

ARN Bibliography #14

TOPIC: Bone Density and Body Composition



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1. Alexander, M. J. L., Butcher JE, MacDonald PB. Effect of a water exercise program on walking gait, flexibility, strength, self-reported disability and other psycho-social measures of older individuals with arthritis. *Physiother Can.* 2001;53:203-211.
2. Almagro Martinez P. Rehabilitating treatment of senile osteoporosis. *Geriatrka (Madrid)*. 1994;10:33-38.
3. Anon. Proceedings of the 17th annual international gravitational physiology meeting. *J Gravit Physiol.* United States:1996;3:1-105.
4. Ay A, Yurtkuran M. Influence of aquatic and weight-bearing exercises on quantitative ultrasound variables in postmenopausal women. *Am J Phys Med Rehabil.* 2005;84:52-61.
5. Ay A, Yurtkuran M. Evaluation of hormonal response and ultrasonic changes in the heel bone by aquatic exercise in sedentary postmenopausal women. *American Journal of Physical Medicine & Rehabilitation.* 2003;82:942-949.
6. Benedict A, Freeman R. The effect of aquatic exercise on aged person's bone density, body image, and morale. *Activities Adapt Aging.* 1993;17:67-85.
7. Block JE, Friedlander AL, Brooks GA, Steiger P, Stubbs HA, Genant HK. Determinants of bone density among athletes engaged in weight-bearing and non-weight-bearing activity. *J Appl Physiol.* 1989;67:1100-1105.
8. Bosch PR, Wells CL. Effect of immersion on residual volume of able-bodied and spinal cord injured males. *Med Sci Sports Exerc.* 1991;23:384-388.
9. Bouchard C. Current understanding of the etiology of obesity: Genetic and nongenetic factors. *Am J Clin Nutr.* 1991;53:1561S-1565S.
10. Bravo G, Gauthier P, Roy P, Payette H. Effects of an aquatic exercise program in osteopenic women. *Canada:*1996;44:S14.
11. BUSCHMANN R. The use of nonspecific irritation therapy in balneotherapy with special reference to body constitution. *Z Rheumaforsch.* 1955;14:186-192.
12. Butts NK, Tucker M, Greening C. Physiologic responses to maximal treadmill and deep water running in men and women. *Am J Sports Med.* 1991;19:612-614.
13. Calles-Escandon J, Arciero PJ, Gardner AW, Bauman C, Poehlman ET. Basal fat oxidation decreases with aging in women. *J Appl Physiol.* 1995;78:266-271.
14. Chatard JC, Lavoie JM, Ottoz H, Randaxhe P, Cazorla G, Lacour JR. Physiological aspects of swimming performance for persons with disabilities. *Med Sci Sports Exerc.* 1992;24:1276-1282.
15. Chomicz T, Katz WA. A pool tool for osteoporosis. *Physician Sportsmed.* 1998;26:10-11.
16. Chu KS, Rhodes EC. Physiological and cardiovascular changes associated with deep water running in the young. possible implications for the elderly. *Sports Med.* 2001;31:33-46.
17. Colman E, Toth MJ, Katzell LI, Fonong T, Gardner AW, Poehlman ET. Body fatness and waist circumference are independent predictors of the age-associated increase in fasting insulin levels in healthy men and women. *Int J Obes Relat Metab Disord.* 1995;19:798-803.
18. D'Acquisto LJ, D'Acquisto DM, Renne D. Metabolic and cardiovascular responses in older women during shallow-water exercise. *J Strength Condition Res.* 2001;15:12-19.
19. Davidson K, McNaughton L. Deep water running training and road running training improve VO2 max in un-

Bone Density & Body Composition

- trained women. *J Strength Condition Res.* 2000;14:191-195.
20. De Lorenzo F, Mukherjee M, Kadziola Z, Sherwood R, Kakkar VV. Central cooling effects in patients with hypercholesterolaemia. *Clin Sci.* 1998;95:213-217.
21. DeLisa JA, Gans BM, Walsh NE, Bockenek WL. *Physical Medicine and Rehabilitation: Principles and Practice.* 4th ed. Philadelphia: Lippincott Williams & Wilkins; 2005.
22. DeMaere JM, Ruby BC. Effects of deep water and treadmill running on oxygen uptake and energy expenditure in seasonally trained cross country runners. *J Sports Med Phys Fitness.* 1997;37:175-181.
23. Devereux K, Robertson D, Briffa NK. Effects of a water-based program on women 65 years and over: A randomised controlled trial. *Aust J Physiother.* 2005;51:102-108.
24. 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;18:847-859.
25. Ertl AC, Bernauer EM, Hom CA. Plasma volume shifts with immersion at rest and two exercise intensities. *Med Sci Sports Exerc.* 1991;23:450-457.
26. Eyolfson DA, Tikuisis P, Xu X, Weseen G, Giesbrecht GG. Measurement and prediction of peak shivering intensity in humans. *Eur J Appl Physiol.* 2001;84:100-106.
27. Fowler A. *Effect of body composition on lower extremity weight bearing during partial immersion.* ; 1994.
28. Fu FH, Cen HW, Eston RG. The effects of cryotherapy on muscle damage in rats subjected to endurance training. *Scand J Med Sci Sports.* 1997;7:358-362.
29. Gappmaier E, Lake W, Nelson AG, Fisher AG. Aerobic exercise in water versus walking on land: Effects on indices of fat reduction and weight loss of obese women. *J Sports Med Phys Fitness.* 2006;46:564-569.
30. Giangregorio L, Blimkie CJ. Skeletal adaptations to alterations in weight-bearing activity: A comparison of models of disuse osteoporosis. *Sports Med.* 2002;32:459-476.
31. Giesbrecht GG, Bristow GK. The convective afterdrop component during hypothermic exercise decreases with delayed exercise onset. *Aviat Space Environ Med.* 1998;69:17-22.
32. Giesbrecht GG, Bristow GK. Influence of body composition on rewarming from immersion hypothermia. *Aviat Space Environ Med.* 1995;66:1144-1150.
33. Glickman-Weiss EL, Cheatham C, Caine N, Blegen M, Marcinkiewicz J, Mittleman KD. The influence of gender and menstrual phase on thermosensitivity during cold water immersion. *Aviat Space Environ Med.* 2000;71:715-722.
34. Glickman-Weiss EL, Goss FL, Robertson RJ, Metz KF, Cassinelli DA. Physiological and thermal responses of males with varying body compositions during immersion in moderately cold water. *Aviat Space Environ Med.* 1991;62:1063-1067.
35. Greenleaf JE. Physiological responses to prolonged bed rest and fluid immersion in humans. *J Appl Physiol.* 1984;57:619-633.
36. Handoll HH, Madhok R, Howe TE. Rehabilitation for distal radial fractures in adults. *Cochrane Database Syst Rev* [serial online]. 2002;2:CD003324.
37. Handoll HH, Madhok R, Howe TE. Rehabilitation for distal radial fractures in adults. *Cochrane Database Syst*

Bone Density & Body Composition

Rev. 2006;3:CD003324.

38. Harrison R, Bulstrode S. Percentage weight-bearing during partial immersion in the hydrotherapy pool. *Physiother Pract.* 1987;3:60-63.
39. Hartman H. The comparison between an aquatic running program versus a hard surface running program on aerobic capacity and body composition. 1989.
40. Herregods P, Willems J, Chappel R. Pseudodystrophy at the lower limb in children. *Clin Rheumatol.* 1997;16:425-427.
41. Hodgson S. Proximal humerus fracture rehabilitation. *Clin Orthop Relat Res.* 2006;442:131-138.
42. Holmer I. Oxygen uptake during swimming in man. *J Appl Physiol.* 1972;33:502-509.
43. Jansky L, Janakova H, Ulicny B, et al. Changes in thermal homeostasis in humans due to repeated cold water immersions. *Pflugers Arch.* 1996;432:368-372.
44. Kieres J, Plowman S. Effects of swimming and land exercises versus swimming and water exercises on body composition of college students. *J Sports Med Phys Fitness.* 1991;31:189-195.
45. Kim JI, Kang HS, Choi HJ, Kim IJ. The effects of aquatic exercise program combined with the self-help course on pain, weight, body mass, self-efficacy, and quality of life in patients having osteoarthritis. Japan:1997;40; Washington, DC:S230.
46. Klentrou PP, Montpetit RR. Energetics of backstroke swimming in males and females. *Med Sci Sports Exerc.* 1992;24:371-375.
47. Kraus VB, Gell N, Blumenthal JA. The effects of chronic exercise on circulating biomarkers in individuals with musculoskeletal disease. *Clinical Exercise Physiology.* 1999;1:17-23.
48. Lee EJ, Long KA, Risser WL, Poindexter HB, Gibbons WE, Goldzieher J. Variations in bone status of contralateral and regional sites in young athletic women. *Med Sci Sports Exerc.* 1995;27:1354-1361.
49. Leftheriotis G, Savourey G, Saumet JL, Bittel J. Finger and forearm vasodilatory changes after local cold acclimation. *Eur J Appl Physiol Occup Physiol.* 1990;60:49-53.
50. Liang MT, Norris S. Effects of skin blood flow and temperature on bioelectric impedance after exercise. *Med Sci Sports Exerc.* 1993;25:1231-1239.
51. Littrell TR, Snow CM. Bone density and physical function in postmenopausal women after a 12-month water exercise intervention [abstract]. *Medicine & Science in Sports & Exercise.* 2004;36:S289-S290.
52. Mackey AL, Donnelly AE, Swanton A, Murray F, Turpeenniemi-Hujanen T. The effects of impact and non-impact exercise on circulating markers of collagen remodelling in humans. *J Sports Sci.* 2006;24:843-848.
53. Mannino JA, Kaufman WC. Comparative cold responses of men and women to external and internal cold stimuli. *Aviat Space Environ Med.* 1986;57:27-30.
54. Masson C, Renier JC, Bregeon C, Audran M. The management of reflex sympathetic dystrophy syndrome: State-of-the-art and suggested criteria for new protocols. *Semaine des Hopitaux.* 1994;70:1058-1064.
55. McArdle WD, Magel JR, Spina RJ, Gergley TJ, Toner MM. Thermal adjustment to cold-water exposure in exercising men and women. *J Appl Physiol.* 1984;56:1572-1577.

Bone Density & Body Composition

56. McArdle WD, Toner MM, Magel JR, Spina RJ, Pandolf KB. Thermal responses of men and women during cold-water immersion: Influence of exercise intensity. *Eur J Appl Physiol Occup Physiol*. 1992;65:265-270.
57. McArdle WD, Magel JR, Lesmes GR, Pechar GS. Metabolic and cardiovascular adjustment to work in air and water at 18, 25, and 33 degrees C. *J Appl Physiol*. 1976;40:85-90.
58. McMurray RG. Plasma volume changes during submaximal swimming. *Eur J Appl Physiol Occup Physiol*. 1983;51:347-356.
59. McMurray RG, Kocher PL, Horvath SM. Aerobic power and body size affects the exercise-induced stress hormone responses to varying water temperatures. *Aviat Space Environ Med*. 1994;65:809-814.
60. Meenan RF, Mason JH, Anderson JJ, Guccione AA, Kazis LE. Arthritis impact measurement scales -- 2. *Arthritis and Rheumatism (Arthritis Care and Research)*. 2000;13:62-65.
61. Melton SA, Hegsted M, Keenan MJ, Morris GS, O'Neil CE, Zablah-Pimentel EM. Water exercise prevents femur density loss associated with ovariectomy in the retired breeder rat. *J Strength Cond Res*. 2004;18:508-512.
62. Mitchell SL, Creed G, Thow M, Hunter A, Chapman J. Physiotherapy guidelines for the management of osteoporosis. Available at: <http://www.nelh.nhs.uk/guidelinesdb/html/GLFrames.htm>.
63. Mitchell SL, Creed G, Thow M, Hunter A, Chapman J. Title: Physiotherapy guidelines for the management of osteoporosis: quick reference guide [quick reference guide for clinicians] Abstract: Copyright release for this abstract has not been obtained. If this record is indexed on MEDLINE you could obtain an abstract by visiting the PubMed web site at <http://www.ncbi.nlm.nih.gov:80/entrez/query/static/citmatch.html>. Available at: <http://www.csp.org.uk/>.
64. Nadel ER, Holmer I, Bergh U, Astrand PO, Stolwijk JA. Energy exchanges of swimming man. *J Appl Physiol*. 1974;36:465-471.
65. Nagle EF, Otto AD, Jakicic JM, Robertson RJ, Goss FL, Ranalli JL. Effects of aquatic plus walking exercise on weight loss and function [abstract]. *Medicine & Science in Sports & Exercise*. 2003;35:S136.
66. Noakes TD. Exercise and the cold. *Ergonomics*. 2000;43:1461-1479.
67. Olefirenko VT, Vasiukova EA, Granovskaia AM, Vinogradova IM. Exogenous constitutional obesity and methods of physical therapy. *Vopr Kurortol Fizioter Lech Fiz Kult*. 1981;(4):64-69.
68. Orwoll ES, Ferar J, Oviatt SK, McClung MR, Huntington K. The relationship of swimming exercise to bone mass in men and women. *Arch Intern Med*. 1989;149:2197-2200.
69. Ostrove SM, Vaccaro P. Effect of immersion on RV in young women: Implications for measurement of body density. *Int J Sports Med*. 1982;3:220-223.
70. Pendergast DR, Di Prampero PE, Craig AB, Jr, Wilson DR, Rennie DW. Quantitative analysis of the front crawl in men and women. *J Appl Physiol*. 1977;43:475-479.
71. Ponce P, Moreira P. Water immersion in an anuric cirrhotic patient. *Nephron*. 1986;43:144-147.
72. Quinn TJ, Sedory DR, Fisher BS. Physiological effects of deep water running following a land-based training program. *Res Q Exerc Sport*. 1994;65:386-389.
73. Reissshauer A, Doerner T, Krause A. Rheumatology day care clinic at the charite: Concepts and experiences. *Aktuelle Rheumatol*. 2003;28:25-29.

Bone Density & Body Composition

74. Rennie DW. Tissue heat transfer in water: Lessons from the Korean divers. *Med Sci Sports Exerc.* 1988;20:S177-84.
75. Ritson F, Scott S. Physiotherapy for osteoporosis: A pilot study comparing practice and knowledge in Scotland and Sweden. *Physiotherapy.* 1996;82:390-394.
76. Romet TT. Mechanism of afterdrop cold water immersion. *Journal of Applied Physiology.* 1988;Oct;65:-8.
77. Rozier M. Crenotherapy. *Presse Therm Clim.* 1966;103:249-252.
78. Salem GJ, Zernicke RF, Vailas AC, Martinez DA. Biomechanical and biochemical changes in lumbar vertebrae of rapidly growing rats. *Am J Physiol.* 1989;256:R259-63.
79. Schapira D, Gutierrez G, Mor M, Nahir AM. Successful pamidronate treatment of severe and refractory regional migratory osteoporosis. *JCR: Journal of Clinical Rheumatology.* 2001;7:188-190.
80. Serre H, Simon L, Claustre J, Blotman F. The role of reflex algodystrophy in the development of rarifying vertebral osteopathies. therapeutic conclusions. *Rev Rhum Mal Osteoartic.* 1974;41:319-325.
81. Smith EL. Exercise for prevention of osteoporosis: A review. *Physician Sportsmed.* ;10.
82. Smith HK, Montpetit RR, Perrault H. The aerobic demand of backstroke swimming, and its relation to body size, stroke technique, and performance. *Eur J Appl Physiol Occup Physiol.* 1988;58:182-188.
83. Solano LC, Vargas O, Roman N, Medina LF, Esquivel J, Madriz K. Effect of a hydrotherapy program in the osteomuscular condition of a group of elderly women. *Costa Rica:*1998;30:116.
84. South African Medical Association - Osteoporosis Working Group, Hough S. Osteoporosis clinical guideline. *South African Medical Journal.* 2000;90:907-944.
85. Stransky AW, Mickelson RJ, van Fleet C, Davis R. Effects of a swimming training regimen on hematological, cardiorespiratory and body composition changes in young females. *J Sports Med Phys Fitness.* 1979;19:347-354.
86. Swaine IL. Time course of changes in bilateral arm power of swimmers during recovery from injury using a swim bench. *Br J Sports Med.* 1997;31:213-216.
87. Swank SA, Long KA, Lee EJ, Poindexter HB. Strength, flexibility, and body composition changes of older women following 10 weeks of water exercise [abstract]. *USA:*1996;28; Cincinnati, Ohio:S189.
88. Swissa-Sivan A, Azoury R, Statter M, et al. The effect of swimming on bone modeling and composition in young adult rats. *Calcif Tissue Int.* 1990;47:173-177.
89. Takeshima N, Okada A, Yamada T, et al. Water exercise training improves cardiorespiratory fitness, strength and body composition in older adults. *Japan:*1998;30:193.
90. Takeshima N, Rogers ME, Watanabe E, et al. Water-based exercise improves health-related aspects of fitness in older women. *Med Sci Sports Exerc.* 2002;34:544-551.
91. Tiffany JE. *The older woman and the experience of osteoporosis.* ; 1988.
92. Toner MM, Sawka MN, Foley ME, Pandolf KB. Effects of body mass and morphology on thermal responses in water. *J Appl Physiol.* 1986;60:521-525.
93. Tsukahara N, Toda A, Goto J, Ezawa I. Cross-sectional and longitudinal studies on the effect of water exercise in controlling bone loss. *Journal of Nutritional Science & Vitaminology.* 1994;40:37-47.

Bone Density & Body Composition

94. von Döbeln W, Holmér I. Body composition, sinking force, and oxygen uptake of man treading water. *J Appl Physiol*. 1974;37:55-59.
95. Wickman LA, Luna B. Locomotion while load-carrying in reduced gravities. *Aviat Space Environ Med*. 1996;67:940-946.
96. Wiczorek M, DeMore D, Tucker JM, et al. Comparison of heart rate, blood pressure and rate of perceived exertion on land versus in water with aerobic stepping. *J Aquatic Phys Ther*. 1996;4:4-10.
97. Young MJ, Brown BS. Effects of aquatic exercise and education on fitness, pain, and perceived health status in fibromyalgia. USA:2003;35; San Francisco, CA:S234.
98. Young AJ, Sawka MN, Quigley MD, et al. Role of thermal factors on aerobic capacity improvements with endurance training. *J Appl Physiol*. 1993;75:49-54.
99. Zamparo P, Antonutto G, Capelli C, et al. Effects of body size, body density, gender and growth on underwater torque. *Scand J Med Sci Sports*. 1996;6:273-280.