Study. PM&R. 2010;2(8):703-712. doi:10.1016/j.pmrj.2010.03.012. 9.

King A, Eitivipart C (2016) Systematic Review of Published Research on Aquatic Exercise for Balance in the Elderly. *Journal of Aquatic Physical Therapy*. 24(1) pp.9-21

Kisner C, Colby LA. (2007) Therapeutic Exercise (5th ed.). Philadelphia: F.A. Davis Company.

Kuck JR, Hasson SM, Olson SL. Effects of aquatic spinal stabilization exercise in patients with symptomatic lumbar spinal stenosis. Journal of Aquatic Physical Therapy. 2005; 13(2): 11-20.

Lim H, Yoon S. (2014) The influence of short-term aquatic training on obstacle crossing in gait by the elderly. *J. Phys. Ther. Sci.* 26(8) 1219-1222.
Lim K, Hwnagbo G, Nam H, Cho Y. (2014) Comparison of the effects on dynamic balance ability of warming up in water versus on the ground. *J. Phys. Ther. Sci.* 26 (4) 575-578.

Louder T, Bressel E, Baldwin M, Dolny D, Gordin R, Miller A. (2014) Effect of aquatic immersion on static balance. *International Journal of Aquatic Research and Education.* 8 (1) 53-65.

Martel GF, Harmer ML, Logan JM, Parker CB(2005**) Aquatic plyometric training increases vertical jump in female volleyball players.***Med Sci Sports Exerc*ise 37(10): 1814-1819

McAvoy,R.(2009)Aquatic and land based vs. land therapy on outcomes of total knee arthroplasty: a piolot Randomized clinical trial. Journal of Aquatic Physical Therapy, 8-15.

Melzer, I., Elbar, O., Tsedek, I., Oddsson, L. (2008) A water-based training program that included perturbation exercises to improve stepping responses in older adults: study protocol for randomized controlled cross-over trial. *BMC Geriatrics.* 8(19): http://www.biomedcentral.com/1471-2318/8/19

Minor, MA, Webel, RR, Kay, DR, Heweet, JE, Anderson, SK. (1988) Efficacy of physical conditioning exercise in patients with rheumatoid arthritis and osteoarthritis. Journal Rheumatology, 15:1396-1405

Moreira,L., Fonza, F., Santos, R., Teixeira, L., Kruel, L. Lazaretti-Castro, M. (2013) High-intensity aquatic exercises (HydrOS) improve physical function and reduce falls among post menopausal women. *Menopause*. 20(10) pp. 1012-1019.

Musomoto K. Mercer JA. (2008) Biomechanics of Human Locomotion in water: an electromyographic analysis. *Exercise and Sports Sciences Reviews.* Obtained online

Neira R et al. (2017) Effectiveness of Aquatic Therapy vs Landbased Therapy for Balance and Pain in Women with Fibromyalgia: a study protocol for a randomised controlled trial. BMC Musculoskeletal Disorders (2017) 18:22

Nualon P, Piriyaprasarth P, Yuktanandana P. The role of 6-week hydrotherapy and landbased therapy plus ankle taping in a preseason rehabilitation program for athletes with chronic ankle instability. Asian Biomed. 2013;7(4):553-559. doi:10.5372/19057415.0704.211. 7

Noh D_K, Lim H-I, Paik N-J. The effect of aquatic therapy on postural balance and muscle strength in stroke survivors – a randomized controlled pilot trial. *Clin Rehabil* 2008; **22**: 966-76

Ohio State University. (n.d.). Pool-bound plyometrics help you get stronger with less pain. Retrieved January 10, 2007, from http://researchnews.osu.edu/archive/plyomet.htm

Robinson LE, Devor ST, Merrick MA, Buckworth J**. The effects of land vs. aquatic plyometrics on power, torque, velocity, and muscle soreness in women.** *J Strength Cond Res;* 18(1): 84-91

Palamara G et al. Land Plus Aquatic Therapy Versus Land-Based Rehabilitation Alone for the Treatment of Balance Dysfunction in Parkinson Disease: A Randomized Controlled Study With 6-Month Follow-Up. *Archives of Physical Medicine and Rehabilitation* Volume 98, Issue 6, June 2017, Pages 1077-1085 https://doi.org/10.1016/j.apmr.2017.01.025

Pichanan Methajarunon, Chachris Eitivipart, Claire J. Diver, Anchalee Foongchomcheay, Systematic review of published studies on aquatic exercise for balance in patients with multiple sclerosis, Parkinson's disease, and hemiplegia, Hong Kong Physiotherapy Journal, Volume 35, 2016, Pages 12-20, ISSN 1013-7025, https://doi.org/10.1016/j.hkpj.2016.03.002.

Roi, G.S., Creta, D., Nanni, G., Marcacci, M., Zaffagnini, S., & Snyder-Mackler, L. (2005). Return to official Italian first division soccer games within 90 days after anterior crucriate ligament reconstruction: a case report. Journal of Orthopedic and Sports Physical Therapy. 35(2): 52-66.

Ruoti, RG., Morris, DM., Cole, AJ. (1997). Aquatic Rehabilitation. Philadelphia: Lippincott.

Resende, S.M., Rassi, C.M., & Viana, F.P. (2008) Effects of hydrotherapy in balance and prevention of falls among elderly women. Rev Bras Fisiote. 12(1): 57-63.

Roth AE, Miller MG, Ricard M, Ritenour D, Chapman BL. Comparisons of Static and Dynamic Balance Following Training in Aquatic and Land Environments. J Sport Rehabil. 2006;15(4):299-311. http://search.ebscohost.com/login.aspx?direct=true&db=s3h&AN=23128346&site=ehostlive.

Roller, J., Johnson, M., Jones, E., Hunt, H., Kirkwood, NW. (2008) Effectiveness of a water-based exercise program on Berg balance test scores in community-living older women. Journal of Aquatic Physical Therapy, 16(1):1-5.

Salzman , A. (2008) Balance act converting the berg balance test into an aquatic challenge. Advance for physical therapists and physical therapist assistants, 19(21), 26. http://physical-therapy.advanceweb.com/Editorial/Search/AViewer.aspx?AN=PT_08oct6_ptp26.html&AD=10-06-2008

Sabela RN et al. (2017) Effectiveness of Aquatic Therapy vs Land-based Therapy for Balance and Pain in Women with Fibromyalgia: a study protocol for a randomised controlled trial. *BMC Musculoskeletal Disorders* BMC series – open, inclusive and trusted2017**18**:22 https://doi.org/10.1186/s12891-016-1364-5

Sano A et al. (2014) Long-term effects of repeated hot spring aquatic exercise combined with physical therapy on balance ability of patients. *Journal of Jpn. Soc. Balneol Climatol Phys Med.* 77(5)

Scarneo, Samantha E., "The Effects of an Injury Prevention Program in an Aquatic Environment on Landing Technique" (2014).*Master's Theses*. 564. http://digitalcommons.uconn.edu/gs_theses/564

Schaefer, S. Y., Louder, T. J., Foster, S., and Bressel, E. (2016) Effect of Water Immersion on Dual-task Performance: Implications for Aquatic Therapy. *Physiother. Res. Int.*, 21: 147–154. doi: 10.1002/pri.1628.

Silva, L.E., et al. (2008). Hydrotherapy versus conventional land-based exercise for the management of patients with osteoarthritis of the knee: a randomized controlled trial. Physical Therapy, 88(1), 12-21.

Simmerman SM, Sizer PS, Dedrick GS, Apte GG, Brismee JM. (2011) Immediate changes in spinal height and pain after aquatic vertical traction in patients with persistent low back pain and signs of nerve root compression. *Physical Medicine and Rehabilitation.* 3(5) 447-57.

Elizabeth H. Skinner, Tammy Dinh, Melissa Hewitt, Ross Piper & Claire Thwaites (2016) An Ai Chi-based aquatic group improves balance and reduces falls in community-dwelling adults: A pilot observational cohort study, Physiotherapy Theory and Practice, 32:8, 581-590, DOI: 10.1080/09593985.2016.1227411

Stener-Victorin E, Kruse-Smidje C, Jung K. (2004) Comparison between electro-acupuncture and hydrotherapy, both in combination with patient education and patient education alone, on the symptomatic treatment of osteoarthritis of the hip. *Clinical Journal of Pain.* 20(3): 179-185.

Suomi, R., Koceja, DM. (2000) Postural sway characteristics in women with lower extremity arthritis before and after an aquatic exercise intervention. *Arch Phys Med Rehabil.* 81: 780-785.

Triplett, NT et al (2009) Concentric and impact forces of single-leg jumps in an aquatic environment versus on land. *Med. Sci Sports Ex.* 41(9) 1790-6

Tovin, BJ, Wolf, SL et al. (1994) Comparison of the effects of exercise in water and on land on the rehabilitation of patients with intra-articular anterior cruciate ligament reconstructions. Physical Therapy. 74: 710-19.

Typ, M et al. (2016) A water rehabilitation program in patients with hip oseparthritis before and after total hip preplacement. *Medical Science Monitor* 22:2635-2642.

Wang TJ, Belza B, Thompson FE, Whitney JD, Bennett K. (2007) Effects of aquatic exercise on flexibility, strength and aerobic fitness in adults with osteoarthritis of the hip or knee. *Journal of Advance Nursing*. 57(2): 141-152.

Waters, D., & Hale, L. (2007) Do aqua-aerobics improve gait and balance in older people? A pilot study. International journal of Therapy and rehabilitation. 14(12): 538-43.

Wilcox, K.C., Woodall, W.R., Stubbs, P.L. (2007) Development of multifaceted aquatic exercise program for rehabilitation of athletes with patellar tendinopathy. Journal of Aquatic Physical Therapy, 15(2):1-7.

Winter, S.V., Burch, D. (2000). Effects of preoperative water exercise on total knee replacement patients. Journal of Aquatic Physical Therapy, 8(2):12-16

Winter SV, McCauley-Callagy S. Effects of aquatic lumbar stabilization and strengthening exercise protocol on chronic low back pain patients. *The Journal of Aquatic Physical Therapy.* 2002; 10:11-20.

Zhu, Z., Cui, L., Yin, M., Yu, Y., Zhou, X., Wang, H., & Yan, H. (2016). Hydrotherapy vs. conventional land-based exercise for improving walking and balance after stroke: a randomized controlled trial. *Clinical Rehabilitation*, *30*(6), 587–593. https://doi.org/10.1177/0269215515593392

Zivi, I., Maffia, S., Ferrari, V., Zarucchi, A., Molatore, K., Maestri, R., & Frazzitta, G. (2018). Effectiveness of aquatic versus land physiotherapy in the treatment of peripheral neuropathies: a randomized controlled trial. *Clinical Rehabilitation*, *32*(5), 663–670. https://doi.org/10.1177/0269215517746716