

REFERENCES

CHAPTER 1

1. Bartels E, Lund H, Hagen K, Dagfinrud H, Christensen R, Danneskiold-Samsoe B. Aquatic exercise for the treatment of knee and hip osteoarthritis. (Protocol) *Cochrane Database of Systematic Reviews*. 2005(4).
2. Finnerty G, Corbitt T. *Hydrotherapy*. New York: Frederick Ungar; 1960.
3. Krizek V. History of balneotherapy. In: Licht S, ed. *Medical Hydrology*. Baltimore: Waverly Press; 1963:132–49.
4. Irion J. Historical overview of aquatic rehabilitation. In: Ruoti R, Morris D, Cole A, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott; 1997:3–13.
5. Lowman C. *Therapeutic Use of Pools and Tanks*, 1st ed. Philadelphia: Saunders; 1952.
6. Champion M. *Adult Hydrotherapy: A Practical Approach*. Oxford, England: Heinemann Medical Books; 1990.
7. Wyman J, Glazer O. *Hydrotherapy in Medical Physics I*. Chicago: Year Book Medical; 1944.
8. Baruch S. *An Epitome of Hydrotherapy*. Philadelphia: Saunders; 1920.
9. Skinner A, Thomson A. *Duffield's Exercise in Water*, 3rd ed. London: Bailliere Tindall; 1983.
10. Franke K. Kneipp treatment. In: Licht S, ed. *Medical Hydrology*. Baltimore: Waverly Press; 1963:321.
11. Davis B, Harrison R. *Hydrotherapy in Practice*. New York: Churchill Livingstone; 1988.
12. Kamenetz H. History of American spas and hydrotherapy. In: Licht S, ed. *Medical Hydrology*. Baltimore: Waverly Press; 1963.
13. Basmajian J. *Therapeutic Exercise*, 3rd ed. Baltimore: Williams & Wilkins; 1978.
14. Haralason K. Therapeutic pool program. *Clinical Management*. 1985;5(2):10–13.
15. Arthritis Foundation. *Arthritis Foundation YMCA Aquatic Program (AFYAP) and AFYAP PLUS: Guidelines and Procedures*. Atlanta; 1990.
16. Morris D, Jackson J. Academic programs survey: Aquatic physical therapy content in entry level PT/PTA education. *Aquatic Physical Therapy Report*. 1993;1(4):13–16.

CHAPTER 2

Norton CO, Jamison LJ, eds. *A Team Approach to the Aquatic Continuum of Care*. Woburn, MA: Butterworth-Heinemann; 2000.

CHAPTER 3

1. Wilson JD, Buffa AJ, eds. *College Physics*, 3rd ed. Englewood Cliffs, NJ: Prentice Hall, 1997.
2. Haralson K. Therapeutic pool programs. *Clin Manage*. 1986;5:10–17.
3. Becker BE. Aquatic physics. In: R Ruoti, P Morris, A Cole, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott, 1997:15–23.
4. Bloomfield J, Fricker P, Fitch K. *Textbook of Science and Medicine in Sport*. Champaign, IL: Human Kinetics, 1992.
5. Skinner AR, Thomson AM. *Duffield's Exercise in Water*, 3rd ed. Philadelphia: Bailliere Tindall, 1989:4–46.
6. Harrison R, Bulstrode S. Percentage weight bearing during partial immersion in the hydrotherapy pool. *Physiother Practice*. 1987;3:60–63.
7. Harrison RA, Hillman M, Bulstrode S. Loading of the lower limb when walking partially immersed: Implications for clinical practice. *Physiotherapy*. 1992;78:164–66.
8. Becker BE. Biophysiologic aspects of hydrotherapy. In: Cole AJ, Becker BE, eds. *Comprehensive Aquatic Therapy*, 2nd ed. Boston: Butterworth-Heinemann; 2004:19–56.
9. Arborelius M Jr, Ballidin UI, Lilja B, Lundgren CE. Hemodynamic changes in man during immersion with the head above water. *Aerosp Med*. 1972;43(6):592–98.
10. Risch WD, Koubenec HJ, Gauer OH, Lange S. Time course of cardiac distension with rapid immersion in a thermoneutral bath. *Pflugers Arch*. 1978;374(2):119–20.
11. Weston CF, O'Hare JP, Evans JM, Corral RJ. Hemodynamic changes in man during immersion in water at different temperatures. *Clin Sci*. 1987;73(6):613–16.
12. Agostoni E, Gutner G, Torri G, Rahn H. Respiratory mechanics during submersion and negative pressure breathing. *J Appl Physiol*. 1966;21(1):251–58.
13. Butts NK, Tucker M, Smith R. Maximal responses to treadmill and deep water running in high school female cross country runners. *Res Q Exer Sport*. 1990;62:236–39.
14. Christie JL, Sheldahl LM, Tristani FE, et al. Cardiovascular regulation during head-out water immersion exercise. *J Appl Physiol*. 1990;69:657–64.
15. Jamison L. Aquatic therapy for the patient with lymphedema. *Journal of Aquatic Physical Therapy*. 2005;13(1):9–12.
16. Davis BS. Lymphedema after breast cancer treatment: Earlier detection and treatment have improved chances of survival. *Am J Nurs*. 2001;101(2):24AAAA–24DDDD.

17. Thein L, McNamara C. Aquatic rehabilitation of clients with musculoskeletal conditions of the extremities. In: Ruoti R, Morris D, Cole A, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott; 1997:59–83.
18. Morris DM. Aquatic Rehabilitation of the neurologically impaired client. In: Ruoti R, Morris D, Cole A, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott; 1997:105–24.
19. Taylor NA, Morrison JB. Static respiratory muscle work during immersion with positive and negative respiratory loading. *J Appl Physiol*. 1999;87:1397–1403.
20. Thomaz S, Beraldo P, Mateus S, Horan T, Cerqueira J. Effects of partial isothermic immersion on the spirometry parameters of tetraplegic patients. *Chest*. 2005;128:184–89.
21. Adams MA, Chandler LS. Effects of physical therapy program on vital capacity of patients with muscular dystrophy. *Phys Ther*. 1974;54:494–96.
22. Pachalski A, Mekarski T. Effect of swimming on increasing of cardio-respiratory capacity in paraplegics. *Paraplegia*. 1980;18:190–96.
23. Cureton KJ. Physiologic responses to water exercise. In: Ruoti R, Morris D, Cole A, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott; 1997:39–56.
24. Choukroun ML, Varenne P. Adjustments in oxygen transport during head-out immersion in water at different temperatures. *J Appl Physiol*. 1990;68:1475–80.
25. Frangolias DD, Rhodes EC. Metabolic responses and mechanisms during water immersion running and exercise. *Sports Med*. 1996;1:38–53.
26. Ritchie SE, Hopkins WG. The intensity of exercise in deep water running. *Int J Sports Med*. 1991;27–29.
27. Wilder RP, Brennan DK. Physiological responses to deep water running in athletes. *Sports Med*. 1993;16:374–380.
28. Thein JM, Brody LT. Aquatic-based rehabilitation and training for the elite athlete. *J Orthop Sports Phys Ther*. 1998;27:32–41.
29. Thein L, McNamara C. Aquatic rehabilitation of clients with musculoskeletal conditions of the extremities. In: Ruoti R, Morris D, Cole A, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott; 1997:59–83.
30. Bates A, Hanson N. *Aquatic Exercise Therapy*. Philadelphia: Saunders; 1996:307–12.
31. Becker BE, Cole AJ. *Comprehensive Aquatic Therapy*. Newton, MA: Butterworth-Heinemann; 1997:42–47.
32. Bishop et al. Physiologic responses to treadmill and water running. *Physician and Sports Med*. 1989;17: 87–94.
33. Bloomfield SA, Williams NI, Lamb DR, et al. Non-weight bearing exercise may increase lumbar spine bone mineral density in healthy postmenopausal women. *American Journal of Physical Medicine and Rehabilitation*. 1993;72:204–9.
34. Buemi M, Corica F, Di Pasquale G, Aloisi C, Sofi M, Casuscelli T, Floccari F, Senatore M, Corsonello A, Frisina N. Water immersion increases urinary excretion of aquaporin-2 in healthy humans. *Nephron*. 2000;85(1):20–26.
35. Carey CR, Schaefer KE, Alvis HJ. Effect of skin diving on lung volume. *Journal of Applied Physiology*. 1956;8:519–23.
36. Chu KS, Rhodes EC. Physiological and cardiovascular changes associated with deep water running in the young. *Sports Medicine*. 2001;31(1):33–46.
37. Cooper C, Campion G, Melton LJ III. Hip fractures in the elderly: A world-wide projection. *Osteoporosis International*. 1992;2:285–89.
38. Derion T, Guy HJB, Tsukimoto K, et al. Ventilation-perfusion relationships in the lung during head-out water immersion. *Journal of Applied Physiology*. 1992;72:64–72.
39. Driver S, O'Connor J, Lox C, Rees K. Evaluation of an aquatics programme on fitness parameters of individuals with a brain injury. *Brain Injury*. 2004;18(9):847–59.
40. Epstein M. Renal effects of head-out water immersion in man: Implication for an understanding of volume homeostasis. *Physiology Review*. 1978;58:1577–85.
41. Epstein M. Cardiovascular and renal effects of head-out water immersion in man. *Circulation Research*. 1976;39(5):619–28.
42. Epstein M. Renal effects of head out immersion in humans: A 15 year update. *Physiology Review*. 1992;72:563.
43. Farhi LE, Linnarsson D. Cardiopulmonary readjustments during graded immersion in water at 35 °C. *Respiratory Physiology*. 1977;30:35–50.
44. Farrow S, Banta G, Schallhorn S et al. Vasopressin inhibits diuresis induced by water immersion in humans. *Journal of Applied Physiology*. 1992;73:932–6.
45. Feightner K. Aquatherapy: The next step in breast surgery recovery. *Nursing Spectrum* (New York/New Jersey Metro Edition). 1997;9A(12):16.
46. Frost HM. Suggested fundamental concepts in skeletal physiology. *Calcified Tissue International*. 1993;5:21–24.
47. Gabrielsen A, Johansen LB, Norsk P. Central cardiovascular pressures during graded water immersion in humans. *Journal of Applied Physiology*. 1993;75:581–85.
48. Gerbes AL, Arendt RM, Gerzer R, et al. Role of atrial natriuretic factor, cyclic GMP, and rennin-aldosterone system in acute volume and regulation in healthy human subjects. *European Journal of Clinical Investigation*. 1988;18:425–9.
49. Geigle PR, Cheek WL Jr, Gould ML, Hunt HC III, Shafiq B. Aquatic physical therapy for balance: The interaction of

CHAPTER 4

1. Abramson AS, Delagi EF. Influence of weight bearing and muscle contraction on disuse osteoporosis. *Archives of Physical Medicine and Rehabilitation*. 1961;42:147–51.
2. Agostoni E, Gurtner G, Torri G, Rahn HL. Respiratory mechanics during submersion and negative-pressure breathing. *Journal of Applied Physiology*. 1966;21:251–58.
3. Arborelius M, Balldin UI, Lilja B, Lundgren EG. Regional lung function in man during immersion with the head above water. *Aerospace Medicine*. 1972;43(7):701–7.
4. Assisi MR, Silva LE, et al. A randomized controlled trial of deep water running: Clinical effectiveness of aquatic exercise to treat fibromyalgia. *Arthritis Care and Research*. 2006;55(1):57–65.
5. Ay A, Yurtkuran M. Influence of aquatic and weight bearing exercises on quantitative ultrasound variables in postmenopausal women. *American Journal of Physical Medicine and Rehabilitation*. 2005;84:52–61.
6. Balldin UI, Dahlback GO, Lundgren CEG. Changes in vital capacity produced by oxygen breathing during immer-

- somatosensory and hydrodynamic principles. *Journal of Aquatic Physical Therapy*. 1997;5(1):4–10.
- Geigle PR, Daddona K, Finken K, Irving A, Kolski M, Kolste M, Shak B. Effects of a supplemental aquatic physical therapy program on balance and girth for NCAA Division III athletes with a grade II lateral ankle sprains. *Journal of Aquatic Physical Therapy*. 2001.
- Geigle PR, Kaufmann L. Lymphedema and aquatics with measurement by perometer (LAMP). American Physical Therapy Combined Sections Meeting, San Diego, February, 2006.
- Goff LG, Fransetto R, Specht H. Oxygen requirements in underwater swimming. *Journal of Applied Physiology*. 1956;9:219–21.
- Goff LG, Brubach HE, Specht H, et al. Effect of total immersion at various temperatures on oxygen uptake at rest and during exercise. *Journal of Applied Physiology*. 1956;9:59–61.
- Haffor AA, Mohler JG, Harrison AC. Effects of water immersion on cardiac output of lean and fat male subjects at rest and during exercise. *Aviation Space Environmental Medicine*. 1991;62:123–27.
- Hong SK, Cerretelli P, Cruz JC, et al. Mechanics of respiration during submersion in water. *Journal of Applied Physiology*. 1969;27:335–38.
- Jamison LJ. The therapeutic value of aquatic therapy in treating lymphedema. *Comprehensive decongestive physiotherapy. Rehab Management: The Interdisciplinary Journal of Rehabilitation*. 2000;13(6):29–31.
- Johnson BL, Stromme SB, Adamczyk JW, Tennoe KO. Comparison of oxygen uptake and heart rate during exercises on land and in water. *Physical Therapy*. 1977;57(3):273–78.
- Kesiktas N, Paker N, Erdogan N, Gulsen G, Bicki D, Yilmaz H. The use of hydrotherapy for the management of spasticity. *Neurorehabilitation and Neural Repair*. 2004;18(4):268–73. AN: 2009056413, NLM unique identifier: 15537997.
- Kuhn G, Buhning M. Physical therapy and quality of life: Design and results of a study on hydrotherapy. *Complementary Therapies in Medicine*. 1995;3:138–41.
- Lentell G, Katzman L, Walters M. The relationship between muscle function and ankle stability. *Journal of Orthopaedic and Sports Physical Therapy*. 1990;11(12):605–11.
- Lollgen H, Nieding GV, Hores R. Respiratory and hemodynamic adjustments during head out water immersion. *International Journal of Sports Medicine*. 1980;1:25–29.
- Malliopoulos X, Kozlowski O, Herbeau C, et al. Aquatic exercises and osteoporosis, at 12th European Congress of Physical Medicine and Rehabilitation. Antalya, Turkey, ECPMR, 2000:271.
- Mowen K. Embraced by water: Water fitness for breast cancer survivors. *Massage and Bodywork*. 2001;16(4):52–54, 58–59.
- Orwoll E, Ferar J, Oviatt S, et al. The relationship of swimming exercise to bone mass in men and women. *Archives of Internal Medicine*. 1989;149:2197–2200.
- Park KS, Choi LK, Park YS. Cardiovascular regulation during water immersion. *Applied Human Science*. 2000;18:233–41.
- Risch WD, Koubenec H-J, Beckmann U, Lange S, Gauer OH. The effect of graded immersion on heart volume, central venous pressure, pulmonary blood distribution, and heart rate in man. *Pflügers Archives: European Journal of Physiology*. 1978;374:115–18.
- Ruoti R, Morris D, Becker AJ. *Aquatic Rehabilitation*. Philadelphia: Lippincott-Raven; 1997.
- Tsukahara N, Toda A, Goto J, et al. Cross-sectional and longitudinal studies on the effect of water exercise in controlling bone loss in Japanese postmenopausal women. *Journal of Nutrition Science and Vitaminology*. 1994;40:37–47.
- Vander Hulls DS, Walker LK, Powell JM. Clinicians' perceptions of the benefits of aquatic therapy for young children with autism: A preliminary study. *Physical and Occupational Therapy in Pediatrics*. 2006;26(1/2):13–22. AN: 2009300017, NLM unique identifier: 16938823.
- Van Dyke A. Aquatic intervention post traumatic brain injury: Case study. Combined Sections Meeting, Boston, February 2006.
- Wilcock IM, Cronin JB, Hing WA. Physiological response to water immersion: A method for sport recovery? *Sports Medicine*. 2006;36(9):747–65.
- Wilder RP, Brennan DK. Physiological responses to deep water running in athletes. *Sports Medicine*. 1993;16(6):374–80.
- YMCA. *Aquatics for Special Populations*. Champaign, IL: Human Kinetics; 1987.

CHAPTER 5

- Alexander MJL, Butcher JE, MacDonald PM. Effect of a water exercise program on walking gait, flexibility, strength, self-reported disability and other psycho-social measures of older individuals with arthritis. *Physiotherapy Canada*. 2001:203–11.
- Bae J-H. The effect of hydrotherapy on improvement of balance in stroke patients. MSc thesis, Inje-University, Busan, South-Korea; 2005.
- Barela AMF, Stolf SF, Duarte M. Biomechanical characteristics of adults walking in shallow water and on land. *Journal of Electromyography and Kinesiology*. 2006;16:250–56.
- Bronstein AM, Brandt T, Woollacott M, Nutt JG. *Clinical Disorders of Balance, Posture and Gait*. London: Arnold; 2004.
- Gagnon M, Montpetit R. Technological development for the measurement of the center of volume in the human body. *Journal of Biomechanics*. 1981;14:235–41.
- Gamper UN. *Wasserspezifische Bewegungstherapie und Training*. Stuttgart, Germany: Gustav Fischer Verlag; 1995.
- Getz M. Aquatic intervention in children with neuro-motor impairments. PhD diss., University of Utrecht, Netherlands; 2006.
- Getz M, Hutzler Y, Vermeer A. The relationship between aquatic independence and gross motor function in children with neuro-motor impairments. *Adapted Physical Activity Quarterly*. 2006;23:339–55.
- Lambeck J, Stanat F, Kinnaird DW. The Halliwick concept. In: Cole AJ, Becker BA, eds. *Comprehensive Aquatic Therapy*. Oxford, UK: Butterworth-Heinemann; 2001.
- McLean SP, Hinrichs RN. Sex differences in the center of buoyancy location of competitive swimmers. *Journal of Sports Sciences*. 1998;16:373–83.
- McLean SP, Hinrichs RN. Influence of arm position and long volume on the center of buoyancy of competitive swimmers. *Research Quarterly for Exercise and Sports*. 2000;71:182–89.

- McMillan J, Zinn L. *The Role of Water in Rehabilitation*. Bad Ragaz, Switzerland: Medical Centre; 1975.
- McMillan J. The role of water in rehabilitation. *Fysioterapeuten*. 1977;45:43–46, 87–90, 236–40.
- Means KM. The obstacle course: A tool for the assessment of functional balance and mobility in the elderly. *Journal of Rehabilitation Research and Development*. 1996;33:413–28.
- Noh D-G, Lambeck J. *The Effects of Hydrotherapy on Balance and Weight-Bearing Ability in People With Chronic Stroke: A Randomized Clinical Trial*. In press.
- Page SJ, Levine P. Modified constraint-induced therapy in patients with chronic stroke exhibiting minimal movement ability in the affected arm. *Phys Ther*. 2007;87:872–78. Epub 2007 May 1.
- Simmons V, Hansen PD. Effectiveness of water exercise on postural mobility in the well elderly: An experimental study on balance enhancement. *J. Gerontol*. 1996;5:M233–38.
- Smulders E. Hydrotherapy for fall prevention. Can hydrotherapy improve balance? MSc thesis, University of Maastricht, Netherlands; 2005.
- Stanat F, Lambeck J. The Halliwick Method, part 1 and part 2. *AKWA*. 2001;15, June/July:39–41 and *AKWA* 15, August/September:39–42.
- Tirosh R. *Aquatic Evaluation Forms: WOTA2*. Jerusalem, Alyn Hospital; 2005.
- Tirosh R, Katz-Leurer M, Getz MD. Halliwick-based aquatic assessments: Reliability and validity. *IJARE*. 2008;2:224–36.
- Weerdesteyn V. Distraction affects the performance of obstacle avoidance during walking. *Journal of Motor Behaviour*. 2003;35:53–63.
- Wolf SL, Barnhart HX, Kutner NG. Reducing frailty and falls in older persons: An investigation of Tai Chi and computerized balance training. Atlanta FICSIT Group. Frailty and Injuries: Cooperative Studies on Intervention Techniques. *J Am Geriatr Soc*. 1996;5:489–97.
- Wolf SL. Intense Tai Chi training and fall occurrences in older, transitionally frail adults: A randomized, controlled trial. *Journal Geriatrics Society*. 2003;51:1693–1701.
- Woo CY, Chen CH, Tang SF, Lin KC, Huang YY. Kinematic and clinical analyses of upper-extremity movements after constraint-induced movement therapy in patients with stroke: A randomized controlled trial. *Arch Phys Med Rehabil*. 2007;88:964–70.
- World Health Organization. *International Classification of Functioning, Disability and Health*. Geneva, Switzerland; 2001.
- Harrison RA, Allard LL. An attempt to quantify the resistances produced using the Bad Ragaz ring method. *Physiotherapy*. 1982;68:330–31.
- Kabat H. Studies of neuromuscular dysfunction: XV. The role of central facilitation in restoration of motor function in paralysis. *Arch Phys Med*. 1952;33:521–33.
- Kabat H. Proprioceptive facilitation techniques for treatment of paralysis. *Phys Ther Erw*. 1953;33:2.
- Klein-Vogelbach S. *Funktionelle Bewegungslehre*. Stuttgart: Thieme Verlag; 1981.
- Knott M, Voss DE. *Proprioceptive Neuromuscular Facilitation, Patterns and Techniques*. New York: Sec Höber; 1968.
- Knupfer H. Zur funktionellen nachbehandlung der poliomyelitis. *Zschr Orthop Grenzgeb*. 1956;87:677–82.
- Knupfer H, Bihl U. Beitrag zur konservativen behandlung paralytischer soliose. *Krankengymnastik*. 1958;10:1–6.
- Lehmann JF. *Therapeutic heat and cold*. Baltimore: Williams & Wilkins; 1970.
- McArdle WD, Katch FI, Katch VL. *Essentials in Exercise Physiology*. Philadelphia: Lippincott Williams & Williams; 2000.
- Ott VR. Unterwasser-bewegungstherapie. *Dtsch Med J*. 1955;6:486–91.
- Tum Suden A. Funktionelle nachbehandlung der poliomyelitis. *Krankengymnastik*. 1955;7:131–36.
- Tum Suden A. Unterwassergymnastik. *Krankengymnastik*. 1972;8:257–61.
- WHO. *International Classification of Disability, Functioning, Disability and Health (IDF)*. WHO; 2001.
- Zinn WM. In Egger B (ed). *Die Rolle des Wassers in der Rehabilitation. Band 9: Bewegungstherapie im Wasser, eine neue Methode mit Ringen*. Bad Ragaz: Medizinische Abteilung; 1975.

CHAPTER 7

- American Council on Exercise. *Clinical Exercise Specialist Manual*. San Diego: ACE; 1999.
- Argo, Carol. 1998. Water tai chi. *American Fitness*. 1998; July/August.
- Arpita. Physiological and psychological effects of hatha yoga: A review of the literature. *Journal of the International Association of Yoga Therapy*. 1982;12:1–27.
- Astin JA, Berman B, Bausell B, Lee W-L, Hochberg M, Forsy KL. The efficacy of mindfulness meditation plus Qigong movement therapy in the treatment of fibromyalgia: a randomized control trial. *Journal of Rheumatology*. 2003; 30(10): 2257–62.
- Berger BG, Owen DR. Mood alteration with yoga and swimming: Aerobic exercise may not be necessary. *Perceptual and Motor Skills*. 1992;75(3, Pt.2):1331–43.
- Berman BM, Singh BB. Chronic low-back pain: Outcome analysis of a mind-body intervention. *Complementary Therapies in Medicine*. 1997;5:29–35.
- Bernard L, Steight P, Bandinelli G, et al. Effect of rosary prayer and yoga mantras on autonomic cardiovascular rhythms: Comparative study. *Brit Med J*. 2001;323(7327):1446–49.
- Bhatti TI et al. Tai chi as a treatment for chronic low-back pain: A randomized, controlled study. *Alternative Therapies in Health and Medicine*. 1998;4:90 (abstract).

CHAPTER 6

- Becker A. A Bad Ragaz ring method variation for use with the cervical spine. *Journal of Aquatic Physical Therapy*. 1997;5:4–7.
- Davies BC. A technique of re-education in the treatment pool. *Physiotherapy*. 1967;53:57–59.
- Egger B. Personal communication.
- Egger B, Zinn WM. *Aktive Physiotherapie im Wasser, Neue Ragazer Methode mit Ringen*. Stuttgart: Gustav Fischer Verlag, 1990.
- Ehlentz H, Gosser M, Zimmermann E. *Krafttraining*. Bv; 1983.

- Block M. Breath and occupation: An essential combination. *Advance for Occupational Therapy Practitioners*. 2000;31.
- Bowler S, Green A, Mitchell C. Buteyko breathing techniques in asthma. A blinded randomized controlled trial. *Medical Journal of Australia* 1998;169:575–78.
- Cheung BM et al. Randomised controlled trial of qigong in the treatment of mild essential hypertension. *Journal of Human Hypertension*. 2005;19:697–704.
- Choliz M. A breathing-retraining procedure in treatment of sleep-onset insomnia: Theoretical basis and experimental findings. *Percept Mot Skills* 1995;80:507–13.
- Chopra D. *Quantum Healing: Exploring the Frontiers of the Mind/Body Medicine*. New York: Bantam Books; 1989.
- Chumillas S, Ponce JL, Delgado F, et al. Prevention of postoperative pulmonary complications through respiratory rehabilitation: A controlled clinical study. *Arch Phys Med Rehabil*. 1998;79:5–9.
- Cole A, Becker B. *Comprehensive Aquatic Therapy*. Philadelphia: Elsevier; 2004.
- Courtney R. Breathe easy eucapnic breath retraining: A powerful tool for the somatic therapist. *Massage and Bodywork*. 2000;12–21.
- Dychtwald K. *Bodymind*. New York: Penguin Putnam; 1986.
- Farrell PA et al. Influence of endogenous opioids on the response of selected hormones to exercise in man. *Journal of Applied Physiology*. 1986;61:1051–57.
- Franklin B. Emerging psychosocial risk factors. *ACSM's Health and Fitness Journal*. 2000;4(6):32–33.
- Fried R. *The Psychology and Physiology of Breathing*. New York: Plenum Press; 1993.
- Fuzhong L, Fisher KJ, Harmer P, McAuley E. Falls self-efficacy as a mediator of fear of falling in an exercise intervention for older adults. *J Gerontol B Psychol Sci Soc Sci*. 2005;60:P34–P40.
- Gallagher B. The mighty power of breath. *Physical Therapy Products*. 2005; April/May:20–43.
- Gatti J. How breathing becomes a therapeutic modality. *Advance for Occupational Therapy Practitioners*. 2003.
- Grossman E, Grossman A, Schein MH, et al. Breathing-control lower blood pressure. *J Hum Hypertens*. 2001;15:263–69.
- Guyton AC. *Textbook of Medical Physiology*. Philadelphia Saunders; 1981.
- Hansen GR, Streltzer I. The psychology of pain. *Emergency Medical Clinics of North America*. 2005;23(2),339–48.
- Hartman CA, Manos TM, Winter C, Hartman DM, Li B, Smith J. Effects of T'ai Chi training on function and quality of life indicators in older adults with osteoarthritis. *J Am Geriatr Soc*. 2000; 48:1553–59.
- Hillman G, Kravitz L. Hypertension and exercise. *IDEA Fitness Journal*. 2007;20–22.
- Hoffman P. The endorphin hypothesis. *Physical Activity and Mental Health*, ed. WP Morgan. Washington, DC: Taylor and Francis, 1997: 163-77.
- Howley E, Franks B. *Health, Fitness Instructor's Handbook*. Champaign IL: Human Kinetics. 1992.
- Jerath R et al. Physiology of long pranayamic breathing: Neural respiratory elements may provide a mechanism that explains how slow deep breathing shifts the autonomic nervous system. *Medical Hypotheses*. 2006;67:566–71.
- Karinkanta S, Heinonen A, Sievänen H, Uusi-Rasi K, Kannus P. Factors predicting dynamic balance and quality of life in home-dwelling elderly women. *Gerontology*. 2005;51(2),116–21.
- Keleman S. *Patterns of Distress: Emotional Insults and Human Form*. Berkeley, CA: Center Press; 1989.
- Koh TC. Qigong—Chinese breathing exercise. *American Journal of Chinese Medicine*. 1982;X:no1–4,86–89.
- Kolasinski SL et al. Iyengar yoga for treating symptoms of osteoarthritis of the knees: A pilot study. *Journal of Alternative and Complementary Medicine*. 2005;11(4):689–93.
- Konno J. *History. Ai Chi Certification Resource Materials*. Ai Chi International 2004.
- LaForge R. High marks for t'ai chi. *IDEA Health and Fitness Source*. 2004:18–19.
- LaForge R. Mind-body fitness: Encouraging prospects for primary and secondary prevention. *Journal of Cardiovascular Nursing*. 1997;11:53–65.
- Lai JS, Wong MK, Lan C, Chong CK, Lien IN. Cardiorespiratory responses of Tai Chi Chuan practitioners and sedentary subjects during cycle ergometry. *J Formos Med Assoc*. 1993;92:894–99.
- Lai JS, Lan C, Wong MK, Teng SH. Two-year trends in cardiorespiratory function among older tai chi chuan practitioners and sedentary subjects. *Journal of the American Geriatric Society*. 1995;43:1222–27.
- Lan C, Lai JS, Chen SY, Wong MK. Tai Chi Chuan to improve muscular strength and endurance in elderly individual: A pilot study. *Arch Phys Med Rehabil*. 2000;81:604–7.
- Li F et al. Tai chi: Improving functional balance and predicting subsequent falls in older persons. *Medicine and Science in Sports and Exercise*. 2004;36(12):2046–52.
- Martinsen EH. Therapeutic implications of exercise for clinically anxious and depressed patients. *International Journal of Sport Psychology*. 1993;24:185–99.
- McArdle W, Katch F, Katch V. *Exercise Physiology*. Malvern, PA: Lea & Febiger; 1991.
- McGinogal K. Yoga for chronic pain. *IDEA Fitness Journal*. 2006;51–57.
- Miller J, Fletcher K, Kabat-Zinn J. Three-year follow-up and clinical implications of mindfulness meditation-based stress reduction intervention in the treatment of anxiety disorders. *General Hospital Psychiatry*. 1995;17:192–200.
- Monroe R, Ghosh AD, Kalish D. 1989. *Yoga Research Bibliography: Scientific Studies on Yoga and Meditation*. Cambridge, England: Yoga Biomedical Trust.
- Morales AJ et al. Natural DHEA levels diminish significantly during aging. *Journal of Clinical Endocrinology and Metabolism*. 1994;78(6):1360–67.
- Moyers B. *Healing and the Mind*. New York: Doubleday; 1993.
- Myers T. Cups and domes. *Massage and Bodywork*. 2000:98–103.
- National Institutes of Health. Biobehavioral pain research. Washington, DC; 2003. <http://grants.nih.gov/grants/guide/pa-files/PA-03-152.html>.
- Natural Standard (an organization that produces scientifically based reviews). www.naturalstandard.com. The information in this monograph was prepared by the professional staff at Natural Standard, based on thorough systematic review of scientific evidence. The material

- was reviewed by the faculty of the Harvard Medical School with final editing approved by Natural Standard.
- Novotny S, Kravitz L. The science of breathing. *Fitness Journal*. 2007;37-43.
- Pal GK, Velkumary S, Madanmohan. Effect of short-term practice of breathing exercises on autonomic functions in normal human volunteers. *Indian Journal of Medical Research*. 2004;120:115-21.
- Qigong for health. *IDEA Fitness Journal*. 2007;107.
- Queiroz, Oliani, Santos, Hunger, and Israel. Aquatic physiotherapy: Ai-chi in patients with Parkinson disease. *FisioBrasil*. 2007; Ano 11-Edicao no. 92, Marco/Abril.
- Rakel D, Mercado MA. Breathing exercises. In: Rakel D, ed. *Integrative Medicine*, 2nd ed. Philadelphia: Saunders Elsevier, 991-98; 2007.
- Rama S, Ballentine R, Hymes A. *Science of Breath*. Himalayan Institute Press; 2007.
- Ross R. 2001. Yoga as a therapeutic modality. In: Weintraub MI, ed. *Alternative and Complementary Treatment in Neurologic Illness*. Philadelphia: Churchill Livingstone; 2001:75-92.
- Sancier KM. Medical applications of qigong. *Alternative Therapies in Health and Medicine*. 1996;2:40-46.
- Schein MH, Garish B, Herz M, et al. Treating hypertension with a device that slows and regularizes breathing: A randomized, double-blind controlled study. *J Hum Hypertens*. 2001. 15:271-78.
- Schneider D, Leung R. Metabolic and cardiorespiratory responses to the performance of Wing Chun and Tai Chi Chuan exercise. *Int J Sports Med*. 1991;12:319-23.
- Sherman KJ et al. Comparing yoga, exercise, and a self-care book for chronic low back pain: A randomized, controlled trial. *Annals of Internal Medicine*. 2005;143:849-56.
- Singh B. A pilot study of cognitive behavioral therapy in fibromyalgia. *Alternative Therapies in Health and Medicine*. 1998;4:67-70.
- Taylor-Piliae RE, Froelicher ES. Effectiveness of tai chi exercise in improving aerobic capacity: Meta-analysis. *Journal of Cardiovascular Nursing*. 2004;19(1):48-57.
- Tsang W, Hui-Chan C. Comparison of muscle torque, balance, and confidence in older tai chi and healthy adults. *Medicine and Science in Sports and Exercise*. 2005;37(2):280-89.
- Turner JA, Ersek M, Kemp C. Self-efficacy for managing pain is associated with disability, depression, and pain coping among retirement community residents with chronic pain. *Journal of Pain*. 2005;6(7):471-79.
- Tweeddale PM, Rowbottom I, McHardy GJ. Breathing retraining: Effect on anxiety and depression scores in behavioural breathlessness. *J Psychosom Res*. 1994;38:1111-21.
- Vargas L. Liquid assets. *Advance for Directors in Rehabilitation*. 2006;47-50.
- Vraciu JK, Vraciu RA. Effectiveness of breathing exercises in preventing pulmonary complications following open heart surgery. *Phys Ther*. 1977;57:1367-71.
- Wang C, Xu D, Qian Y, Shi W. Effects of qigong on preventing stroke and alleviating the multiple cerebrocardiovascular risk factors: A follow-up report on 242 hypertensive cases over 30 years. Proceedings, Second World Conference for Academic Exchange of Medical Qigong, Geijing, China; 1993:123.
- Wolf S et al. Reducing frailty and falls in older persons: An investigation of tai chi and computerized balance training. *Journal of the American Geriatric Society*. 1996;44:489-97.
- Wolfson L et al. Balance and strength training in older adults: Intervention gains and tai chi maintenance. *Journal of the American Geriatric Society* 1996;44:498-506.
- Xu DQ, Li JX, Hong Y, Wang YT. Effects of long term Tai Chi practice and jogging exercise on muscle strength and endurance in older people. *British Journal of Sports Medicine*. 2006;40:50-54.
- Yan JH. Tai chi practice improves senior citizens' balance and arm movement control. *Journal of Aging and Physical Activity*. 1998;6:271-84.

CHAPTER 8

1. Dull H. Watsu: *Freeing the Body in Water*: California. Middletown, CA: Harbin Springs; 1997.
2. Becker B, Cole A. *Comprehensive Aquatic Therapy*. Philadelphia: Butterworth Heinemann; 2004.
3. Worldwide Aquatic Bodywork Association, Harbin Springs, Middletown, CA, September 1, 2007, www.watsu.com.
4. School of Shiatsu and Massage, Middletown, CA, September 1, 2007, www.learnwatsu.com.
5. Douer O. Jahara in hydrotherapy education. *Jahara Journal*, 10th anniversary ed., 2007, <http://jahara.com/Journal-Download.htm>.
6. Oz M, Whitworth G, Liu E. Complementary medicine in the surgical wards. *Journal of the American Medical Association*. 1998;279(9):710-11.
7. Jamison L. The therapeutic value of aquatic therapy in treating lymphedema. *Rehab Management Interdisciplinary Journal Rehabilitation*. 2000; August-September.
8. Bobath B. *Adult Hemiplegia: Evaluation and Treatment*, 2nd ed. London: Heinemann; 1978.
9. Brunstrom S. *Movement and Therapy in Hemiplegia*. New York: Harper and Row; 1970.
10. Knott M, Voss D. *Proprioceptive Neuromuscular Facilitation, Patterns and Techniques*, 2nd ed. Philadelphia: Harper and Row; 1968.
11. Levine P. *Walking the Tiger*. Berkeley, CA: North Atlantic Books; 1997.
12. Dougherty L, Dunlap E, Mehler S. The rehabilitative benefits of Watsu. In Dull H, ed. *Watsu: Freeing the Body in Water*. Middletown, CA: Harbin Springs; 1997.
13. Merskey H, Bogduk N, eds. *Classification of Chronic Pain: Descriptions of Chronic Pain Syndromes and Definitions of Pain Terms*, 2nd ed. Seattle: IASP Press; 1994:210-11.
14. Logigian MK. *Adult Rehabilitation: A Team Approach for Therapists*. Boston: Little, Brown; 1982.
15. Farber S. *Sensorymotor Evaluation and Treatment Procedure*, 2nd ed. Indianapolis: Indiana University-Purdue University at Indianapolis Medical Center; 1974.

16. Emileane L, PSY/Mental Health NP, RN, MS. Personal communication. Faculty associate, Graduate College of Nursing, ASU. Director of Southwestern Gestalt Center, Phoenix, AZ.

CHAPTER 9

1. American Red Cross. *Swimming and Diving*. St. Louis: Mosby-Year Book; 1992.
2. Arrigo CA, Fuller CS, Wilk KE. Aquatic rehab following ACL-PTG reconstruction. *Sports Medicine Update*. 1992;7(2):22-27.
3. Cirullo JV. Swimmer's shoulder. *Clin Sports Med*. 1986;1(5):115-37.
4. Cole AJ, Eagleston RE, Moschetti ML. Getting backs in the swim. *Rehabilitation Management*. 1992; August/September:62-71.
5. Cole AJ, Eagleston RE, Moschetti ML. Swimming. In: White, AH, ed. *Spine Care Diagnosis and Conservative Treatment*. Vol. 1. St. Louis: Mosby; 1995:727-45.
6. Cole AJ, Farrell FP, Stratton SA. Cervical spine athletic injuries: A pain in the neck. *Physical Medicine and Rehabilitation Clinics of North America*. 1994;5(1):37-68.
7. Cole AJ, Martin L, Moschetti ML. *Aquatic Therapy: Stabilization Strategies for the Cervical and Lumbar Spine*. Course notes for Workshop at Timpany Center, San Jose, California, June 1, 1991.
8. Cole AJ, Moschetti ML, Eagleston RE. An aquatic sports medicine approach for lumbar spine rehabilitation. In: Tollison DC, ed. *The Handbook of Pain Management*, 2nd ed. Baltimore: Williams & Wilkins; 1994:368-400.
9. Darden L, Fuller CS. Considerations for aquatic therapy with the Illizarov external fixators. *Sports Medicine Update*. 1992;1(1):18-21.
10. Elkington HJ. The effective use of the pool. *Physiotherapy*. 1978;65:452-60.
11. Fowler PJ, Regan WD. Swimming injuries of the knee, foot and ankle, elbow and back. *Clin Sports Med*. 1986;1(5):139-48.
12. Garvey LA. Spinal cord injury and aquatics. *Clinical Management*. 1991;1(1):21-24.
13. Genuario SE, Vegso JJ. The use of a swimming pool in the rehabilitation and reconditioning of athletic injuries. *Contemporary Orthopedics*. 1990;20:381-87.
14. Grace KJ. Hydrodynamics: Rehabilitation of running injuries. *Topics in Acute Care and Trauma Rehabilitation*. 1986;1(a):79-86.
15. Harris SR. Neurodevelopmental treatment approach for teaching swimming to cerebral palsied children. *Phys Ther*. 1978;58:979-83.
16. Hurley R, Turner C. Neurology and aquatic therapy. *Clinical Management*. 1991;1(1):26-29.
17. Hughes D. Aquatic therapy in the management of low back dysfunction. *Sports Medicine Update*. 1992;1(1):10-15.
18. Levin S. Aquatic therapy: A splashing success for arthritis and injury rehabilitation. *The Physician and Sportsmedicine*. 1991;19(10):119-26.
19. Martin J. The Halliwick method. *Physiotherapy*. 1981;67:288-91.
20. Peganoff SA. The use of aquatics with cerebral palsied adolescents. *Am J Occup Ther*. 1984;38:469-73.
21. Styer-Acevedo JL, Charness AL. *Considerations for Planning Adapted Swimming Instruction*. Course notes for Adapted Aquatic Workshop at Rehabilitation Institute of Chicago, Chicago, Illinois, Feb. 23-24, 1985.
22. Thomas GJ. Swimming: An alternative form of therapy. *Clinical Management*. 1989;9(3):24-26.
23. Jones KD, Adams D, Winters-Stone K, Burchkhardt CS. A comprehensive review of 46 exercise treatment studies in fibromyalgia (1988-2005). *Health and Quality of Life Outcomes* 2006, 4:67.
24. Gangaway J. Evidence in Practice: Use of Aquatic Physical Therapy as an intervention for fibromyalgia, *The Journal of Aquatic Physical Therapy*, Vol 14 No.1 Fall 2006.
25. Meiworm L, Jakob E, Walker UA, Peter HH, Keul J. Patients with fibromyalgia benefit from aerobic endurance exercise. *Clin Rheumatol*, 2000; 19(4): 253-7.

CHAPTER 10

- Adams HP, Norton CO, Tilden HM. *Aquatic Exercise Toolbox—Updated Edition*. Champaign, IL: Human Kinetics; 2006.
- American College of Sports Medicine. *ACSM's Guidelines for Exercise Testing and Prescription*, 6th ed. Philadelphia: Lippincott Williams & Wilkins; 2000.
- APTA. *Guide to Physical Therapist Practice*, 2nd ed. *Physical Therapy*. 2001;81:9-744.
- Bacon MC, Nicholson C, Binder H, White PH. Juvenile rheumatoid arthritis: Aquatic exercise and lower extremity function. 1991;4:102-5.
- Burckhardt CS, Clark SR, Bennett RM. The fibromyalgia impact questionnaire (FIQ): Development and validation. *J Rheumatol*. 1991;18:728-33.
- Butland RJ, Pang J, Gross ER, et al. Two, six, and twelve minute walking test in respiratory disease. *BMJ*. 1982;284:1604-08.
- Campbell JA, D'Acquisto LJ, D'Acquisto DM, Cline MG. Metabolic and cardiovascular response to shallow water exercise in young and older women. *Medicine and Science in Sports and Exercise*. 2003;35(4):675-81.
- Chu KS, Eng JJ, Dawson AS, Harris JE, Ozkaplan A, Gylfadottir S. Water-based exercise for cardiovascular fitness in people with chronic stroke: A randomized controlled trial. *Archives of Physical Medicine and Rehabilitation*. 2004;85:870-74.
- Chu KS, Rhodes EC. Physiological and cardiovascular changes associated with deep water running in the young. *Sports Medicine*. 2001;31(1):33-46.
- Ciccone CD. *Pharmacology in Rehabilitation*, 3rd ed. Philadelphia: Davis; 2002.
- Ciolek CH, Geigle PR. Age and water do mix. *Rehab Management: The Interdisciplinary Journal of Rehabilitation*. 2002;15(1):28-30.
- Driver S, O'Connor J, Lox C, Rees K. Evaluation of an aquatics programme on fitness parameters of individuals with a brain injury. *Brain Injury*. 2004;18(9):847-59.

- Fairbank J et al. The Oswestry low back pain disability questionnaire. *Physiotherapy*. 1980;66(8):271-73.
- Fuller R. Bio-occlusive dressings for aquatic exercise [videotape], 2002.
- Geigle PR. Clinical decision making in aquatic physical therapy. *Journal of Aquatic Physical Therapy*. 2000;8(2):29-32.
- Geigle PR, Norton C. Optimal aquatic practice. *Journal of Aquatic Physical Therapy*. 2005; Winter.
- Geigle PR, Cheek WL Jr, Gould ML, Hunt HC III, Shafiq B. Aquatic physical therapy for balance: The interaction of somatosensory and hydrodynamic principles. *Journal of Aquatic Physical Therapy*. 1997;5(1):4-10.
- Hall C, Brody L, eds. *Therapeutic Exercise: Moving Toward Function*. 2nd ed. Philadelphia: Lippincott, Williams and Wilkins; 2003. *How to Manual*. Aquatic Physical Therapy Section. Denver; 2003.
- McNamara C. STAR form. Personal communication; 2007.
- Pepin V, Brodeur J, Lacasse Y, Milot J, Leblanc P, Whittom F, Maltais F. Six-minute walking versus shuttle walking: Responsiveness to bronchodilation in chronic obstructive pulmonary disease. *Thorax*. 2007;62:291-298.
- Perkins BA, Riddell MC. Type 1 diabetes and exercise: Using the insulin pump to maximum advantage. *Canadian Journal of Diabetes*. 2006;30(1):72-79.
- Poteat AL, Bjerke MD, Johnston TD, Mairs JP. Evidence-based aquatic therapy: Building a case for use of aquatic physical therapy for fibromyalgia patient populations. *Journal of Aquatic Physical Therapy*. 1997;5(2):8-16.
- Purtillo RB. Applying the principles of informed consent to patient care. Legal and ethical considerations for physical therapy. *Physical Therapy*. 1984;64(6):934-937.
- Retas A, Forrester K. Consent implications for health care practitioners. *Journal of Law and Medicine*. 1995;2:317-326.
- Salzman AP. Blueprint for investigation of effectiveness and efficiency of aquatic physical therapy. *Journal of Aquatic Physical Therapy*. 1998;6(2):6.
- Salzman AP. Quantification of aquatic physical therapy: Land-based methods: Part III: Documentation templates. *Journal of Aquatic Physical Therapy*. 1998;6(2):7-11.
- Styer-Acevedo JL. Aquatic rehabilitation of the pediatric client. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott-Raven; 1997:151-170.
- Takeshima N, Rogers ME, Watanabe E, Brechue WF, Okada A, Yamada T, Islam MM, Hayano J. Water-based exercise improves health-related aspects of fitness in older women. *Medicine and Science in Sports and Exercise*. 2002;34(3):544-51.
- Tirosh R, Katz-Leurer M, Getz MD. 2008. Halliwick-based aquatic assessments: Reliability and validity. *IJARE*. 2:224-236.
- Vines P. Informed consent: From paternal benevolence to trust and mediated by truthfulness. *Physiotherapy*. 1996;42(3):245-246.
- Wolfe F et al. The American College of Rheumatology 1990 Criteria for the Classification of Fibromyalgia. *Arthritis and Rheumatism*. 1990;33(2):160-172.
- www.who.int/classification/icf.
- www.who.int/classifications/icf/site/checklist/icf-checklist.pdf.
- www.simiyymca.org/Y-Aquatics.html.
- YMCA. *Aquatics for Special Populations*. Champaign, IL: Human Kinetics; 1987.

CHAPTER 11

- Agostoni E, Gurtner G, Torri G, Rahn H. Respiratory mechanics during submersion and negative-pressure breathing. *Journal of Applied Physiology*. 1966;21(1):251-58.
- American College of Sports Medicine. Position statement on the recommended quantity of exercise for developing and maintaining fitness in healthy adults. *Medicine Science Sports Exercise*. 1990;22:265-74.
- American College of Sports Medicine. *ACSM Guidelines for Exercise Testing and Prescription*, 7th ed. Philadelphia: Lippincott Williams and Wilkins; 2005:141-46.
- American College of Sports Medicine. *ACSM Resource Manual for Guidelines for Exercise Testing and Prescription*, 4th ed. Philadelphia: Lippincott Williams and Wilkins; 2006:454,531-79.
- Arborelius M, Balldin UI, Lilja B, Lundgren EG. Regional lung function in man during immersion with the head above water. *Aerospace Medicine*. 1972;43(7):701-7.
- Artal R, Clapp JF, Vigil DV. Exercise during pregnancy. *Current Comment for American College of Sports Medicine*. 2000; August.
- Assis MR, Silva LE, Alves AMB, Pessanha AP, Valim V, Feldman D, Neto TLB, Natour J. A randomized controlled trial of deep water running: Clinical effectiveness of aquatic exercise to treat fibromyalgia. *Arthritis and Rheumatism*. 2006;55(1):57-65.
- Bates A, Hanson N. *Aquatic Exercise Therapy*. Philadelphia: Saunders; 1996:307-12.
- Bilberg A, Ahlmen M, Mannerkorpi K. Moderately intensive exercise in a temperate pool for patients with rheumatoid arthritis: A randomized controlled study. *Rheumatology*. 2005;44:502-8.
- Bishop PA, Frazier S, Smith J, Jacobs D. Physiologic responses to treadmill and water running. *Physician and Sports Medicine*. 1989;17(2):87-94.
- Black LF, Hyatt RE. Maximal respiratory pressures: Normal values and relationships to age and sex. *Am Rev Respir Dis*. 1969;90:696-702.
- Borg GA. Psychophysical basis of perceived exertion. *Med Sci Sports Exerc*. 1982;14:377-81.
- Brawner CA, Keteyian SJ, Czaplicki TE. A method of guiding exercise intensity: The talk test. *Med Sci Sports Exercise*. 1995;27:S241.
- Bullard RW, Rapp GM. Problems of body heat loss in water immersion. *Aerospace Medicine*. 1970;41:1269-77.
- Campbell JA, D'Acquisto LJ, D'Acquisto DM, Cline MG. Metabolic and cardiovascular response to shallow water exercise in young and older women. *Medicine and Science in Sports and Exercise*. 2003;35(4):675-81.
- Cannon C, Foster C, Porcari JP, Skemp-Arlt KM, Fater DCW, Backes R. Prescribing exercise using the talk test: Avoidance of exertional ischemia. *Am J Med Sports*. 2004;6:52-56.

- Cassady SL, Nielsen DH. Cardiorespiratory responses of healthy subjects to calisthenics performed on land versus in water. *Physical Therapy*. 1992;72(7):532-38.
- Chu KS, Eng JJ, Dawson AS, Harris JE, Ozkaplan A, Gylfadottir S. Water-based exercise for cardiovascular fitness in people with chronic stroke: A randomized controlled trial. *Archives of Physical Medicine and Rehabilitation*. 2004;85:870-74.
- Chu KS, Rhodes EC. Physiological and cardiovascular changes associated with deep water running in the young. *Sports Medicine*. 2001;31(1):33-46.
- Clark SR. Prescribing exercise for fibromyalgia patients. *Arthritis Care Research*. 1994;7:221-25.
- Coyle EF, Hemmert MK, Coggan AR. Effects of detraining on cardiovascular responses to exercise: Role of blood volume. *Journal of Applied Physiology*. 1986;60:95-99.
- Coyle EF, Martin WH, Sinacore DR, Joyner MJ, Hagberg JM, Holloszy JO. Time course of loss of adaptations after stopping prolonged intense endurance training. *Journal of Applied Physiology*. 1984;57:1857-64.
- Crane MG, Harris JJ. Suppression of plasma aldosterone by partial immersion. *Metabolism*. 1974;23:359-68.
- Czaplicki TE, Keteyian SJ, Brawner CA, Weingarten MA. Guiding exercise training intensity on a treadmill and dual-action bike using the talk test. *Med Sci Sports Exercise*. 1997;29:S70.
- D'Acquisto LJ, D'Acquisto DM, Renne D. Metabolic and cardiovascular responses in older women during shallow-water exercise. *Journal of Strength and Conditioning Research*. 2001;15(1):12-19.
- Dehart-Beverly M, Foster C, Porcari JP, Fater DCW, Mikat RP. Relationship between the talk test and ventilatory threshold. *Clin Exerc Physiol*. 2000;2:34-38.
- Dressendorfer RH, Haykowsky MJ, Eves N. Exercise for persons with COPD. *Current Comment for American College of Sports Medicine*. 2002; October.
- Driver S, O'Connor J, Lox C, Rees K. Evaluation of an aquatics programme on fitness parameters of individuals with a brain injury. *Brain Injury*. 2004;18(9):847-59.
- Einarsson G. Muscle conditioning in late poliomyelitis. *Archives of Physical Medicine and Rehabilitation*. 1991;72:11-14.
- Ernstoff B, Wetterqvist H, Kvist H, Grimby G. The effects of endurance training on individuals with post-poliomyelitis. *Archives of Physical Medicine and Rehabilitation*. 1996;77:843-48.
- Epstein M. Cardiovascular and renal effects of head-out water immersion in man. *Circulation Research*. 1976;39(5):619-28.
- Evans BW, Cureton KJ, Purvis JW. Metabolic and circulatory responses to walking and jogging in water. *Research Quarterly*. 1978;49:442-49.
- Fillyaw MJ, Badger GJ, Goodwin GD, Bradley WG, Fries TJ, Shukla A. The effects of long-term non-fatiguing resistance exercise in subjects with post-polio syndrome. *Orthopedics*. 1991;14:1253-56.
- Foss ML, Keteyian SJ. *Fox's Physiological Basis for Exercise and Sport*, 6th ed. Boston: McGraw-Hill; 1998:303-93.
- Gehlsen GM, Grigsby SA, Winant DM. Effects of an aquatic fitness program on the muscular strength and endurance of patients with multiple sclerosis. *Physical Therapy*. 1984;64(5):653-57.
- Gleim GW, Nicholas JA. Metabolic costs and heart rate responses to treadmill walking in water at different depths and temperatures. *American Journal of Sports Medicine*. 1989;17(2):248-52.
- Guthrie TC, Nelson DA. Influence of temperature changes on multiple sclerosis. *Journal of Neurological Science*. 1995;129:1-8.
- Haffor AA, Mohler JG, Harrison AC. Effects of water immersion on cardiac output of lean and fat male subjects at rest and during exercise. *Aviation Space Environmental Medicine*. 1991;62:123-27.
- Hall J, Grant J, Blake D, Taylor G, Garbutt G. Cardiorespiratory responses to aquatic treadmill walking in patients with rheumatoid arthritis. *Physiotherapy Research International*. 2004;9(2):59-73.
- Hall J, Macdonald IA, Maddison PJ, O'Hare JP. Cardiorespiratory responses to underwater treadmill walking in healthy females. *European Journal of Applied Physiology*. 1998;77:278-84.
- Hall J, Skevington SM, Maddison PJ, Chapman K. A randomized and controlled trial of hydrotherapy in rheumatoid arthritis. *Arthritis Care and Research*. 1996;9:206-15.
- Hardman AE. Issues of fractionization of exercise. *Medical Science in Sports and Exercise*. 2001;33:S421-27.
- Hilman DR. A model of respiratory pump. *Journal of Applied Physiology*. 1982;5(3):524-29.
- Hong SK, Cerretelli P, Cruz JC, Rahn H. Mechanics of respiratory during submersion in water. *Journal of Applied Physiology*. 1969;27(4):535-38.
- Hutzler Y, Chacham A, Bergman U, Szeinberg A. Effects of a movement and swimming program on vital capacity and water orientation skills of children with cerebral palsy. *Developmental Medicine and Child Neurology*. 1998;40:176-81.
- Ide MR, Belini MAV, Caromano FA. Effects of an aquatic versus non-aquatic respiratory exercise program on the respiratory muscle strength in healthy aged persons. *Clinics*. 2005;60(2):151-58.
- Jentoft E, Kvalvik A, Mengshoel A. Effects of pool-based and land-based aerobic exercise on women with fibromyalgia/chronic widespread muscle pain. *Arthritis Care Research*. 2001;45:42-47.
- Jones DR, Speier J, Canine K, Owen R, Stull A. Cardiorespiratory responses to aerobic training by patients with post-poliomyelitis sequelae. *JAMA*. 1989;261:3255-58.
- Katz VL, McMurray R, Goodwin WE, Cefalo RC. Nonweight-bearing exercise during pregnancy on land and during immersion: A comparative study. *American Journal of Perinatology*. 1990;7(3):281-84.
- Kelly M, Darrah J. Aquatic exercise for children with cerebral palsy. *Developmental Medicine and Child Neurology*. 2005;47:838-42.
- Killian KJ, Joyce-Petrovich RA, Menna L, Arena SA. Measuring water orientation and beginners swim skills of autistic individuals. *Adaptive Physical Activity Quarterly*; 1985.
- Kirby RL, Sacamano JT, Balch DE, Kriellaars DJ. Oxygen consumption during exercise in a heated pool. *Archives of Physical Medicine and Rehabilitation*. 1984;65:21-23.

- Krolner B, Taft B, Nielson SP, et al. Physical exercise as prophylaxis against involutional vertebral bone loss: A controlled trial. *Clinical Science*. 1983;64:541-46.
- Krupp B, Alvarez LA, LaRocca NG, et al. Fatigue in multiple sclerosis. *Archives of Neurology*. 1988;45:435-37.
- Lagally KM, Robertson RJ. Construct validity of the OMNI resistance exercise scale. *Journal of Strength and Conditioning Research*. 2006;20(2):252-56.
- Mannerkorpi K, Nyberg B, Ahlmen M, Ekdahl C. Pool exercise combined with an education program for patients with fibromyalgia syndrome. A prospective, randomized study. *Journal of Rheumatology*. 2000;27(10):2473-81.
- Mannerkorpi K, Ahlmen M, Ekdahl C. Six- and 24-month follow-up of pool exercise therapy and education for patients with fibromyalgia. *Scandinavian Journal of Rheumatology*. 2002;31:306-10.
- Martin L, Nutting A, MacIntosh BR, et al. An exercise program in the treatment of fibromyalgia. *Journal of Rheumatology*. 1996;23:1050-53.
- Mazzeo RS, Cavanaugh P, Evans WJ, Fiatarone M, Hagberg J, McAuley E, Startzell J. Exercise and physical activity for older adults. *Medicine and Science in Sports and Exercise*. 1998;30(6):992-1008.
- McCain GA, Bell DA, Mai FM, Halliday PD. A controlled study of the effects of a supervised cardiovascular fitness training program on the manifestations of primary fibromyalgia. *Arthritis and Rheumatology*. 1988;31:1135-41.
- McMurray RG, Katz VL, Berry MJ, Cefalo RC. Cardiovascular responses of pregnant women during aerobic exercise in water: A longitudinal study. *International Journal of Sports Medicine*. 1988;9:443-47.
- Melton-Rogers S, Hunter G, Walter J, Harrison P. Cardiorespiratory responses of patients with rheumatoid arthritis during bicycle riding and running in water. *Physical Therapy*. 1996;76:1058-65.
- Michaud TJ, Brennan DK, Wilder RP, Sherman NW. Aquarunning and gains in cardiorespiratory fitness. *Journal of Strength and Conditioning Research*. 1995;9(2):78-84.
- Navia AM. Comparison of energy expenditure between treadmill running and water running. Thesis, University of Alabama at Birmingham; 1986.
- Nelson DA, Jeffreys WH, McDowell F. Effects of induced hyperthermia on some neurological diseases. *AMA Archives of Neurological Psychiatry*. 1958;79:31-39.
- Nichols DS, Glenn TM. Effects of aerobic exercise on pain perception, affect, and level of disability in individuals with fibromyalgia. *Physical Therapy*. 1994;74:327-32.
- O'Hara WJ, Allen C, Shephard RJ. Treatment of obesity by exercise in cold water. *Journal of the Canadian Medical Association*. 1977;117:773-78.
- O'Hara WJ, Allen C, Shephard RJ, Allen G. Fat loss in the cold- a controlled study. *Journal of Applied Physiology*. 1979;46:873-77.
- Olgiati R, Girr A, Hugi L, Haegi V. Respiratory muscle training in multiple sclerosis: A pilot study. *Schweiz Archives of Neurological Psychiatry*. 1989;140(1):46-50.
- Osternig LR, Bates BT, James SL. Isokinetic and isometric torque force relationships. *Archives of Physical Medicine and Rehabilitation*. 1977;58:254-57.
- Peganoff SA. The use of aquatics with cerebral palsied adolescents. *American Journal of Occupational Therapy*. 1984;38(7):469-73.
- Perk J, Perk L, Boden C. Cardiorespiratory adaptations of COPD patients to physical training on land and in water. *European Respiratory Journal*. 1996;9:248-52.
- Persinger R, Foster C, Gibson M, Fater DCW, Porcari JP. Consistency of the talk test for exercise prescription. *Med Sci Sports Exerc*. 2004;36:1632-36.
- Peterson C. Exercise in 94° water for a patient with multiple sclerosis. *Physical Therapy*. 2001;81(4):1049-58.
- Pfeiffer KA, Pivarnik JM, Womack CJ, Reeves MJ, Malina RM. Reliability and validity of the Borg and OMNI rating of perceived exertion scales in adolescent girls. *Medicine and Science in Sports and Exercise*. 2002;34(12):2057-61.
- Porcari JP, Kelso AJ, Foster C, et al. Comparison of methods of using the talk test for exercise prescription. *J Cardiopulm Rehabil*. 2002;22:369.
- Poyhonen T, Sipilä S, Keskinen KL, Hautala A, Savolainen J, Malkia E. Effects of aquatic resistance training on neuromuscular performance in healthy women. *Medicine Science in Sports and Exercise*. 2002;34(12):2103-09.
- Risch WD, Koubenec H-J, Beckmann U, Lange S, Gauer OH. The effect of graded immersion on heart volume, central venous pressure, pulmonary blood distribution, and heart rate in man. *Pflügers Archives: European Journal of Physiology*. 1978;374:115-18.
- Roemmich JN, Barkley JE, Epstein LH, Lobarinas CL, White TM, Foster JH. Validity of PCERT and OMNI walk/run ratings of perceived exertion. *Medicine and Science in Sports and Exercise*. 2006;38(5):1014-19.
- Robertson RJ, Goss FL, Aaron DJ, Tessmer KA, Gairola A, Ghiarelli JJ, Kowallis RA, Thekkada S, Liu Y, Randall CR, Weary KA. Observation of perceived exertion in children using the OMNI pictorial scale. *Medicine and Science in Sports and Exercise*. 2006;38(1):158-66.
- Robertson RJ, Goss FL, Andreacci JL, Dube JJ, Rutkowski JJ, Snee BM, Kowallis RA, Crawford K, Aaron DJ, Metz KF. Validation of the children's OMNI RPE scale for stepping exercise. *Medicine and Science in Sports and Exercise*. 2005;37(2):290-98.
- Rothman JG. Effects of respiratory exercise on the vital capacity and forced expiratory volume in children with cerebral palsy. *Physical Therapy*. 1978;58:421-25.
- Ruoti RG, Troup JT, Berger RA. The effects of nonswimming water exercises on older adults. *Journal of Orthopedics and Sports Physical Therapy*. 1994;19(3):140-45.
- Sheldahl LM. Special ergometric techniques and weight reduction. *Medicine and Science in Sports and Exercise*. 1985;18(1):25-30.
- Sheldahl LM, Buskirk ER, Loomis JL, Hodgson JL, Mendez J. Effects of exercise in cool water on body weight loss. *International Journal of Obesity*. 1982;6:29-42.
- Skinner AT, Thompson AM, eds. *Duffield's Exercise in Water*. London: Bailliere Tindall; 1983.
- Stenström CH, Lindell B, Swanberg E, Swanberg P, Harms-Ringdahl K, Nordemar R. Intensive dynamic training in water for rheumatoid arthritis functional class II—a long-term study of effects. *Scandinavian Journal of Rheumatology*. 1991;20(5):358-65.

- Svedenhag J, Seger J. Running on land and in water: Comparative exercise physiology. *Med Sci Sports Exerc.* 1992;24:1155-60.
- Takeshima N, Rogers ME, Watanabe E, Brechue WF, Okada A, Yamada T, Islam MM, Hayano J. Water-based exercise improves health-related aspects of fitness in older women. *Medicine and Science in Sports and Exercise.* 2002;33(3):544-51.
- Thein JM, Thein-Brody L. Aquatic-based rehabilitation and training for the elite athlete. *Journal of Orthopedic and Sports Physical Therapy.* 1998;27(1):32-41.
- Thorpe DE, Reilly M. The effect of an aquatic resistive exercise program on lower extremity strength, energy expenditure, functional mobility, balance and self-perception in an adult with cerebral palsy: A retrospective case report. *Journal of Aquatic Physical Therapy.* 2000;8:18-24.
- Thorpe DE, Reilly M, Case L. The effects of an aquatic resistive exercise program on ambulatory children with cerebral palsy. *Journal of Aquatic Physical Therapy.* 2005;13(2):21-34.
- Wang TJ, Belza B, Thompson E, Whitney JD, Bennett K. Effects of aquatic exercise on flexibility, strength and aerobic fitness in adults with osteoarthritis of the hip and knee. *Journal of Advanced Nursing.* 2006;57(2):141-52.
- Watson WJ, Katz VL, Hackney AC, Gall MM, McMurray RG. Fetal responses to maximal swimming and cycling exercise during pregnancy. *Obstetrics and Gynecology.* 1991;77:382-86.
- Whitley JD, Schoene LL. Comparison of heart rate responses: Water walking versus treadmill walking. *Physical Therapy.* 1987;67(10):1501-04.
- Wilder RP, Brennan D, Schotte DE. A standard measure for exercise prescription for aqua running. *American Journal of Sports Medicine.* 1993;21(1):45-48.
- Wilder RP, Brennan DK. Physiological responses to deep water running in athletes. *Sports Medicine.* 1993;16(6):374-380.
- Willen C, Sunnerhagen KS, Grimby G. Dynamic water exercise in individuals with late poliomyelitis. *Archives of Physical Medicine and Rehabilitation.* 2001;82:66-72.
- Wolfe F, Ross K, Anderson J, et al. The prevalence and characteristics of fibromyalgia in the general population. *Arthritis and Rheumatology.* 1995;38:19-28.
- Wolf SL. The morphological and functional basis of therapeutic exercise. In Basmajian JV, ed. *Therapeutic Exercise.* Baltimore: Williams and Wilkins; 1980:63.
- Young MJ, Brown BS. Effects of aquatic exercise and education on fitness, pain, and perceived health status in fibromyalgia. *Medicine and Science in Sports and Exercise.* 2003;35(5):S234.
- Becker BE, Cole AJ (eds). *Comprehensive Aquatic Therapy.* Boston: Butterworth-Heinemann, 2004:17-48.
- Becker BE. Aquatic physics. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation.* Philadelphia: Lippincott; 1997:15-24. Boyle AM. The Bad Ragaz ring method. *Physiotherapy* 1981;67:265.
- Campion MR. Water activity based on the Halliwick method. In: Skinner A, Thompson A, eds. *Duffield's Exercise in Water*, 3rd ed. London: Bailliere Tindall; 1983:180.
- Campion MR. *Hydrotherapy in Pediatrics.* Oxford: Heinemann Medical Books; 1985.
- Campion MR. *Adult Hydrotherapy: A Practical Approach.* Oxford: Heinemann Medical Books; 1990.
- Craik RL. Abnormalities of motor behavior. In Lister MJ, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference.* Alexandria, VA: Foundation for Physical Therapy, 1990:155.
- Cunningham J. Halliwick method. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation.* Philadelphia: Lippincott, 1997; 305-31.
- Davis BC, Harrison RA. *Hydrotherapy in Practice.* New York: Churchill Livingstone, 1988.
- Douris et al. The Effect of Land and Aquatic Exercise on Balance Scores in Older Adults. *Journal of Geriatric Physical Therapy.* 2003;(2):1-6.
- Dull H. Watsu: *Freeing the Body in Water.* Harbin Hot Springs, CA: Harbin Springs Publishing; 1993.
- Dull H. Watsu. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation.* Philadelphia: Lippincott; 1997:333-52.
- Duncan PW, Chandler J et al. How do physiological components of balance affect mobility in elderly men? *Arch Phys Med Rehabil.* 1993;74:1343-49.
- Evarts EV, Shinoda Y, Wise SP. *Neurophysiological Approaches to Higher Brain Function.* New York: Wiley; 1984.
- Garrett G. Bad Ragaz Ring method. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation.* Philadelphia: Lippincott; 1997:289-92.
- Garvey LA. Spinal cord injury and aquatics. *Clinical Management.* 1991;11:21.
- Gehlsen GM, Grigsby SA, Winant DM. Effects of an aquatic fitness program on the muscular strength and endurance of patients with multiple sclerosis. *Physical Therapy.* 1984;64:653.
- Geigle PR, Cheek WL Jr, Gould ML, Hunt HC III, Shafiq B. Aquatic physical therapy for balance: The interaction of somatosensory and hydrodynamic principles. *Journal of Aquatic Physical Therapy.* 1997;5:4-10.
- Giesecke CL. Aquatic rehabilitation of clients with spinal cord injury. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation.* Philadelphia: Lippincott-Raven; 1997:127-50.
- Gentile AM. Skill acquisition: Action, movement, and neuro-motor processes. In: Carr J, Shephard R, eds. *Movement Science: Foundations for Physical Therapy Rehabilitation*, 2nd ed. Rockville, MD: Aspen Press; 2000.
- Gordon NF, Gulanick M, Costa F, Fletcher G, Franklin BA, Roth EJ, Shephard T. AHA scientific statement: Physical activity and exercise recommendations for stroke survivors. *Circulation.* 2004;109:2031-41.

CHAPTER 12

- Gordon J. Assumptions underlying physical therapy intervention: Theoretical and historical perspectives. In: Carr JH, Shepherd RB, Gordon J, et al., eds. *Movement Science: Foundations for Physical Therapy in Rehabilitation*. Rockville, MD: Aspen, 2000.
- Gulick DT et al. Comparison of aquatic and land plyometric training on strength, power and agility. *Journal of Aquatic Physical Therapy*. 2007;16(1):11-18.
- Hesse et al. Treadmill training w/ partial body weight support (PWS) compared with physiotherapy in nonambulatory hemiparetic patients. *Stroke*. 1995;26(6):976-81.
- Horak FB. Assumptions underlying motor control for neuromuscular rehabilitation. In J Lister, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference*. Alexandria, VA: Foundation for Physical Therapy; 1990.
- Hurley R, Lyons-Olski E, Sweetman NA, et al. Neurology and aquatic therapy. *Clinical Management*. 1991;11:26.
- Jette AM. Toward a common language for function, disability, and health. *Physical Therapy*. 2006;86:726-34.
- Keren O, Reznik J, Groswasser Z. Combined motor disturbances following severe traumatic brain injury: An integrative long-term treatment approach. *Brain Injury*. 2001;5(7):633-38.
- Lambeck J, Stanat FC. The Halliwick concept, part I. *Journal of Aquatic Physical Therapy*. 2000;8:6-11.
- Lambeck J, Stanat FC. The Halliwick concept, part II. *Journal of Aquatic Physical Therapy*. 2001;9:7-12.
- Lee DN, Lishman R. Visual proprioceptive control of stance. *J Hum Mov Studies*. 1975;1:8795.
- Lord S, Mitchell D, Williams P. Effect of water exercise on balance and related factors in older people. *American Journal of Physiotherapy*. 1993;39:217-22.
- Lundy-Ekman L. *Neuroscience*, 2nd ed. Philadelphia: Saunders; 2002.
- Martin J. The Halliwick method. *Physiotherapy*. 1981;67:288.
- McComas AJ, Sica RE, Upton AR et al. Functional changes in motoneurons of hemiparetic patients. *J Neurol Neurosurg Psychiatry*. 1973;36:183.
- Morris D. The use of pool therapy to improve functional activities of adult hemiplegic patients. In: *Forum Proceedings on Issues Related to Strokes*. Alexandria, VA: Neurology Section American Physical Therapy Association; 1992:45-48.
- Morris DM. Aquatic rehabilitation for the treatment of neuromuscular disorders. *J Back Musculoskel Rehabil*. 1994;4(4):297-308.
- Morris DM. Aquatic neurorehabilitation. *Neurology Report*. 1995;19(3):22-28.
- Morris DM. Aquatic rehabilitation for the treatment of neuromuscular disorders. *J Back Musculoskel Rehabil*. 1994;4:297.
- Morris DM. Aquatic rehabilitation of the neuromuscularly impaired client. In: Ruoti
- RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott, 1997:105-125.
- Morris DM, Buettner TL, White EW. Aquatic community-based exercise programs for stroke survivors. *Journal of Aquatic Therapy*. 1996;4:15-20.
- Myslinski MJ. Evidenced-based exercise prescription for individuals with spinal cord injury. *Journal of Neuromuscular PT*. 2005; 29:104-5.
- Norton CO, Jamison LJ, eds. *A Team Approach to the Aquatic Continuum of Care*. Woburn, MA: Butterworth-Heinemann; 2000.
- Pagliaro P, Zamparo P. Quantitative evaluation of the stretch reflex before and after hydro kinesy therapy in patients affected by spastic paresis. *Journal of Electromyography and Kinesiology*. 1999;9(2):141-8.
- Pariser G, Madras D, Weiss E. Outcomes of an aquatic exercise program including aerobic capacity, lactate threshold, and fatigue in two individuals with multiple sclerosis. *Journal of Neuromuscular Physical Therapy*. 2006;30:82-90.
- Pearson KG. Proprioceptive regulation of locomotion. *Curr Opin Neurobiol*. 1995;5:786-91.
- Peterson C. Exercise in 94° water for a patient with multiple sclerosis. *Phys Ther*. 2001;81:1049-58.
- Rimmer JH. Health promotion for people with disabilities: The emerging paradigm shift from disability prevention to prevention of secondary conditions. *Physical Therapy*. 1999;79:495-502.
- Roehrs TG, Karst GM. Effects of an aquatics exercise program on quality of life measures for individuals with progressive multiple sclerosis. *Journal of Neuromuscular Physical Therapy*. 2004;28:63-71.
- Sahrman S, Norton BJ. The relationship of voluntary movement to spasticity in the upper motor neuron syndrome. *Ann Neurol*. 1977;2:460.
- Schmidt RA. Motor learning principles for physical therapy. In MJ Lister, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference*. Alexandria, VA: Foundation for Physical Therapy; 1991:49.
- Shumway-Cook A, Woollacott MH. *Motor Control: Theory and Practical Applications*, 3rd ed. Philadelphia: Lippincott; 2007.
- Shik M, Orlovsky GM. Neurophysiology of locomotor automatism. *Physiol Rev*. 1976;56:465.
- Simmons V, Hansen PD. Effectiveness of water exercise on postural mobility in the well elderly: An experimental study on balance enhancement. *Journals of Gerontology*. 1996;51:233-38.
- Skinner A, Thompson A, eds. *Duffield's Exercise in Water*, 3rd ed. New York: Churchill Livingstone; 1983.
- Sullivan KJ, Knowlton BJ, Dobkin BH. Step training with body weight support: Effect of treadmill speed and practice paradigms on poststroke locomotor recovery. *Arch Phys Med Rehab*. 2002;83:683-91.
- Suomi R, Collier D. Effects of arthritis exercise programs on functional fitness and perceived activities of daily living measures in older adults with arthritis. *Archives of Physical Medicine and Rehabilitation*. 2003;84;(11):1589-1594.
- Suomi R, Kocejka DM. Postural sway characteristics in women with lower extremity arthritis before and after an aquatic exercise intervention. *Archives of Physical Medicine and Rehabilitation*. 2000;81(6):780-85.
- Taub E. Motor behavior following deafferentation in the developing and motorically mature monkey. *Adv Behav Biol*. 1976;18:675.

- Thorpe DE, Reilly M. The effect of an aquatic resistive exercise program on lower extremity strength, energy expenditure, functional mobility, balance and self-perception in an adult with cerebral palsy: A retrospective case report. *Journal of Aquatic Physical Therapy*. 2000;8(2):18–24.
- Vogtle LK, Morris DM, Denton BG. An aquatic program for adults with cerebral palsy living in group homes. *Physical Therapy Case Reports*. 1998;1(5):250–59.
- Umphred DA. *Neuromuscular Rehabilitation*, 5th ed. St. Louis: Mosby, 2007.
- Vandyke A, Geigle PR. Aquatic intervention post traumatic brain injury: Case study. Platform presentation Combined Sections Meeting, APTA, Boston; 2007.
- Weinstein CJ. Designing practice for motor learning: Clinical implications. In Lister MJ, ed. *Contemporary Management of Motor Control Problems: Proceedings of the II STEP Conference*. Alexandria, VA: Foundation for Physical Therapy; 1991:65.
- Weinstein CJ, Gardner ER, McNeal DR, et al. Standing balance training: Effect on balance and locomotion in hemiparetic adults. *Arch Phys Med Rehabil*. 1989;70:755.
- World Health Organization. *International Classification of Functioning, Disability and Health: ICF*. Geneva, Switzerland: World Health Organization; 2001.

CHAPTER 13

- Hodges P. Core stability exercise in chronic low back pain. *Orthop Clin N Am*. 2003;34:245–54.
- McGill S. *Low Back Disorders: Evidence-Based Prevention and Rehabilitation*. Champaign, IL: Human Kinetics; 2002.
- Moseley G, Hodges P, Gandevia S. Deep and superficial fibers of lumbar multifidus are differentially active during voluntary arm movements. *Spine*. 2002;27:E29–36.
- Nadler S, Malanga G, Feinberg J, Prybicien M, Stitik T, DePrince M. Relationship between hip muscle imbalance and occurrence of low back pain in collegiate athletes: A prospective study. *Am J Phys Med Rehabil*. 2001;80(8):572–77.
- Kernozek T, Torry M, Van Hoof H, Cowley H, Tanner S. Gender differences in frontal and sagittal plane biomechanics during drop landings. *Med Sci Sports Exerc*. 2005;37(6):1003–12.
- Hodges P, Richardson C. Contraction of the abdominal muscles associated with movement of the lower limb. *Phys Ther*. 1997;77:132–44.
- Leetun D, Ireland M, Willson J, Ballantyne B, Davis I. Core stability measures as risk factors for lower extremity injury in athletes. *Med Sci Sports Exerc*. 2004;36(6):926–34.
- Willson J, Ireland M, Davis I. Core strength and lower extremity alignment during single leg squats. *Med Sci Sports Exerc*. 2006;38(5):945–52.
- Clairborne T, Armstrong C, Gandhi V, Pincivero D. Relationship between hip and knee strength and knee valgus during a single leg squat. *J Appl Biomech*. 2006;22(1):41–50.
- Nadler S, Malanga G, Bartoli L, Feinberg J, Prybicien M, DePrince M. Hip muscle imbalance and low back pain in athletes: Influence of core strengthening. *Med Sci Sports Exerc*. 2002;34(1):9–16.
- Mascal C, Landel R, Powers C. Management of patellofemoral pain targeting hip, pelvis, and trunk muscle function: Two case reports. *J Ortho Sports Phys Ther*. 2003;33:647–60.
- Mills J, Taunton J, Mills W. The effect of a 10-week training regimen on lumbo-pelvic stability and athletic performance in female athletes: A randomized-controlled trial. *Phys Ther Sport*. 2005;6:60–66.
- Tyler T, Nicholas S, Weinstein R, Mullaney M, McHugh M. Successful outcome of patellofemoral pain targeting hip and pelvis muscle function and the relationship of therapy visits. Proceedings of the Combined Sections Meeting: Sports Physical Therapy Section; 2007.
- Zazulak B, Hewett T, Reeves N, Goldberg B, Cholewicki J. The effects of core proprioception on knee injury. *Am J Sports Med*. 2007;35(3):368–73.
- Bandy W, Irion J. The effect of time of static stretch on the flexibility of the hamstring muscles. *Phys Ther*. 1994;74:845–52.
- Feland J, Myrer J, Schulthies S. The effect of duration of stretching of the hamstring muscle group for increasing range of motion in people aged 65 years or older. *Phys Ther*. 2001;81:1110–17.
- Ford K, Myer G, Toms H, Hewett T. Gender differences in the kinematics of unanticipated cutting in young athletes. *Med Sci Sports Exerc*. 2005;37(1):124–29.
- Hurd W, Chmielewski T, Axe M, Davis I, Snyder-Mackler L. Differences in normal and perturbed walking kinematics between male and female athletes. *Clin Biomech*. 2004;19(5):465–72.
- Law L, Smidt G. Underwater forces produced by the Hydro-Tone bell. *J Ortho Sports Phys Ther*. 1996;23(4):267–71.
- Kelly B, Roskin L, Kirkendall D, Speer K. Shoulder muscle activation during aquatic and dry land exercises in nonimpaired subjects. *J Ortho Sports Phys Ther*. 2000;30(4):204–10.
- Knott M, Voss D. *Proprioceptive Neuromuscular Facilitation, Patterns and Techniques*, 2nd ed. Philadelphia: Harper & Row; 1968.
- Pengel H, Maher C, Refshauge K. Systematic review of conservative interventions for subacute low back pain. *Clinical Rehabilitation*. 2002;16:811–20.
- Jones K, Adams D, Winters-Stone K, Burckhardt C. A comprehensive review of 46 exercise treatment studies in fibromyalgia. *Health and Quality of Life Outcomes*. 2006;4(67):1–6.
- White J, Hornsby J, Gorsby G, Ultrich I, Briggs P, Yeater R. A pilot study to determine the efficacy of aquatic therapy on functional outcome in fibromyalgia. *Arthritis Rheum*. 1996;42:S329.
- Pollock M, Gaesser G, Butcher J, et al. ACSM Position Stand on the Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness, and Flexibility in Adults. *Med Sci Sports Exerc*. 1998;30(6):975–91.
- Barker K, Dawes H, Hansford P, Shamley D. Perceived and measured levels of exertion of patients with chronic back pain exercising in a hydrotherapy pool. *Arch Phys Med Rehabil*. 2003;84(9):1319–23.

27. Town G, Bradley S. Maximal metabolic responses of deep and shallow water running in trained runners. *Med Sci Sports Exerc.* 1991;23:238–41.
28. Yamaji K, Greenley M, Northey D, Hughson R. Oxygen uptake and heart rate responses to treadmill and water running. *Can J Sports Sci.* 1990;15:96–98.
29. Ireland M, Willson J, Ballantyne B, McClay D. Hip strength in females with and without patellofemoral pain. *J Orthop Sports Phys Ther.* 2003;33(11):671–76.
30. Meisser S, Davis S, Curl W, Lowery R, Pack R. Etiologic factors associated with patellofemoral pain in runners. *Med Sci Sports Exerc.* 1991;23:1008–15.
31. Kraemer J. Natural course and prognosis of intervertebral disc diseases. *Spine.* 1995;20:635–39.
32. Boissonnault W. Joint and muscle disorders. In: Goodman C, Boissonnault W, eds. *Pathology: Implications for the Physical Therapist.* Philadelphia: Saunders; 1998.
33. Hellmann D, Stone J. Arthritis and musculoskeletal disorders. In: Tierney L, McPhee S, Papadakis M, eds. *Current Medical Diagnosis and Treatment.* Vol 44. New York: Lange Medical Books/McGraw-Hill; 2005:781–836.
1. Senbursa G, Baltaci G, Atay A. Comparison of conservative treatment with and without manual physical therapy for patients with shoulder impingement syndrome: A prospective, randomized clinical trial. *Knee Surg Sports Trumatol Arthrosc.* 2007; Feb 28.
2. Yelin E, Callahan L. The economic cost and social and psychological impact of musculoskeletal conditions. *Arthritis Rheum.* 1995;38:1351–62.
3. Kohles S, Gregorczyk K, Phillips T, Brody L, Orwin J. Concentric and eccentric shoulder rehabilitation biomechanics. *Proc Inst Mech Eng.* 2007;221(3):237–49.
4. De Smedt T, de Jong A, Dossche L, van Leemput W, Van Glabbeek F. Lateral epicondylitis in tennis: Update on aetiology, biomechanics and treatment. *Br J Sports Med.* 2007; Jul 6.
5. Jensen I, Harms-Ringdahl K. Strategies for prevention and management of musculoskeletal conditions: Neck pain. *Best Pract Res Clin Rheumatol.* 2007;21(1):93–108.
6. Brue S, Valentin A, Forssblad M, Werner S, Mikkelsen C, Cerulli G. Idiopathic adhesive capsulitis of the shoulder: A review. *Knee Surg Sports Trumatol Arthrosc.* 2007; Feb 28.
7. Levine W, Kashyap C, Bak S, Ahmad C, Blaine T, Bigliani L. Nonoperative management of idiopathic adhesive capsulitis. *J Shoulder Elbow Surg.* 2007; May 23.
8. Robinson C, Akhtar A, Mitchell M, Beavis C. Complex posterior fracture-dislocation of the shoulder: Epidemiology, injury patterns and results of operative treatment. *J Bone Joint Surg Am.* 2007;89(7):1454–66.
9. Jones K, Adams D, Winters-Stone K, Burckhardt C. A comprehensive review of 46 exercise treatment studies in fibromyalgia. *Health and Quality of Life Outcomes.* 2006;4(67):1–6.
10. Templeton M, Booth D, O'Kelly W. Effects of aquatic therapy on joint flexibility and functional ability in subjects with rheumatic disease. *J Ortho Sports Phys Ther.* 1996;23(6):376–81.
11. McClure P, Balaicuis J, Heiland D, Broersma M, Thorn-dike C, Wood A. A randomized controlled comparison of stretching procedures for posterior shoulder tightness. *J Ortho Sports Phys Ther.* 2007;37(3):108–14.
12. Bandy W, Irion J. The effect of time of static stretch on the flexibility of the hamstring muscles. *Phys Ther.* 1994;74:845–52.
13. White J, Hornsby J, Gorsby G, Ultrich I, Briggs P, Yeater R. A pilot study to determine the efficacy of aquatic therapy on functional outcome in fibromyalgia. *Arthritis Rheum.* 1996;42:S329.
14. Hall C. The shoulder girdle. In: Hall C, Brody L, eds. *Therapeutic Exercise: Moving Toward Function.* 2nd ed. Philadelphia: Lippincott, Williams and Wilkins; 2003.
15. Kraemer J. Natural course and prognosis of intervertebral disc diseases. *Spine.* 1995;20:635–39.
16. Fritz J, Brennan G. Preliminary examination of a proposed treatment-based classification system for patients receiving physical therapy interventions for neck pain. *Phys Ther.* 2007;87(5):513–24.
17. Butler D, Jones M. *Mobilization of the Nervous System.* St. Louis: Churchill Livingstone; 1999.
18. Knott M, Voss D. *Proprioceptive Neuromuscular Facilitation, Patterns and Techniques.* 2nd ed. Philadelphia: Harper & Row; 1968.
19. Simmons V, Hansen P. Effectiveness of water exercise on postural mobility in the well elderly: An experimental study on balance enhancement. *J Gerontology.* 1996;51A(5):M233–38.
20. Law L, Smidt G. Underwater forces produced by the Hydro-Tone bell. *J Ortho Sports Phys Ther.* 1996;23(4):267–71.
21. Aguinaldo A, Buttermore J, Chambers H. Effects of upper trunk rotation on shoulder joint torque among baseball pitchers of various levels. *J Appl Biomech.* 2007;23(1):42–51.
22. Ecklund K, Lee T, Tibone J, Gupta R. Rotator cuff tear arthroplasty. *J Am Acad Orthop Surg.* 2007;15(6):340–49.
23. Owens M, Duffey M, Nelson L, Deberardino L, Taylor C, Mountcastle S. The incidence and characteristics of shoulder instability at the United States Military Academy. *Am J Sports Med.* 2007;37(7):1168–73.
24. Placzek R, Drescher W, Deuretzbacher G, Hempfing A, Meiss A. Treatment of chronic radial epicondylitis with botulinum toxin A. A double-blind, placebo-controlled, randomized multicenter study. *J Bone Joint Surg Am.* 2007;89(2):255–60.
25. Vasseljen O. Physiotherapy interventions improve tennis elbow with superior long-term outcomes to corticosteroid injections. *Aust J Physiother.* 2007;53(1):61.
26. Kelly B, Roskin L, Kirkendall D, Speer K. Shoulder muscle activation during aquatic and dry land exercises in nonimpaired subjects. *J Ortho Sports Phys Ther.* 2000;30(4):204–10.
27. Wierzwicka M, Wiegner A, Shahani B. The role of agonist and antagonist in fast arm movements in man. *Exp Brain Res.* 1986;63:331–37.

CHAPTER 15

1. Yelin E, Callahan L. The economic cost and social and psychological impact of musculoskeletal conditions. *Arthritis Rheum.* 1995;38:1351–62.
2. Lawrence R, Helmich C, Arnett F. Estimates of the prevalence of arthritis and selected musculoskeletal disorders in the United States. *Arthritis Rheum.* 1998;41:778–99.
3. McMurray R, Berry M, Katz V. Cardiovascular responses of pregnant women during aerobic exercise in the water: A longitudinal study. *Int J Sports Med.* 1988;9:433–47.
4. Cochrane T, Davey R, Matthes Edwards S. Randomised controlled trial of the cost-effectiveness of water-based therapy for lower limb osteoarthritis. *Health Technol Assess.* 2005;9(31):1–114.
5. Takeshima N, Rogers M, Watanabe E. Water-based exercise improves health-related aspects of fitness in older women. *Med Sci Sports Exerc.* 2002;33:544–51.
6. Foley A, Halbert J, Hewitt T, Crotty M. Does hydrotherapy improve strength and physical function in patients with osteoarthritis: A randomised controlled trial comparing a gym based and a hydrotherapy based strengthening program. *Ann Rheum Dis.* 2003;62:1162–67.
7. Wyatt F, Milam S, Manske R, Deere R. The effects of aquatic and traditional exercise programs on persons with knee osteoarthritis. *J Strength Conditioning Res.* 2001;15:337–40.
8. Hinman R, Heywood S, Day A. Aquatic physical therapy for hip and knee osteoarthritis: Results of a single-blind randomized controlled trial. *Phys Ther.* 2007;87(1):32–43.
9. Bartels E, Lund H, Hagen K, Dagfinrud H, Christensen R, Danneskiold-Samsoe B. Aquatic exercise for the treatment of knee and hip osteoarthritis. (Protocol) *Cochrane Database of Systematic Reviews.* 2007(4).
10. Hall J, Grant J, Blake D, Taylor G, Garbutt G. Cardio-respiratory responses to aquatic treadmill walking in patients with rheumatoid arthritis. *Physiother Res Int.* 2004;9(1):59–73.
11. Christie J, Sheldahl L, Tristani F. Cardiovascular regulation during head-out immersion exercise. *J Appl Physiol.* 1990;69:657–64.
12. Templeton M, Booth D, O'Kelly W. Effects of aquatic therapy on joint flexibility and functional ability in subjects with rheumatic disease. *J Ortho Sports Phys Ther.* 1996;23(6):376–81.
13. Douchette S, Goble E. The effect of exercise on patellar tracking in lateral patellar compression syndrome. *Am J Sports Med.* 1992;20(4):434–37.
14. Tyler T, Nicholas S, Weinstein R, Mullaney M, McHugh M. Successful outcome of patellofemoral pain targeting hip and pelvis muscle function and the relationship of therapy visits. Proceedings of the Combined Sections Meeting: Sports Physical Therapy Section; 2007.
15. Bandy W, Irion J. The effect of time of static stretch on the flexibility of the hamstring muscles. *Phys Ther.* 1994;74:845–52.
16. Voss D, Ionta M, Myers B. *Proprioceptive Neuromuscular Facilitation: Patterns and Techniques*, 3rd ed. Philadelphia: Harper & Row; 1985.

17. Steinkamp L, Dillingham M, Markel M, Hill J, Kaufman K. Biomechanical considerations in patellofemoral joint rehabilitation. *American Journal of Sports Medicine.* 1993;21:438–44.
18. Powers C, Ward S, Fredericson M, Guillet M, Shellock F. Patellofemoral kinematics during weight-bearing and non-weight-bearing knee extension in persons with lateral subluxation of the patella: A preliminary study. *J Orthop Sports Phys Ther.* 2003;33(11):677–85.
19. Reischl F, Powers C, Rao S, Perry J. Relationship between foot pronation and rotation of the tibial and femur during walking. *Foot Ankle.* 1999;20:513–20.
20. Poyhonen T, Kyrolainen H, Keskinen K, Hautala A, Savolainen J, Malkia E. Electromyographic and kinematic analysis of therapeutic knee exercises under water. *Clin Biomech.* 2001;16(6):496–504.
21. Poyhonen T, Keskinen K, Kyrolainen H, Hautala A, Savolainen J, Malkia E. Neuromuscular function during therapeutic knee exercise under water and on dry land. *Arch Phys Med Rehabil.* 2001;82(10):1446–52.
22. Pollock M, Gaesser G, Butcher J, et al. ACSM Position Stand on the Recommended Quantity and Quality of Exercise for Developing and Maintaining Cardiorespiratory and Muscular Fitness, and Flexibility in Adults. *Med Sci Sports Exerc.* 1998;30(6):975–91.
23. Devereux K, Robertson D, Briffa N. Effects of a water-based program on women 65 years and over: A randomised controlled trial. *Aust J Physiother.* 2005;51(2):102–8.
24. Harrison R, Hillman M, Bulstrode S. Loading the lower limb when walking partially immersed: Implications for clinical practice. *Physiotherapy Practice.* 1992;78:164–66.
25. Harrison R, Bulstrode S. Percentage weightbearing during partial immersion in the hydrotherapy pool. *Physiotherapy Practice.* 1987;3:60–64.
26. Simmons V, Hansen P. Effectiveness of water exercise on postural mobility in the well elderly: An experimental study on balance enhancement. *J Gerontology.* 1996;51A(5):M233–38.

CHAPTER 16

- Barbeau H, Visintin. Optimal outcomes obtained with body-weight support combined with treadmill training in stroke subjects. *Arch Phys Med Rehab.* 2003;84:1458–65.
- Barbieri M, Ferrucci L, Ragno E, et al. Chronic inflammation and the effect of IGF-1 on muscle strength and power in older persons. *Am J Physiol Endocrinol Metab.* 2002;284:E481–87.
- Bar-Or O. *Pediatric Sports Medicine for the Practitioner*, 1st ed. New York: Springer-Verlag; 1983.
- Bar-Or O, Inbar O. Physiological effects of a sports rehabilitation program on cerebral palsy and post-poliomyelitic adolescents. *Medical Science and Sports.* 1976;8:157–61.
- Berg K. Effect of physical training on school children with cerebral palsy. *Acta Paediatrica Scandinavia.* 1970;59:27–33.
- Berg K, Wood-Dauphinee S, Williams JI, Gayton D. Measuring balance in the elderly: Preliminary development of an instrument. *Physiotherapy Canada.* 1989;41(6):304–11.

- Berg K, Maki B, Williams JJ, Holliday PJ, Wood-Dauphinee S. Clinical and laboratory measures of postural balance in an elderly population. *Archives of Physical Medicine and Rehabilitation*. 1992;73:1073-80.
- Berger J. Protecting the mobility of the aging person with cerebral palsy or spina bifida. In: Lollar D, ed. *Preventing Secondary Conditions Associated With Spina Bifida or Cerebral Palsy*. Washington, DC: Spina Bifida Association of America; 1994:54-64.
- Bohannon R. Test-retest reliability of hand-held dynamometry during a single session of strength assessment. *Physical Therapy*. 1986;66:206-9.
- Bruininks RH. *Bruininks-Oseretsky Test of Motor Proficiency II*. Circle Pines, MN: American Guidance Service; 2005.
- Burd B. Infant swimming classes immersed in controversy. *The Physician and Sports Medicine*. 1986;14:239-44.
- Coleman H, Finlay FO. Community pediatrics: When is it safe for babies to swim? *Professional Care of Mother and Child*. 1995;5:85-86.
- Coster WJ et al. *School Functional Assessment*. Sargent College of Health and Rehabilitation Sciences, Boston University.
- Darrah J, Wessel J, Nearingburg P, O'Connor M. Evaluation of a community fitness program for adolescents with cerebral palsy. *Pediatric Physical Therapy*. 1999;11:18-23.
- Driver S, O'Connor J, Lox C, and Rees K. Evaluation of an aquatic programme on fitness parameters of individuals with a brain injury. *Brain Injury*. 2004;18(9):847-59.
- Fernandez J, Pitetti K. Training of ambulatory individuals with cerebral palsy. *Archives of Physical Medicine and Rehabilitation*. 1993;74:468-72.
- Frey-Law L, Schmidt G. Underwater forces produced by the Hydro-Tone Bell. *Journal of Orthopedic and Sports Medicine*. 1996;23:267-271.
- Geigle PR, Cheek WL, Gould ML, Hunt HC, and Shafiq Q. Aquatic physical therapy for balance: The interaction of somatosensory and hydrodynamic principles. *Journal of Aquatic Physical Therapy*. 1997;5(1):4-10.
- Geigle PR, Norton C. Optimal aquatic practice. *Journal of Aquatic Physical Therapy*. 2005; winter.
- Gibbons WJ, Fruchter N, Sloan S, Levy RD. Reference values for a multiple repetition 6 minute walk test in healthy adults older than 20 years. *J Cardiopulmonary Rehabil*. 2001;21:87-93.
- Giesecke CL. Aquatic rehabilitation of clients with spinal cord injury. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott-Raven; 1997:127-50.
- Goldberg GN et al. Infantile water intoxication after a swimming lesson. *Pediatrics*. 1986;70(4):599-600.
- Haley SM, Coster WJ et al. *Pediatric Evaluation of Disability Inventory*. Center for Rehabilitation Effectiveness. Sargent College of Health and Rehabilitation Sciences, Boston University.
- Hesse et al. Treadmill training w/ partial body weight support (PWS) compared with physiotherapy in nonambulatory hemiparetic patients. *Stroke*. 1995;26(6):976-81.
- How to Manual*. Aquatic Physical Therapy Section. Denver; 2003.
- Hutzler Y, Chacham A, Bergman U, Szeinberg A. Effects of a movement and swimming program on vital capacity and water orientation skills of children with cerebral palsy. *Dev Med Child Neurol*. 1998;40:176-81.
- Irion J, Herman H. 2008.
- Keren O, Reznik J, and Groswasser Z. Combined motor disturbances following severe traumatic brain injury: An integrative along-term treatment approach. *Brain Injury*. 2001;15(7):633-38.
- Kramer J, MacPhail H. Relationships among measures of walking efficiency, gross motor ability and isokinetic strength in adolescents with cerebral palsy. *Pediatric Physical Therapy*. 1994;6:3-8.
- Kropp RM, Schwartz JF. Water intoxication from swimming. *J Pediatrics*. 1982;947-48.
- Lagally KM, Robertson RJ. Construct validity of the OMNI resistance exercise scale. *Journal of Strength and Conditioning Research*. 2006;20(2):252-56.
- Langendorfer S. Aquatic experiences for young children: Evaluating risks and benefits. *Pediatric Exercise Science*. 1989;1:230-43.
- MacPhail H, Kramer J. Effect of isokinetic strength-training on functional ability and walking efficiency in adolescents with cerebral palsy. *Developmental Medicine and Child Neurology*. 1995;37:731-39.
- Messer B. Manual for the adult self-perception profile. In: Harter S, ed. Denver: University of Denver; 1986:43.
- Murphy K, Molnar G, Lankasky K. Medical and functional status of adults with cerebral palsy. *Developmental Medicine and Child Neurology*. 1995;37:1075-84.
- Nelson K, Swaiman K. Cerebral palsy. *Pediatric Neurology: Principles and Practice*, 2nd ed. Toronto: Mosby; 1993:18.
- Nelson S, Fischer J. YMCA Swim Therapy Program for Young Adults with Cerebral Palsy and Related Neuromotor Dysfunction. Totline. Section on Pediatrics, American Physical Therapy Association. 1984;10(2):7-8.
- Neumann P, Gill V. Pelvic floor and abdominal muscle intervention: EMG activity and intra-abdominal pressure. *Int Urogynecol J*. 2002;13:125-32.
- Ondrak KS, Thorpe DE. Physiologic responses of adolescents with CP when walking on land and in water: A case series. *Journal of Aquatic Physical Therapy*. 2007;15(2).
- Overeinder J, Turk M, Dalton A, Janicki, M. "I'm worried about the future . . ." The aging of adults with cerebral palsy. In: JFK Johnson Rehabilitation Institute PDS, ed. *Cerebral Palsy: A New Era of Technology, Therapeutic Options and Social Responsibility*. JFK Conference Center, Edison, NJ: JFK Johnson Rehabilitation Institute; 1993:17.
- Pearson KG. Proprioceptive regulation of locomotion. *Curr Opin Neurobiol*. 1995;5:786-91.
- Pfeiffer KA, Pivarnik JM, Womack CJ, Reeves MJ, Malina RM. Reliability and validity of the Borg and OMNI rating of perceived exertion scales in adolescent girls. *Medicine and Science in Sports and Exercise*. 2002;34(12):2057-61.
- Reid MB, Li YP. Cytokines and oxidative signalling in skeletal muscle. *Acta Physiol Scand*. 2001;171:225-32.

- Roemmich JN, Barkley JE, Epstein LH, Lobarinas CL, White TM, Foster JH. Validity of PCERT and OMNI walk/run ratings of perceived exertion. *Medicine and Science in Sports and Exercise*. 2006;38(5):1014-19.
- Robertson RJ et al. Observation of perceived exertion in children using the OMNI pictorial scale. *Medicine and Science in Sports and Exercise*. 2006;38(1):158-66.
- Robertson RJ et al. Validation of the children's OMNI RPE scale for stepping exercise. *Medicine and Science in Sports and Exercise*. 2005;37(2):290-98.
- Russell D, Rosenbaum P, Gowland C, et al. *Gross Motor Function Measure Manual*, 2nd ed. Toronto, Canada: Easter Seals Research Institute; 1993:112.
- Sahrmann SA. *Diagnosis and Treatment of Movement Impairment Syndromes*. St. Louis: Mosby; 2002.
- Sapsford RR, Hodges PW. Contraction of the pelvic floor muscles during abdominal maneuvers. *Arch Phys Med Rehabil*. 2001;82:1081-88.
- Shepard R. *Fitness in Special Populations*. Champaign, IL: Human Kinetics; 1990.
- SMART Balance Master Limits of Stability Motor Impairment Assessment. NeuroCom International, Inc. Accessed May 7, 2008. www.onbalance.com.
- Styer-Acevedo JL. Aquatic rehabilitation of the pediatric client. In: Ruoti RG, Morris DM, Cole AJ, eds. *Aquatic Rehabilitation*. Philadelphia: Lippincott-Raven; 1997:151-70.
- Sullivan KJ, Knowlton BJ, Dobkin BH. Step training with body weight support: Effect of treadmill speed and practice paradigms on poststroke locomotor recovery. *Arch Phys Med Rehabil*. 2002;83:683-91.
- Suomi R, Kocejka DM. Postural sway characteristics in women with lower extremity arthritis before and after an aquatic exercise intervention. *Archives of Physical Medicine and Rehabilitation*. 2000;81(6):780-85.
- Thorpe DE, Reilly M. The effect of an aquatic resistive exercise program on lower extremity strength, energy expenditure, functional mobility, balance and self-perception in an adult with cerebral palsy: A retrospective case report. *Journal of Aquatic Physical Therapy*. 2000;8(2):18-24.
- Thorpe DE, Reilly M, Case L. The effects of an aquatic resistive exercise program on ambulatory children with cerebral palsy. *Journal of Aquatic Physical Therapy*. 2005;13(2):21-34.
- Tirosh, R. WOTA2 pool assessment. Alyn Hospital, Pediatric and Adolescent Rehabilitation. Personal communication, 2007.
- Trouillas P, Takayanagi T, Hallett M et al. International cooperative ataxia rating scale for pharmacological assessment of the cerebellar syndrome. *Journal of the Neurological Sciences*. 1997;145(2):205-11.
- Vogtle LK, Morris DM, Denton BG. An aquatic program for adults with cerebral palsy living in group homes. *Physical Therapy Case Reports*. 1998;1(5):250-59.
- www.wikipedia.org/wiki/Hyponatremia.