

The Effects of Twelve-Weeks Power Fitness Yoga Training on Physiological Parameters and Health-Related Physical ...

蕭雅馨、詹貴惠

E-mail: 9511104@mail.dyu.edu.tw

ABSTRACT

The purpose of this study was to investigate the effects of 12 weeks power fitness yoga intervention on physiological parameters and health-related physical fitness in sedentary females. Fifteen sedentary females performed the power fitness yoga training for 90 minutes per day, three times per week for 12 weeks. The body height, body weight, body mass index, body fat, waist-to-hip ratio, blood pressure, resting heart rate, 3-minutes step test, back strength, stand and reach test as well as bent-knee sit-ups of subjects were tested before and after training. Paired t-tests were used to compare the variables within subjects during training period. The results showed that after 12 weeks of power fitness yoga training, the resting heart rate, diastolic pressure, waist circumference, hip circumference and waist-to-hip ratio had significant improved (p

Keywords : power fitness yoga, body fat, waist-to-hip ratio, health-related physical fitness, sedentary.

Table of Contents

封面內頁 簽名頁 授權書.....	iii	中文摘要.....	iv	英文摘要.....	v
要.....	v	誌謝.....	vi	目錄.....	vii
圖目.....					viii
第一章 緒論.....	1	第一節 研究背景.....	1	第二節 研就動機.....	3
第二章 文獻探討.....	6	第一節 瑜伽簡介.....	6	第二節 瑜伽的效果與益處.....	7
第三章 研究方法與步驟.....	20	第一節 研究對象.....	20	第二節 實驗時間與地點.....	20
第四章 結果與討論.....	31	第一節 結論.....	38	第二節 建議.....	38
第五章 結論與建議.....	38	第一節 結論.....	38	第二節 建議.....	38
第六章 參考文獻.....	40	附錄一.....	49	附錄二.....	50
附錄三.....	51	附錄四.....	52	附錄五.....	53
附錄六.....	54	附錄七.....	55	附錄八.....	56
附錄九.....	57	圖目錄 圖3-1 研究流程圖 22		表目錄 表2-1 瑜伽介入的益處(續1) 14	
表2-1 瑜伽介入的益處(續2) 15		表2-1 瑜伽介入的益處(續3) 16		表3-1 本研究之強力適能瑜伽課程內容 24	
表4-1 受試者基本資料 31		表4-2 強力適能瑜伽訓練前、後生理值之變化 33		表4-3 強力適能瑜伽訓練前、後健康體適能之變化 35	

REFERENCES

- 1.方進隆(1993)。健康體能的理論與實際。台北:漢文書局。
- 2.台北縣教育局(2005)。北縣府引進流行感十足健康操，員工每天健康活力10分鐘。2006年5月8日，取自 <http://www.gov.tw/PUBLIC/view.php?id=83707%E2%8A%82=51&main=GOVNEWS>
- 3.行政院體委會(1998)。國民體能檢測實務手冊。台北:行政院體委會。
- 4.呂碧琴(1996)。導讀瑜伽。台大體育，28，99-104。
- 5.呂碧琴(1997)。瑜伽體位法對大學女生健康體能的影響效果探討。台大體育學報，1，233-254。
- 6.卓俊辰(1992)。體適能-健康運動處方的理論與實驗。台北:國立台灣師範大學體育學會。
- 7.林正常(2005)。運動生理學。台北:師大書苑。
- 8.林貞岑(2003)。瑜伽-全球健康新風潮。康健雜誌，60，105-110。
- 9.林晉榮(2002)。體適能與健康相關生活品質。國民體育季刊，3(1)，52-59。
- 10.林婉蓉(2005)。行銷趨勢觀察，還有誰沒練瑜伽。30雜誌，11，62-66。
- 11.啟新健康世界(無日期)。健康檢查新境界。2006年5月9日，取自 <http://www.ch.com.tw/asp/home.asp?chapter=AEA000003>
- 12.陳金鼓(2000)。瑜伽訓練對靜態工作女性之健康體適能影響。華岡理科學報，17，83-91。
- 13.陳金鼓、甘光熙(1997)。瑜伽對大學生基本體能之影響。體育與運動，104，49-55。
- 14.陸文灝(2001)。健康魔法書。台北:民視文化。
- 15.廖瑞銘(1987)。大不列顛百科全書。台北:丹青圖書有限公司。
- 16.綿本昇(1991)。怎樣做好瑜伽。台北:文經社。
- 17.教育部(1997)。教師體適能指導手冊。台北:教育部。
- 18.劉美珠(1990)。瑜伽-身心合一的科學。中華體育，13，45-50。
- 19.嚴苑華(2001)

- 。圖解瑜珈自然健康法。台北:遠流。二、英文部分
1. American College of Sports Medicine. (1998). The recommended quality and quantity of exercise for developing and maintaining cardiorespiratory and muscular fitness, and flexibility in health and adults. *Medicine and Science in Sports and Exercise*, 30 (6), 975-991.
 2. Bharshankar, J. R., Bharshankar, R. N., Deshpande, V. N., Kaore, S. B., & Gosavi, G. B. (2003). Effect of yoga on cardiovascular system in subjects above 40 years. *Indian Journal of Physiology and Pharmacology*, 47(2), 202-206.
 3. Bhattacharya, S., Pandey, U. S., & Verma, N. S. (2002). Improvement in oxidative status with yogic breathing in young healthy males. *Indian Journal of Physiology and Pharmacology*, 46(3), 349-354.
 4. Bijlani, R. L., Vempati, R. P., Yadav, R. K., Ray, R. B., Gupta, V., Sharma, R., Mehta, N., & Mahapatra, S. C. (2005). A brief but comprehensive lifestyle education program based on yoga reduces risk factors for cardiovascular disease and diabetes mellitus. *Journal of Alternative and Complementary Medicine (New York, N.Y.)*, 11(2), 267-274.
 5. Birkel, D. A., & Edgren, L. (2000). Hatha yoga: improved vital capacity of college students. *Alternative Therapies in Health and Medicine*, 6(6), 55-63.
 6. Carlson, L. E., Speca, M., Patel, K. D., & Goodey, E. (2004). Mindfulness-based stress reduction in relation to quality of life, mood, symptoms of stress and levels of cortisol, dehydroepiandrosterone sulfate (DHEAS) and melatonin in breast and prostate cancer outpatients. *Psychoneuroendocrinology*, 29(4), 448-474.
 7. Clay, C. C., Lloyd, L. K., Walker, J. L., Sharp, K. R., & Pankey, R. B. (2005). The metabolic cost of hatha yoga. *Journal of Strength and Conditioning Research*, 19(3), 604-610.
 8. Cohen, L., Warneke, C., Fouladi, R. T., Rodriguez, M. A., & Chaoul-Reich, A. (2004). Psychological adjustment and sleep quality in a randomized trial of the effects of a Tibetan yoga intervention in patients with lymphoma. *Cancer*, 100(10), 2253-2260.
 9. Damodaran, A., Malathi, A., Patil, N., Shah, N., Suryavanshi, & Marathe, S. (2002). Therapeutic potential of yoga practices in modifying cardiovascular risk profile in middle aged men and women. *The Journal of the Association of Physicians of India*, 50(5), 633-640.
 10. Dash, M., & Telles, S. (2001). Improvement in hand grip strength in normal volunteers and rheumatoid arthritis patients following yoga training. *Indian Journal of Physiology and Pharmacology*, 45(3), 355-360.
 11. DiBenedetto, M., Innes, K. E., Taylor, A. G., Rodeheaver, P. F., Boxer, J. A., Wright, H. J., & Kerrigan, D. C. (2005). Effect of a gentle Iyengar yoga program on gait in the elderly: an exploratory study. *Archives of Physical Medicine and Rehabilitation*, 86(9), 1830-1837.
 12. Ellekjaer, H., Holmen, J., Ellekjaer, E., & Vatten, L. (2000). Physical activity and stroke mortality in women. Ten-year follow-up of the Nord-Trøndelag health survey, 1984-1986. *Stroke; A Journal of Cerebral Circulation*, 31(1), 14-18.
 13. Emmey, R., & Dawn, M. (2002). Hatha Yoga therapy management of urologic disorders. *World journal of urology*, 20, 306-309.
 14. Funderburk, J. (1977). *Science Studies Yoga*. Glenview : Himilayan Institute of Yoga Science and Philosophy of U.S.A..
 15. Gharote, M. L. (1981). Yoga for sports. *Society for the Institutes of Physical Education and Sports Journal*, 4(4), 58-62.
 16. Goyeche, J. R., Abo, Y., & Ikemi, Y. (1982). Asthma: the yoga perspective. Part II: Yoga therapy in the treatment of asthma. *The Journal of Asthma : Official Journal of the Association for the Care of Asthma*, 19(3), 189-201.
 17. Harinath, K., Malhotra, A. S., Pal, K., Prasad, R., Kumar, R., Kain, T. C., Rai, L., & Sawhney, R. C. (2004). Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. *Journal of alternative and complementary medicine*, 10(2), 261-268.
 18. Jatuporn, S., Sangwatanaroj, S., Saengsiri, A. O., Rattanapruks, S., Srimahachota, S., Uthayachalerm, W., Kuanoon, W., Panpakdee, O., Tangkijvanich, P., & Tosukhowong, P. (2003). Short-term effects of an intensive lifestyle modification program on lipid peroxidation and antioxidant systems in patients with coronary artery disease. *Clinical Hemorheology and Microcirculation*, 29(3-4), 429-436.
 19. Khalsa, S. B. (2004). Treatment of chronic insomnia with yoga: a preliminary study with sleep-wake diaries. *Applied Psychophysiology and Biofeedback*, 29(4), 269-278.
 20. Kolasinski, S. L., Garfinkel, M., Tsai, A. G., Matz, W., Van, D. A., & Schumacher, H. R. (2005). Iyengar yoga for treating symptoms of osteoarthritis of the knees: a pilot study. *Journal of Alternative and Complementary Medicine (New York, N.Y.)*, 11(4), 689-693.
 21. Kreitzer, M. J., Gross, C. R., Ye, X., Russas, V., & Treesak, C. (2005). Longitudinal impact of mindfulness meditation on illness burden in solid-organ transplant recipients. *Progress in transplantation*, 15(2), 166-772.
 22. Kristal, A. R., Littman, A. J., Benitez, D., & White, E. (2005). Yoga practice is associated with attenuated weight gain in healthy, middle-aged men and women. *Alternative Therapies in Health and Medicine*, 11(4), 28-33.
 23. Madanmohan, Udupa, K., Bhavanani, A. B., Shatapathy, C. C., & Sahai, A. (2004). Modulation of cardiovascular response to exercise by yoga training. *Indian Journal of Physiology and Pharmacology*, 48(4), 461-465.
 24. Manjunath, N. K., & Telles, S. (2004). Spatial and verbal memory test scores following yoga and fine arts camps for school children. *Indian Journal of Physiology and Pharmacology*, 48(3), 353-356.
 25. Manjunath, N. K., & Telles, S. (2005). Influence of Yoga and Ayurveda on self-rated sleep in a geriatric population. *The Indian Journal of Medical Research*, 121(5), 683-690.
 26. Michalsen, A., Grossman, P., Acil, A., Langhorst, J., Ludtke, R., Esch, T., Stefano, G. B., Dobos, G. J. (2005). Rapid stress reduction and anxiolysis among distressed women as a consequence of a three-month intensive yoga program. *Medical Science Monitor : International Medical Journal of Experimental and Clinical Research*, 11(12), CR555-561.
 27. Murugesan, R., Govindarajulu, N., & Bera, T. K. (2000). Effect of selected yogic practices on the management of hypertension. *Indian Journal of Physiology and Pharmacology*, 44(2), 207-210.
 28. Nagarathna, R., & Nagendra, H. R. (1985). Yoga for bronchial asthma: a controlled study. *British Medical Journal*, 291(6502), 1077-1079.
 29. Narendran, S., Nagarathna, R., Gunasheela, S., & Nagendra, H. R. (2005). Efficacy of yoga in pregnant women with abnormal Doppler study of umbilical and uterine arteries. *Journal of the Indian Medical Association*, 103(1), 12-14.
 30. Nass, R. W. (1980). Limber up with Yoga. Ideal for cyclist, yoga will stretch your muscles and relax your body. *Cycling Journal*, 21(2), 70-74.
 31. Nayar, H. S., Mathur, R. M., & Kumar, R. S. (1975). Effects of yogic exercises on human physical efficiency. *The Indian Journal of Medical Research*, 63(10), 1369-1376.
 32. Prakasamma, M., & Bhaduri, A. (1984). A study of Yoga as a nursing intervention in the care of patients with pleural effusion. *Journal of Advanced Nursing*, 9, 127-133.
 33. Raju, P. S., Madhavi, S., Prasad, K. V., Reddy, M. V., Reddy, M. E., Sahay, B. K., & Murthy, K. J. (1994). Comparison of effects of yoga & physical exercise in athletes. *The Indian Journal of Medical Research*, 100, 81-86.
 34. Ray, U. S., Sinha, B., Tomer, O. S., Pathak, A., Dasgupta, T., & Selvamurthy, W. (2001). Aerobic capacity & perceived exertion after practice of Hatha

yogic exercises. *The Indian Journal of Medical Research*, 114, 215-221.

35. Seidell, J. C., Perusse, L., Despres, J. P., & Bouchard, C. (2001). Waist and hip circumferences have independent and opposite effects on cardiovascular disease risk factors: the Quebec Family Study. *The American Journal of Clinical Nutrition*, 74(3), 315-321.

36. Singh, S., Malhotra, V., Singh, K. P., Madhu, S. V., & Tandon, O. P. (2004). Role of yoga in modifying certain cardiovascular functions in type 2 diabetic patients. *The Journal of the Association of Physicians of India*, 52, 203-206.

37. Singh, V., Wisniewski, A., Britton, J., & Tattersfield, A. (1990). Effect of yoga breathing exercises (pranayama) on airway reactivity in subjects with asthma. *Lancet*, 335, 1381-1383.

38. Tandon, M. K. (1978). Adjunct treatment with yoga in chronic severe airways obstruction. *Thorax*, 33(4), 514-517.

39. Taneja, I., Deepak, K. K., Poojary, G., Acharya, I. N., Pandey, R. M., & Sharma, M. P. (2004). Yogic versus conventional treatment in diarrhea-predominant irritable bowel syndrome: a randomized control study. *Applied Psychophysiology and Biofeedback*, 29(1), 19-33.

40. Telles, S., Joshi, M., Dash, M., Raghuraj, P., Naveen, K. V., & Nagendra, H. R. (2004). An evaluation of the ability to voluntarily reduce the heart rate after a month of yoga practice. *Integrative Physiological and Behavioral Science : The Official Journal of the Pavlovian Society*, 39(2), 119-125.

41. Telles, S., Reddy, S. K., & Nagendra, H. R. (2000). Oxygen consumption and respiration following two yoga relaxation techniques. *Applied Psychophysiology and Biofeedback*, 25(4), 221-227.

42. Tran, M. D., Holly, R. G., Lashbrook, J., & Amsterdam, E. A. (2001). Effects of Hatha Yoga Practice on the Health-Related Aspects of Physical Fitness. *Preventive Cardiology*, 4(4), 165-170.

43. U. S. Department of Health and Human Services (1991). *Healthy people 2000 : National Health Promotion and Disease Prevention Objective*. U. S. Government Printing Office, Washington, DC.

44. Vijayalakshmi, P., Madanmohan, Bhavanani, A. B., Patil, A., & Babu, K. (2004). Modulation of stress induced by isometric handgrip test in hypertensive patients following yogic relaxation training. *Indian Journal of Physiology and Pharmacology*, 48(1), 59-64.

45. Visweswaraiyah, N. K., & Telles, S. (2004). Randomized trial of yoga as a complementary therapy for pulmonary tuberculosis. *Respirology (Carlton, Vic.)*, 9(1):96-101.

46. Weller, S. (1977). Yoga for tired legs and aching back. *The Canadian Nurse*, 20-23.

47. West, J., Otte, C., Geher, K., Johnson, J., & Mohr, D. C. (2004). Effects of Hatha yoga and African dance on perceived stress, affect, and salivary cortisol. *Annals of Behavioral Medicine : A Publication of the Society of Behavioral Medicine*, 28(2), 114-118.

48. Williams, K.A., Petronis, J., Smith, D., Goodrich, D., Wu, J., Ravi, N., Doyle, E. J., Gregory, Juckett, R., Munoz, Kolar, M., Gross, R., & Steinberg, L. (2005). Effect of Iyengar yoga therapy for chronic low back pain. *Pain*, 115(1-2), 107-117.

49. Woolery, A., Myers, H., Sternlieb, B., & Zeltzer, L. (2004). A yoga intervention for young adults with elevated symptoms of depression. *Alternative Therapies in Health and Medicine*, 10(2), 60-63.

50. Yadav, R. K., & Das, S. (2001). Effect of yogic practice on pulmonary functions in young females. *Indian Journal of Physiology and Pharmacology*, 45(4), 493-496.

51. Yadav, R. K., Ray, R. B., Vempati, R., & Bijlani, R. L. (2005). Effect of a comprehensive yoga-based lifestyle modification program on lipid peroxidation. *Indian Journal of Physiology and Pharmacology*, 49(3), 358-362.

52. Yogendra, J., Yogendra, H. J., Ambardekar, S., Lele, R. D., Shetty, S., Dave, M., & Husein, N. (2004). Beneficial effects of yoga lifestyle on reversibility of ischaemic heart disease: caring heart project of International Board of Yoga. *The Journal of the Association of Physicians of India*, 52, 283-289.