

Course Title: Older Adults and Aquatic Applications

<u>Produced by:</u> Fitness Learning Systems

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Course Type: e-Learning Home Study

Credit hours: IACET (International Association for Continuing Education and Training) 0.5

(5 Hours) Approved and Accepted by several additional organizations.

Author:

Aquatic Exercise Association

This eLearning course is developed from the material from a live workshop conducted by the Aquatic Exercise Association. Several aquatic fitness industry professionals contributed to the information contained in this course. The Aquatic Exercise Association is a not-for-profit educational organization committed to the advancement of aquatic fitness worldwide. AEA has certified over 45,000 professionals worldwide and maintains a strong membership base with representation in over 50 countries. AEA currently offers a certification program in the United States and internationally, as well as in-depth educational programs offered live and as home study designed to enhance leadership skills and knowledge in the aquatic fitness industry.

Contributions to this course were made by:

- **Angie Proctor** Executive Director Aquatic Exercise Association. International Presenter and Educator.
- Monique Acton Monique Acton is the president of The Personal Health Trac in Venice, Florida. She provides in home personal training, creating both land-based and aquatic exercise programs for her clientele. She travels internationally presenting aquatic exercise programs. Monique is recognized for her innovative ideas for exercise options that appeal to all ages and ability levels. Aquatic Exercise Association Training Specialist.
- Marti Peters Marti Peters presents educational programs worldwide and is an author for several publications. She works as program director at a member owned fitness facility, and is the owner of Heart Dancing Fitness. Aquatic Exercise Association Training Specialist.
- Sandy Stoub As a recognized industry leader, Sandy blends a Bachelor's degree in Exercise Science and a Master's degree in Gerontology with over 25 years of fitness experience. Beginning as an instructor, her journey has included corporate fitness, consulting, hospital wellness, and management. Former Aquatic Exercise Association Training Specialist.

Course Summary:

Older Adults comprise the fastest growing segment of the American population and aquatic exercise can help them maintain functional fitness and independent living skills. A thorough review of the physiological aspects of aging in this course will introduce aquatic fitness professionals to important considerations for providing safe and effective programming for the older adult population. This course includes programming and exercise descriptions with videos for three levels of senior aquatic programming to help you reach the needs of ALL older adults!

Objectives:

After completing this course you will:

- 1. Discuss variables and statistics related to aging.
- 2. Define functional age and chronological age and discuss parameters for categorizing older adults.
- 3. Identify 5 benefits of the aquatic environment for older adult exercise.
- 4. Identify and discuss 5 major categories of physiological changes related to aging.
- 5. Discuss marketing strategies for older adult aquatic exercise.
- 6. Explain how aquatic fitness programs improve psychological and social quality for older adults.
- 7. Identify the 4 components of an aquatic class for older adults.
- 8. Describe special considerations for programming and limitations for older adults participating in aquatic exercise.
- 9. Discuss skills desirable for an older adult aquatic exercise instructor including 3 ways to develop rapport and 4 skills to use during and after class.
- 10. Review 3 sample aquatic workouts for older adults and explain safe and effective exercises for warm up, cardiorespiratory endurance and flexibility.

Outline:

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Fast Track Menu
Overview of Aging
Age Definitions and Parameters
Benefits of the Aquatic Environment
Marketing to Older Adults
Physiological Changes Relative to Aging
      Sensory Changes
      Changes in Body Appearance
       Balance, Posture, Stability and Mobility
             Significance of Falls
             Balance
             Posture
             Stability
             Programming for Balance and fall Prevention
      Cardiorespiratory Changes
      Musculoskeletal Changes
Psychological and Social Changes
Class Format
      Warm Up
      Main Segment
      Resistance Training
      Cool Down
Special Considerations
      Programming
      Limitations
Instructor Skills
Sample Workouts
      Sample Workout 1
             Warm Up
             Rhythmic Stretches
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CR Pattern A CR Pattern B

CR Pattern C

Balance and Core Conditioning

Final Stretch

Sample Workout 2

Warm Up

CR Circuit 1

CR Circuit 2

CR Circuit 3

CR Circuit 4

CR Circuit 5

CR Wrap Up

Final Stretch

Sample Workout 3

Extended Warm UP

Combination One

Combination Two

Combination Three

Combination Four

Interval Cycle One

Interval Cycle Two

Interval Cycle Three

Abdominal Techniques

Final Stretch

Summary

Bibliography:

- 1. American Geriatrics Society. (2002) Guidelines for the prevention of falls in older persons. *American Geriatrics Society website*. Available at: www.americangeriatrics.org/products/positionpapers/Falls.pdf.
- 2. Arnheim, (1993) PRINCIPLES OF ATHLETIC TRAINING. Eighth Edition, Mosby.
- Arnold CM, Faulkner RA. (2010) The effect of aquatic exercise and education on lowering fall risk in older adults with hip osteoarthritis. <u>J Aging Phys Act.</u> Jul;18(3):245-60.
- 4. Baker, S.P., O'Neill, B., Ginsburg, M.J., Li, G. (1992). *The Injury Fact Book* (2nd ed.). New York: Oxford University Press.
- 5. Bruess. (1989) DECISIONS FOR HEALTH, Third Edition, WCB.
- 6. <u>Cadmus L, Patrick MB, Maciejewski ML, Topolski T, Belza B, Patrick DL</u>. (2010) Community-based aquatic exercise and quality of life in persons with osteoarthritis. <u>Med Sci Sports Exerc.</u> 2010 Jan;42(1):8-15.
- 7. Centers for Disease Control and Prevention. (2012) Web-based Injury Statistics Query and Reporting System (WISQARS) [database online]. *National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (producer)*. Available: www.cdc.gov/ncipc/wisgars
- 8. Centers for Disease Control and Prevention. (2003) Web-based Injury Statistics Query and Reporting System (WISQARS) [Online]. National Center for Injury Prevention and Control, Centers for Disease Control and Prevention (producer): www.cdc.gov/ncipc/wisqars.
- 9. DeVries. (1987) FITNESS AFTER 50, Scribner's.
- 10. Gillespie LD, Gillespie WJ, Robertson, MC, Lamb SE, Cumming RG, Rowe BH. (2002). Interventions for preventing falls in elderly people. *Cochrane Rev Abstract*. Medscape website. Available at: www.medscape.com/viewarticle/434825_print.

- 11. Hornbrook MC, Stevens VJ, Wingfield DJ, Hollis JF, Greenlick MR, Ory MG. (1994) Preventing falls among community-dwelling older persons: Results from a randomized trial. *The Gerontologist*: 34(1):16â€'23.
- 12. Josephson, K.R., Fabacher, D.A., Rubenstein, L.Z. (1991). Home Safety and Fall Prevention. *Clinical Geriatric* Med, 7:707-731.
- 13. <u>Katsura Y, Yoshikawa T, Ueda SY, Usui T, Sotobayashi D, Nakao H, Sakamoto H, Okumoto T, Fujimoto S</u>. (2010) Effects of aquatic exercise training using water-resistance equipment in elderly. <u>Eur J Appl Physiol.</u> Mar;108(5):957-64. Epub 2009 Dec 4.
- 14.e Fitness Center, AKWA, Vol 17 No 3, page ___
- 15. Knopf, Karl. . (XXXX) What Older Adults Want in a Teacher, AKWA, Vol __No __, page __
- 16. Kreighbaum. (1990) BIOMECHANICS, Third Edition, Macmillan,.
- 17. Lord S.R., Rogers M.W., Howland A., Fitzpatrick R. (1999) Lateral stability, sensorimotor function, and falls in older people. *J Am Geriatr Soc.*, 47(9):1077-1081.
- 18. Lorig. (1988) THE ARTHRITIS HELPBOOK, Addison Wesley.
- 19. McArdle, (1991) EXERCISE PHYSIOLOGY, Third Edition, Lead & Febiger.
- 20. Nordin. (1989) BASIC BIOMECHANICS OF THE MUSCULOSKELETAL SYSTEM, Second Edition, Lea & Febiger.
- 21. Richardson DR, Hicks MJ, Walker RB. (2002) Falls in rural elders: an empirical study of risk factors. *Medscape website*. www.medscape.com/viewarticle/434348_print. Rogers, M.E., (2003) Balance and Bands. The Journal of Active Aging, 24-32 Rose, R.J. (2003). FallProof!: A Comprehensive Balance and Mobility Training Program Human Kinetics, Champaign, IL
- 22. Rubenstein, L.Z. et al. (2001) Quality indicators for the Management and Prevention of Falls and Mobility Problems in vulnerable Elders. *Annual Internal Medicine*, 135: 686-693.
- 23. Samelson EJ, Zhang Y, Kiel DP, Hannan MT, FelsonDT. (2002) Effect of birth cohort on risk of hip fracture: Age-specific incidence rates in the Framingham Study. *American Journal of Public Health*, 92(5):858â€'62.
- 24. Shumway-Cook, A., Woollacott, M.H. (2001) *Motor Control. Theory and Practical Applications* (2nd ed). Philadelphia: Lippincott Williams & Wilkins.
- 25. Tennstedt, S., Peterson, E, Howland, J., Lachman, M. (1998) *A Matter of Balance: Managing Concerns About Falls Training Manual.* Boston University: Boston, MA.
- 26. Teno J, Kiel DP, Mor V. (1990) Multiple stumbles: A risk factor for falls in community-dwelling elderly. *Journal of the American Geriatrics Society*, 30:1321â€'5.
- 27. Tortora (1990) PRINCIPLES OF ANATOMY AND PHYSIOLOGY, sixth Edition, Harper and Collins.
- 28. YMCA (1992) Older Adult Manual, Revised Edition.
- 29. YMCA (1989) Y's WAY TO PHYSICAL FITNESS, Third Edition.
- 30. Zylstra, Jayme. (Feb/Mar 2004) Retaining Your Seniors. AKWA Vol 17 No 5 page14.