### Abstract

This study aimed to affection of postural sway and balance in patients with diabetic peripheral neuropathy (DPN), the effect of visual feedback on balance, and correlation of duration of affection with DPN and degree of balance. Results showed reduced balance control in case of DPN, deterioration on balance was positively correlated to duration of affection, and visual feedback played important role in balance control in patients and norms. It is recommended to add balance training to treatment programs of those patients.

### Key words

1. Diabetes mellitus.
2. diabetic neuropathy.
4. postural sway.
5. Peripheral Neuropathy.

### Library register number

1253-1254.
**Author** : Ashraf Abdel Maksud Mahrus El Marakby.

**Title** : Response of Forced Expiratory Volume at the First Second and Diaphragmatic Motor Nerve Conduction Time to Intermittent Cervical Traction in Cases of Chronic Cervical Spondylosis.

**Dept.** : Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

**Supervisors**
1. Zienab Mohamed Helmy.
2. Hala Mohamed Azeldin.

**Degree** : Master.

**Year** : 2005.

**Abstract**
The aim of this study was to determine the effect of intermittent cervical traction on forced expiratory volume at the first second and phrenic nerve conduction time which is the sole motor supply for the diaphragm. Fifteen patients suffering from multiple cervical spondylotic radiculopathy involving C3, C4 and C5. They received 12 sessions of physical therapy program in form of intermittent cervical traction, hot packs and isometric neck exercises. Forced expiratory volume at the first second (FEV1), maximum voluntary ventilation (MVV) and phrenic nerve conduction studies were tested before and after treatment. There were significant improvement in MVV and phrenic nerve amplitude but there were no significant differences in FEV1 and phrenic nerve latency and duration. It was concluded that, the improvement of diaphragmatic function tested in MVV was due to improvement of phrenic nerve function which occurred as a result of the mechanical effect of intermittent cervical traction.

**Key words**

**Arabic Title Page**
استداتح قىج دفغ هىاء انشفُز فٍ انثانُح الأونً  وسين تىطُم انؼظة انحزكٍ

**Library register number** : 1229-1230.
# Cardiopulmonary Functions Response to Aerobic versus Anaerobic Exercise Program in Overweight Adult Subjects.

## Author:
Bahgat Ragy Thabet.

## Title:
Cardiopulmonary Functions Response to Aerobic Versus Anaerobic Exercise Program in Overweight Adult Subjects.

## Dept.:
Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

## Supervisors:
1. Awny Fouad Rahmy.
2. Soliman Nasr Soliman.
3. Azza Fikry Ismail.

## Degree:
Master.

## Year:
2005.

## Abstract:
The aim of this study was to determine the effect of aerobic and anaerobic exercises on the cardiopulmonary function differentiate between them. The present work was conducted on forty cases of overweight adult males subjects. Their age ranged between twenty to twenty-eight years old, they were divided into two equal groups. The first group performed aerobic exercise training program, the duration of exercise was twelve weeks from January to April 2005, at a frequency of four sessions per week, the second group performed anaerobic exercise training for the same period, at a frequency of two sessions per week. Cardiopulmonary function was measured for both groups before and after the exercise program then compared the difference. The results indicated that aerobic and anaerobic exercise training program produce significant increase in pulmonary function. The aerobic exercise group indicated a significant improvement in the cardiac function but the anaerobic exercise program indicated that there are no significant changes in the cardiac function so it is recommended to use aerobic exercise and diet in older to reduce weight and improve cardiopulmonary fitness.

## Key words:
1. Overweight.
2. Cardiopulmonary Functions.
3. Aerobic exercise.
4. Anaerobic exercise.

## Arabic Title Page:
استداتح انىظائف انقهثُح انزئىَح نثزنايح تًزَناخ هىائُح يقاتم تًزَناخ لاهىائُح 

## Library register number:
1221-1222.
The aim of this study was to investigate and compare between the effects of treadmill walking exercise and burst-mode TENS on exercise testing parameters and on hemodynamic measurements in peripheral arterial occlusive disease patients. Forty male patients complaining of intermittent claudication participated in this study, their ages ranged from 50-60 years. Twenty patients were trained by treadmill walking exercise and the other twenty patients received burst-mode TENS. The results of this study revealed a significant increase in exercise testing parameters and in skin blood flow in both groups. Exercise training resulted in a significant increase of ABI at rest and after exercise while TENS caused a non significant decrease of ABI at rest and a non significant increase of ABI after exercise.

**Key words**
1. Treadmill walking exercise.
2. Burst.
3. Transcutaneous electrical nerve stimulation.
4. Peripheral arterial occlusive disease.
The purpose of this study was to compare the effectiveness of treadmill and stepping exercise training programs in patients complaining of IC. Forty patients (mean age = 61.5 years) were randomly divided into two groups equal in numbers (treadmill group and stepping group). Each patient in the treadmill group practiced supervised treadmill exercise training program with moderate intensity from 60 to 75% of his/her HR$_{max}$, three sessions/week for three months on an electronic treadmill, with progressive increase in speed as tolerated until reach the maximal claudicating pain. Patients in the stepping group practiced supervised stepping exercise training program with moderate intensity from 60 to 75% of his/her HR$_{max}$ until the maximal claudicating pain tolerance, three sessions/week for three months on a fixed stair. The results showed increased peak exercise performance in all treated patients by (80.63%-48.17% in treadmill and stepping groups respectively), and delayed the onset and progression of claudicating pain during exercise by (100%-46.43% in the treadmill and stepping groups respectively). The magnitude of improvement in patients receiving treadmill training was greater than the response to stepping training, without any significant difference in ABPI.

Key words
1. Stepping.
2. Intermittent Claudication.
3. Treadmill.
4. Exercise.
5. Walking Exercise.
The aim of this study was to determine the best method out of incentive spirometry (IS), noninvasive intermittent positive pressure breathing (IPPB) and continuous positive airway pressure (CPAP) on cardiopulmonary response after coronary artery bypass graft in phase I of cardiac rehabilitation program. Forty five patients who had open heart surgery participated in the study divided into three equal groups. The first group received IS, the second group received noninvasive IPPB and the third group received (CPAP). All groups received in addition the usual physiotherapy modalities after coronary artery bypass graft in phase I of cardiac rehabilitation program. The ventilatory function test and respiratory rate were measured before the program and at the tenth postoperative day at the end of the program for the patients in the three groups. There was a more significant increase in ventilatory function test and reduction in respiratory rate and heart rate following incentive spirometry than in noninvasive intermittent positive pressure breathing and continuous positive airway pressure.
**Abstract**

The aim of this study was to investigate the effect of breathing exercises by the use of the specially designed biofeedback system on ventilatory function in children with moderate and severe persistent asthma. Thirty six asthmatic children (19 boys and 17 girls) were participated in the study, their age ranged from 6 to 13 years. They were divided randomly into two groups. The group A comprised of 20 children who received breathing exercises with the specially designed biofeedback system and group B received pursed lips breathing exercises. The results showed that the forced expiratory volume at one second, the forced vital capacity, the peak expiratory flow and the forced mid expiratory flow were significantly improved in both groups but the percentage of improvement of all the variables were significantly higher in group A.

**Key words**

1. Asthma.
2. Children.
4. Ventilatory function.

**Arabic Title Page**

كلفة تمارين التنفس بواسطة نظام متخصص للرد الفعلي الانعكاسي على وظائف التنفيس الرئوية للأطفال المصابين بالربو الشعبي متوسط الشدة.

**Library register number**

1181-1182.
# Response of Ventilatory Function to Breathing Exercise in Welders

**Author:** Hanan El Housin El Nhas.

**Title:** Response of Ventilatory Function to Breathing Exercise in Welders.

**Dept.:** Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.

**Supervisors:**
1. Awany F. Rhamy.
3. Azza F. Ismail.

**Degree:** Master.

**Year:** 2005.

**Abstract:**

Background and purpose: This study was intended to determine the effect of different types of breathing exercises in improving the ventilatory functions in welders. Methods: Sixty male welders, age ranged between 20-30 years, have been selected from Abu Al Yazid welding exhaust factory at 6th of October industrial area. Data of each case were collected from the medical examination and spirometric results. To measure forced vital capacity (FVC), forced expiratory volume in the first second (FEV1) and maximum voluntary ventilation (MVV), before period of training the workers were classified randomly into three groups. First group trained by arm exercise connected with breathing. Second group trained by incentive spirometer. Third group trained by both arm exercise and incentive spirometer. The ventilatory function test was performed to each subject pre, after one month also after two months of training to mark out the values of FVC, FEV1 and MVV. Results: Our result showed that breathing exercises program improve ventilatory functions (FVC, FEV1, MVV) after one month and after two months of training. Conclusion: This study supports the importance of arm exercise connected with breathing and incentive spirometer as a method of breathing exercise in improving the ventilatory functions in welders.

**Key words:**
1. Welding.
2. Incentive spirometer.
3. Arm exercise with breathing.
4. Ventilatory function test.
5. Breathing Exercise.

**Arabic Title Page:** استجابة وظائف التنفس الرئوية لتمرينات التنفس لعمال اللحام.

**Library register number:** 1155-1156.
The aim of this study was to determine the efficacy of the walking training program in improving the quality of life of the sedentary elderly subjects. Forty elderly subjects of sedentary life participated in the study divided into two equal groups. The first group received the walking training program; the second group continued live their sedentary life. The program continued for eight weeks (three sessions per week). There was a great significant improvement of the quality of life following the eight weeks of walking training than the control group. So, this walking training program can be introduced as a method to improve the quality of life of the sedentary elderly subjects.

| Key words | 1. Walking Training.  
|           | 2. Quality of Life. |

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**Abstract**

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**Key words**

1. Walking Training.
2. Quality of Life.

**Arabic Title Page**

تأثیر تدیریبیات المشی علي نوعیة الحیاة لدى المسینین محدودي الشیاط.

**Library register number**

1189-1190.
Background—The age-related changes in maximal oxygen consumption, maximal walking distance and arterial blood oxygenation was stated by the previous studies. However, the relative effects of treadmill exercise program on arterial blood oxygenation in older subjects are not known and the effects of treadmill exercise program on maximal oxygen consumption and maximal walking distance are inconsistent in the previous studies. So this study was done to investigate the effect of treadmill exercise on blood oxygenation, maximal oxygen consumption, oxygen consumption in upright rest and maximal walking distance. Methods and Results—Twenty elderly subjects (9 males and 11 females) were subjected for this study. The mean values of their ages were 63.8 ± 3.5 years and 64.2 ± 2.9 years for male and female subjects respectively. The subjects of the study participated in treadmill exercise with training intensity from 60% to 70% of (HR max) in moderate walking exercise. This program was applied 3 times per week over 8 successive weeks. VO2 in upright rest, VO2 max, maximal walking distance and arterial oxygen saturation were measured for each subject before and immediately after the last session post 8 weeks. The results of this study indicated no significant increase in VO2 in upright rest, representing changes of 0.8% , significant increase in VO2 max, representing changes of 13.09% , highly significant increase in maximal walking distance representing changes of 23 % and significant increase in SaO2, representing changes of 1.4 %.Conclusions— It can be concluded that participation in moderate intensity walking exercise increased the blood oxygenation, VO2 max and maximal walking distance in elderly subjects with no significance increase in VO2 in upright rest. Male elderly subjects have greater increase in VO2 max and maximal walking distance than female elderly subjects. Female elderly subjects have greater increase in arterial oxygen saturation than male elderly subjects.

Key words

1. Aging.
2. Blood oxygenation.
3. Exercise.
4. Oxygen consumption.
5. Walking.

Arabic Title Page : استجابة أوكسجين الدم لتمرينات سيرالمشي عند المسئنين.

Library register number : 1175-1176.
The aim of this study is to compare the efficiency of negative balanced diet and negative balanced diet together with laser acupuncture in the therapy of abdominal obesity in post menopausal women. Forty post menopausal obese women, their age ranged between 45 and 60 years, their BMI between 32.8 and 39.8Kg/m², WHR between 0.9 and 0.95 and waist circumference between 88 and 103 cm, were selected from the out patient clinic of Faculty of Physical Therapy. They were assigned into two equal groups A and B. Each of them consisted of 20 participants. Group A received negative balanced diet alone. While group B received laser acupuncture technique plus negative balanced diet. The study lasted for 3 months. Group B received session at a frequency of 2 sessions per week. Evaluation included, body weight, body mass index, waist circumference, waist hip ratio, fasting blood lipid profile and fasting blood glucose. The results showed that after 3 months study period, both groups exhibit a statically significant reduction in both anthropometric (BMI by 11% for group A and 13% for group B, WC (6% for group A and 10% for group B), WHR (10% for group A and 13% for group B) and BFM (100/0 for group A and 14% for group B) and metabolic variables (TG (140/0 for group A and 170/0 for group B), TC (10% for group A and 11% for group B), LDL (80/0 for group A and 13% for group B) and FBG (4% for group A and 5% for group B), but rise in HDL (4% for group A and 60/0 for group B). The mean reduction was higher in the second group of women (laser acupuncture and negative balanced diet). Our results testify that the combination of negative balanced diet and laser acupuncture is characterized by a higher efficiency than a negative balanced diet alone in lowering anthropometric and metabolic variables. In addition laser acupuncture is an additional useful healing method in the therapy of abdominal obesity in post menopausal women.

Key words

1. Laser acupuncture.
2. Negative balanced diet.
4. Abdominal obesity.
5. Lasers.

Arabic Title Page

تأثير الليزر على نقاط الوخز بالابير الصينية والنظام الغذائي على سمنة البطن في السيدات بعد انقطاع الطماس.

Library register number

1261-1262.
# Low laser puncture therapy outcomes in management of infants with pneumonia.

## Abstract

The aim of this study was to determine laser puncture therapy outcomes in management of infants with pneumonia. Thirty infants with bacterial pneumonia participated in the study. They were divided into two equal groups. The first group received laser puncture therapy, traditional physiotherapy and medical treatment; the second group received medical treatment in addition to traditional physiotherapy. The program was continued for two weeks (six sessions per week) there was a significant improvement in general condition, respiratory function, disappearance of clinical manifestation of acute pneumonia. After one week there was a significant improvement in WBC and CRP, ESR. There was no significant improvement in body temperature, RR, RDG, crepitating, Sao2, Paco2 and Pao2, when combined group was compared to the control group. So laser puncture therapy may be introduced as a method in a combined treatment for infants with pneumonia.

## Key words

1. Low laser puncture therapy.
2. Pneumonia.
3. Lasers.
4. Infants.

## Library register number

1239-1240.