

PROCEEDINGS



13th International Congress of the World Confederation for Physical Therapy

**May 23–28, 1999
Yokohama, JAPAN**

Hosted by Science Council of Japan and
The Japanese Physical Therapy Association

EFFECTS OF AN EDUCATION & EXERCISE PROGRAM ON MENOPAUSAL WOMEN.

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Menopausal women are faced with increased risk for cardiovascular disease, stroke, osteoporosis, and hypertension. **Purpose:** To develop, implement, and evaluate the effects of an education and exercise program on menopausal women. **Method:** The sample (n=30) consists of peri and post menopausal women. The 12-week program consists of biweekly supervised exercise sessions and 9-one hour education sessions. The objectives are to determine a) changes in physical work capacity, b) reduction of cardiovascular risk factors, and c) how education and exercise program has influenced health attitudes and self-care. Assessment measures include questionnaires, focus groups, physiological, and exercise testing. **Results (all at p>0.0001):** Showed improved exercise capacity (METS pre: 6.6, post 8.1; VO₂ max (ml/kg/min) pre: 22.9, post 27.2); improved cardiovascular risk factor profiles (wt (kg) pre: 77.3, post: 75.2; chol (mmol) pre: 5.6, post 4.8; BMI pre: 30.8, post: 29.6; smoking pre: 5, post 1; Hypertension pre: 10, post: 3; Hormone replacement therapy pre: 12, post: 19); positive influence on health attitudes and self-care. **Conclusion:** Results of this study provide physiotherapists and other health professionals with directions toward the development and implementation of effective education and exercise programs to reduce cardiovascular risk factors for menopausal women.

PL-RR-060-25C

A PILOT STUDY INVESTIGATING THE EFFECTIVENESS OF ASSISTED COUGH TECHNIQUES AND THE CLINICAL UTILITY OF A PEAK FLOW METER TO MEASURE PEAK COUGH EXPIRATORY FLOW IN PERSONS WITH SPINAL CORD INJURY. Massery M, Dreyer H, Borjenson A, Cahalin L. Boston University, Sargent College, and Boston Medical Center, Departments of Physical Therapy, Boston, MA, USA.

PURPOSE: Pulmonary complications continue to be the major cause of death in persons with acute and chronic spinal cord injury (SCI). Therefore, the purpose of this study was to investigate the effects of independent and assisted cough techniques (ACT) upon peak cough expiratory flow (PCEF) and subjective report of ACT effectiveness in persons with SCI. **METHODS:** Standard baseline pulmonary function tests were performed via the Jones Spirometer and PCEF (peak flow during the expulsive phase of each patient's cough measured with the Assess peak flow meter) and symptoms of comfort and cough effectiveness were evaluated in 9 persons with SCI {7 men, 2 women: 7 cervical (4 incomplete C4-5, 2 complete C4-5, and 1 incomplete C5-6) and 2 thoracic (incomplete T4) SCI; age [mean±SD]=34±14 yrs, weeks post-SCI=39±46, FEV₁=1.85 ±.68L, FVC=1.97±.60) before and during independent coughing and 4 randomly performed ACT in 4 positions {instruction in sitting (I), abdominal thrust in supine (AT), anterior chest compression in 1/4 supine (ACC), and counter-rotation in sidelying (CR)}. Statistical analyses included the calculation of means±SD, Wilcoxon signed-rank tests, and ANOVA with p<0.05 as the level of significance. **RESULTS:** PCEF was greater after each of the ACT and was significantly greater after AT and ACC when compared to the patient's independent cough. Each ACT produced significantly greater PCEF than that obtained during baseline testing, but no ACT was more effective than another when comparing the ACT PCEF. Only 2 persons preferred the traditional ACT of AT and no particular ACT was preferred over another. **CONCLUSION:** ACT appear to increase the PCEF of persons with cervical and thoracic SCI which should result in more effective airway clearance and reduce the risk of respiratory complications. The reason no ACT was more effective than another may be due to several individual patient characteristics, including mechanics of breathing, comfort, posture, and spinal limitations/precautions. Persons with SCI who find the traditional method of AT uncomfortable or ineffective may find other forms of ACT acceptable. An optimal ACT can be easily evaluated with a peak flow meter. Such efforts may improve patient compliance with pulmonary hygiene and possibly improve the morbidity and mortality associated with SCI.