

#### Hip and Knee OA-TKA course References (most recent)

Alcalde, GE et al. (2017) Effect of aquatic physical therapy on pain perception, functional capacity and quality of life in older people with knee osteoarthritis: study protocol for a randomized controlled trial *Trials* 2017**18**:317 <https://doi.org/10.1186/s13063-017-2061-x>

Cibulka MT, Bloom NJ, Ensey 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>

Deasy M, Leahy E, Semciw A. (2016) Hip strength deficits in people with symptomatic knee osteoarthritis: A systematic review with meta-analysis. *Journal of Orthopedic and Sports Physical Therapy*. 46(8) 629-639

Harris-Hayes, M. et al. (2016) Movement-pattern training to improve function in people with chronic hip joint pain: a feasibility randomized clinical trial. *Journal of orthopedic and Sports Physical Therapy*. 46(6)452-461.

Harris-Hayes et al. (2014) Persons with chronic hip joint pain exhibit reduced hip muscle strength. *Journal of Orthopedic and Sports Physical Therapy*. 44(14): 890-898.

McIlroy S., Browning P. (2017) Aquatic therapy for people with persistent knee pain: A feasibility study. *Musculoskeletal Care* <https://doi.org/10.1002/msc.1179>

Skou ST. (2018) Physical Activity and Exercise Therapy Benefit More Than Just Symptoms and Impairments in People With Hip and Knee Osteoarthritis *Journal of Orthopaedic & Sports Physical Therapy*, 2018, **Volume:48 Issue:6 Pages:439-447** doi: 10.2519/jospt.2018.7877

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

#### Additional references:

Aglietti P, Baldini A, Buzzi R, Lup D, De Luca L. (2005) Comparison of mobile-bearing and fixed-bearing total knee arthroplasty: a prospective randomized study. *Journal of Arthroplasty*. 20(2): 145-153.

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

Blagojevic M, Jinks C, Jeffery A, Jordan KP. (2010) Risk factors for onset of osteoarthritis of the knee in older adults: a systematic review and meta-analysis. *Osteoarthritis Cartilage*. 18(1): 24-33

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. *Journal of Orthopedic and Sports Physical Therapy*, 39(4)A1-A25.

Cochrane T, Davey RC, Matthes Edwards SM. (2005) Randomised controlled trial of the cost-effectiveness of water-based therapy for lower limb osteoarthritis. *Health Technology Assessment*. 9(31): iii-iv, ix-xi, 1-114.

Degani, AM., Danna-dos-Santos, A. (2006). Spatio-temporal parameters and interlimb coordination for older adults when walking in shallow water. *Journal of Aquatic Physical Therapy*, 14(1):2-7.

Dowzer CN, Reilly T, Cable NT. (1998) Effects of deep and shallow water running on spinal shrinkages. *British Journal of Sports Medicine*. 32, 44-48.

Dy CJ, Wilkinson JD, Tamariz L, Scully SP. Influence of pre-operative cardiovascular risk factor clusters on complications of total joint arthroplasty. *American Journal of Orthopedics*. 40(11) 560-565.

Felson DT, Zhang Y, Hannan MT, Naimark A, Weissman B, Aliabadi P, Levy D. (1997) Risk factors for incident radiographic knee osteoarthritis in the elderly: the Framingham study. *Arthritis Rheum*. 40(4): 728-33

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. *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.

Giaquinto S, Ciotola E, Dall'armi V, Margutti F (2010) Hydrotherapy after total hip arthroplasty: a follow up study. *Archives of Gerontology and Geriatrics*. 50(1): 92-95

Giaquinto S, Ciotola E, Margutti F. (2007) Gait in early days after total knee and hip arthroplasty: a comparison. *Disability and Rehabilitation* 29(9): 731-736

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*.

Harmer AR, Naylor JM, Crosbie J, Russell T. (2009) Land-based versus water-based rehabilitation following total knee replacement: a randomized, single-blind trial. *Arthritis & Rheumatism*. 61(2): 184-191.

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.

Klussmann A, et al. (2010) Individual and occupational risk factors for knee osteoarthritis: results of a case-control study in Germany. *Arthritis Research & Therapy*. 12(3) R:88. Available online at <http://arthritis-research.com/content/12/3/R88>

Kurtz, SM. Lau E, Ong K, Zhao K, Kelly M, Bozic KJ (2009) Future young patient demand for primary and revision joint replacement: National projections from 2010 to 2030. *Clinical Orthopedics Relat Res*. 467(10): 2606-2612

Liebs TR, Herzberg W, Ruther W, Haasters J, Russlies M, Hassenpflug J. (2012) Multicenter randomized controlled trial comparing early versus late aquatic therapy after total hip or total knee arthroplasty. *Archives of Physical Medicine and Rehabilitation*. 93(2): 192-9.

McAvoy R. (2009) Aquatic and land-based therapy vs. land therapy on the outcome of total knee arthroplasty: a pilot randomized clinical trial. *Journal of Aquatic Physical Therapy*. 17:pp8-15.

March LM, Bagga H. (2004) Epidemiology of osteoarthritis in Australia. *Medical Journal of Australia*. March 1: 180 (5 suppl): S6-10.

Masumoto K, Mercer JA. (2008) Biomechanics of Human Locomotion in water: an electromyographic analysis. *Exercise and Sports Sciences Reviews*. Obtained online [www.medscape.com/viewarticle/576869\\_print](http://www.medscape.com/viewarticle/576869_print) on 7/22/09.

Messier SP, Gutekunst DJ, Davis C, DeVita P. (2005) Weight loss reduces knee-joint loads in overweight and obese adults with knee osteoarthritis. *Arthritis and Rheumatism*. 52(7): 2026-32.

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

Murphy L et al. (2008) Lifetime risk of symptomatic knee osteoarthritis. *Arthritis and Rheumatism*. 59(9): 1207-1213.

Rahmann AE, Brauer SG, Nitz, JC. (2009) A specific inpatient aquatic physiotherapy program improves strength after total hip or knee replacement surgery: a randomized controlled trial. *Archives Physical Medicine and Rehabilitation*. 90(5) 745-755.

Riddle DL, Jiranek WA, McGlynn FJ. (2008) Yearly incidence of unicompartmental knee arthroplasty in the United States. *Journal of Arthroplasty*. 23(3): 408-12.

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.

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.

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.

Wergenfiels-Lahar I, Hatzler Y, Roth D, Harder-Frumer M. (2007) Physical and psychological effects of aquatic therapy in participants after total hip joint replacement: a Pilot study. *International Journal of Aquatic Research and Education*. (1) 311-321

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

Zhang W. et al. (2008) OARSI recommendations for the management of hip and knee osteoarthritis, part II: OARSI evidence-based, expert consensus guidelines. *Osteoarthritis and Cartilage*. 16: 137-162.

### **Balance 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.

Avelar, NA, Bastone AC, Alcantara, MA, Gomes, WF. (2010) Effectiveness of aquatic and non-aquatic lower limb muscles endurance training in the static and dynamic balance of elderly people. *Rev Bras Fisioter*. 14(3): 229-36.

Briggs RC, Gossman MR, Birch R, Drews JE, Shaddeau SA. (1984) Balance performance among non-institutionalized elderly women. *Physical Therapy*. 69(9):784-756.

Buatois, S. et al (2010) A simple clinical scale to stratify risk of recurrent falls in community-dwelling adults aged 65 years and older. *Physical Therapy*. 90(4) 551-560.

Desari A, Goodman V, Kapadia N, Shap BL, Szturm T. (2010) Relationship between dynamic balance measures and functional performance in community-dwelling elderly people. *Physical Therapy*. 90(5): 1-12.

Douris P, Southard V, Varga C, Schauss W, Gennaro C, Reiss A. (2003) The effect of land and aquatic exercise on balance scores in older adults. *Journal of Geriatric Physical Therapy*. 26(1) 3-6.

Gabilan, Y.P.L., Perracini, M.R., Munhoz, M.S.L., Gananc, F.F. (2008) Aquatic physiotherapy for vestibular rehabilitation in patients with unilateral vestibular hypofunction: exploratory prospective study. *Journal of Vestibular Research*. (18) 139-146.

Horak, F.B., Wruskey, D.M., Frank, J. (2009) The balance evaluation systems test (BESTest) to differentiate balance deficits. *Physical Therapy*. 89(5) 484-498.

Jones CJ, Rikli RE, Beam WC. (1999) A 30 second chair-stand test to measure of lower body strength in community-residing older adults. *Res quarterly Exercise Sport* . 70(2):113-119

Mansfield, A., Peter, A.L., Liu, A., Maki, B.E. (2007) A perturbation-balance training program for older adults: study protocol for a randomized controlled trial. *BMC Geriatrics* available from

<http://biomedcentral.com/1471-2318/7/12>

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>

Morris, DM. (2010) Aquatic therapy to improve balance dysfunction in older adults. *Topics in Geriatric Rehabilitation*. 26(2) 104-119.

Muir, S.W., Berg, K., Chesworth, B., Klar, N., Speechley, M. (2010) Balance Impairment as a risk factor for falls in community-dwelling older adults who are high functioning: a prospective study. *Physical Therapy*. 90(3): 338-347

O'Sullivan, S.B., Schmitz, T.J. (2007) *Physical Rehabilitation* (5<sup>th</sup> ed.). Philadelphia: FA Davis Company.

Podsiadlo D, Richardson S. (1991) The timed "up and go": a test of basic functional mobility for frail elderly persons. *JAGS*. 39: 142-148

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.

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://physicaltherapy.advanceweb.com/Editorial/Search/AViewer.aspx?AN=PT\\_08oct6\\_ptp26.html&AD=10-06-2008](http://physicaltherapy.advanceweb.com/Editorial/Search/AViewer.aspx?AN=PT_08oct6_ptp26.html&AD=10-06-2008)

Shumway-Cook, A., Ciol, MA., Hoffman, J., Dudgeon, BJ., Yorkston,

K., Chan, L. (2009). Falls in the Medicare population: incidence, associated factors and impact on health care. *Physical Therapy*, 89(4): 324-332.

Shumway-Cook, A., Woollacott, MH. (2001) *Motor Control Theory and Practical Applications*, (2<sup>nd</sup> ed). Baltimore: Lippincott Williams & Wilkins

Silsupadol, P., Siu, K., Shumway-Cook, A., Woollacott M.H. (2006). Training of balance under single and dual-task conditions in older adults with balance impairment. *Physical Therapy*, 86(2): 269-281.

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.

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(1): 538-43