

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR CARDIOPULMONARY DISORDER AND
GERIATRICS AND ITS SURGERY**
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED
**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and Its
Surgery**
Doctoral Degree
2017

Author	:	Ahmed Mounir Salama Mohamed
Title	:	Inspiratory Muscle Training Versus Slow Deep Breathing On Sympathetic Tone In Essential Hypertensive Patients
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Azza Abdel Aziz Abdel Hady
	2.	Gamal Mohammed Shaban
	3.	Heba Ahmed Ali Abdeen
	4.	Walied Ahmed Emam Sayed
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	<p>This study aimed to determine the effect of inspiratory muscle training versus slow deep breathing exercise on sympathetic tone in essential hypertensive patients. Forty men with essential hypertension, the mean age was 35 years old with mean BMI was 26.19 kg/m² which the systolic blood pressure range was (140 - 159 mm Hg) and diastolic blood pressure range was (90 - 99 mm Hg) participated in this study were selected from the National Heart Institute and other private clinics. They were assigned randomly into two groups equal in number. Participants of the group (A) received inspiratory muscle training program, while the group (B) received slow deep breathing program lasting four weeks. Patients were assessed objectively by mercury sphygmomanometer to measure Blood pressure (BP), vacuum manometer to evaluate maximum inspiratory pressure (MIP) and 24-Hour Ambulatory Electrocardiographic Recording (Holter) to measure frequency domain component of heart rate variability (HRV). Also patients were assessed subjectively by the hypertension health related quality of life questionnaire (MINICHAL) to evaluate quality of life. The participants were assessed before and after the training program. Results: the statistical analysis revealed that there was a significant improvement in inspiratory muscle training group (A) and slow deep breathing exercise group (B) but the improvement was more significant in favour of group (A) than group (B) as follow: a significant decrease of (SBP) by (7%) and (4.5%), a significant decrease of (DBP) by (5.5 %) and (3 %), a significant increase of (HF of HRV) by (15 %) and (10.5%) , a significant decrease of (LF of HRV) by (15%) and (10%) , a significant decrease of (LF/HF of HRV) by (26%) and (19%), a significant increase of (MIP) by (32%) and (12%) and a significant improvement of quality of life by (84%) and (45.5%) in group (A) and group (B) respectively (p<0.05). Conclusions: inspiratory muscle training is more effective than slow deep breathing on modulating sympathetic tone in essential hypertensive patients.</p>
Key words	1.	Essential hypertension.
	2.	Maximum inspiratory pressure
	3.	Inspiratory muscle training.
	4.	Slow deep breathing
	5.	Blood pressure.
	6.	Sympathetic Tone In Hypertension
	7.	Heart rate variability
	8.	(MINICHAL) questionnaire
Classification number	:	000.000.
Pagination	:	88 p.
Arabic Title Page	:	تدريب عضلة الشهيق مقابل التنفس البطئ العميق على الوتيرة السمبثاوية في مرضى ارتفاع ضغط الدم الأساسي
Library register number	:	5535-5536.

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Author	:	Ashraf Helal Farag Amar
Title	:	Diaphragmatic Response to Inspiratory Muscle Training Versus Aerobic Exercise after Lung Decortication
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Awny Fouad Rahmy
	2.	Khaled Mahmoud Kamel
	3.	Mohamed Abd El-Halim Mohamed Shendy
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Background: Decortication is a surgical procedure that consists in restoring the ventilatory function of the lung by removing the constricting membrane that compresses it over the mediastinum. The diaphragmatic dysfunction is a major factor in the etiology of postoperative pulmonary complications after lung decortications. The objective of this study: was to establish the efficacy of inspiratory muscle training versus aerobic exercise on diaphragmatic muscle strength, excursion and pulmonary functions post lung decortication. Methods: Thirty patients from both sex, second day post lung decortication surgery participated in this study, their aged ranged from 20-50 years old Patients assigned randomly into two equal groups Group (I) consisted of 15 patients post lung decortication received inspiratory muscle training (IMT) in addition to conventional chest physiotherapy, Group (II) consisted of 15 patients post lung decortication received aerobic exercise (AE) in addition to conventional chest physiotherapy. Results: In this study, the measuring variables showed no significant differences in between both groups at the baseline ($P < 0.05$). The results showed that both IMT and AE increased significantly, maximum inspiratory pressure (MIP) within each group, Significant differences of the post treatment mean values between both groups in favor of group IMT were recorded ($p < 0.05$).and increased significantly diaphragmatic excursion, FVC, FEV1, MVV within each group, Significant differences of the post treatment mean values between both groups in favor of group AE were recorded ($p < 0.05$).but had no significant effect ($P > 0.05$) on FEV1/FVC ratio within each group or on comparing the two groups. Conclusion: Both IMT and AE provided a statistically significant improvement in the ventilatory functions, diaphragmatic strength and excursion due to increasing the respiratory muscles strength and endurance .These findings advocate for application of IMT and AE in thoracic surgery rehabilitation programmes.</p>		
Key words	1.	Diaphragmatic response
	2.	Lung decortication
	3.	Inspiratory muscle training
	4.	Aerobic Exercise after Lung Decortication
Classification number	:	000.000.
Pagination	:	185 p.
Arabic Title Page	:	استجابة الحجاب الحاجز لتدريب عضلة الشهيق مقابل التمرينات الهوائية بعد تقشير الرئة.
Library register number	:	4649-4650.

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Author	:	Haytham Hamed Mahmoud Hamad
Title	:	Adipokines response to continuous versus interval aerobic training in ischaemic heart disease patients
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Azza Abd El Aziz Abd El Hady
	2.	Esam Balegh Ewas,
	3.	Nesreen Ghareeb Mohamed El-Nahas
	4.	Amany Raafat Mohamed Soliman
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	<p>Background: Coronary artery disease (CAD) is the most common cause of death in the developed world, responsible for about 1 in every 5 deaths and it is expected that its rate will accelerate in the next decade. Purpose: To find out adipokines response to continuous versus interval aerobic training in ischaemic heart disease Patients. Patients and Method: Forty men patients with an ischemic heart disease with age ranged from 50-60 years old participated in this study. They were recruited from cardiac outpatient clinic of Kasr El Ainy hospital. Patients were assigned into two groups equal in number: Group A included 20 patients received high intensity interval aerobic training on treadmill 3 times/week for 12 weeks. Group B included 20 patients received moderate intensity continuous aerobic training on treadmill 3 times/week for 12 weeks. Serum adiponectin, serum leptin, 6 minute walk distance and patient's specific quality of life were measured before and after training program for both groups. Results: Statistical analysis revealed that high intensity interval aerobic training has more significant effect on serum adiponectin (28.25 %↑), serum leptin (9.19 %↓), 6 minute walk distance (16.55 %↑) and patient's specific quality of life median (88.8) (75) (80) than moderate intensity continuous aerobic training (14.33 %↑), (4.67 %↓), (10.37 %↑) and (66.6), (66.6), (67.5) respectively. Conclusion: High intensity interval appears to be more effective than moderate intensity continuous aerobic training for improvement of adipokines, functional capacity and quality of life in patients with ischemic heart disease.</p>
Key words	1.	Adipokines
	2.	Moderate intensity continuous aerobic training
	3.	Ischemic heart disease.
	4.	High intensity interval aerobic training
Classification number	:	000.000.
Pagination	:	157 p.
Arabic Title Page	:	استجابة الاديوكين للتمارين الهوائية المستمرة مقابل المتقطعة لدى مرضى قصور الشريان التاجي
Library register number	:	5261-5262.

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Author	:	Marwa Mahmoud Elsayed
Title	:	Training impact with inspiratory muscle trainer versus pranayama on breathing and quality of life in hemodialysis patients
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Zahra Mohamed Hassan Serry
	2.	Sahier Omar Elkhatab,
	3.	Hany Farid Eid Morsy Elsisy.,
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Background: Exercise is often recommended for patients with chronic kidney diseases to improve physical conditioning and reduce complications of diseases. Objective: The purpose of this study was to evaluate the effect of inspiratory muscle trainer (IMT) versus pranayama on breathing and quality of life (QOL) in hemodialysis (HD) patients. Subjects and methods: Forty HD patients (22 men and 18 women) participated in the study, their ages ranged from 40-55years from September 2015 to November 2015 . They were assigned randomly into two groups; 20 patients each: Group (A) received IMT and resistive exercises for 12 weeks, 3 sessions per week. Group (B) received pranayama and resistance exercises 12 weeks, 3 sessions per week with. Pre and post 12 weeks pulmonary function include (Forced vital capacity(FVC) in,(forced expiratory volume in one second (FEV1), Forced expiratory flow (FEF) 25-75%, and peak expiratory flow(PEF) and blood pressure (BP) (systolic blood pressure(SBP), and diastolic blood pressure (DBP) and O2 saturation and QOL questionnaire .Results: IMT and pranayama had a significant improvement in pulmonary function increase in (FVC p was 0.0001*) group A ,(FEV1, PEF, and FEF 25-75% in favor to group B and in males) and BP decrease (SBP,DBP equally in both sexes) in favor of group (B) and increase O2 saturation in favor to group A equally in both sexes and improve in QOL questionnaire and in males.Conclusions: supervised program of IMT, Pranayama, and resistance exercises 12 weeks in HD men and women results in an improvement of pulmonary functions, BP, O2 saturation, and QOL.</p>		
Key words	1.	Hemodialysis.
	2.	inspiratory muscle trainer
	3.	pranayama
	4.	Training impact with inspiratory muscle trainer
	5.	pulmonary function
	6.	quality of life
	7.	resistance exercises
	8.	breathing in hemodialysis patients
Classification number	:	000.000.
Pagination	:	141 p.
Arabic Title Page	:	تأثير التدريب بجهاز تدريب عضلات التنفس مقابل براناياما على التنفس وجودة الحياة لدى مرضى الغسيل الكلوي.
Library register number	:	5391-5392.

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Author	:	Mohamed Ahmad Mohamed Mohamed
Title	:	Effect of hyperinflation and diaphragmatic stretch on weaning from mechanical ventilation in intubated patients
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Hala Mohamed EzzELdeenHamed
	2.	Sherin Hassan Mohamed Mehani
	3.	Mariam El Sayed Mohamed
	4.	Abd Al Aziz MostafaAbd Al Aziz
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Background: Mechanical ventilation is indicated in acute respiratory failure. There were many complications as increased risk of sputum retention, atelectasis and pneumonia, making weaning more difficult and resulting in excess morbidity and mortality. Manual hyperinflation and diaphragm stretch were used as treatment techniques in the management of intubated patients. Purpose: To investigate the effect of using of manual hyperinflation and diaphragm stretch on weaning from mechanical ventilation in intubated patients. Patients and Methodology: Thirty mechanically ventilated patients were selected for this study from Beni-suef University Hospital (critical care department); with age ranged between 53 to 73 years. Arterial blood gases (ABG), mechanical ventilator parameters and rapid shallow breathing index (RSBI) were measured before and at the end of treatment which lasted for five days with rate one time/ day. Results: Statistical analysis of data showed non-significant differences in mean value between both groups post treatment for glasgow coma scale (GCS), with ABG there was a significant improvement in the study group between PH and SO₂ and a non-significant difference between HCO₃, PaO₂ and PaCO₂, For ventilator parameters of patients, the study had non-significant difference between RSBI of both groups pre and post treatment and had a high significance difference between Murray score of both groups pre and post treatment and for weaning, there was significant difference between both groups post treatment. Conclusion: There was a significant effect of using manual hyperinflation & diaphragm stretch on weaning from mechanical ventilation in intubated patients.</p>		
Key words	1.	Diaphragm Stretch
	2.	Manual Hyperinflation
	3.	Mechanical ventilation
	4.	intubated patients
Classification number	:	000.000.
Pagination	:	108 p.
Arabic Title Page	:	تأثير التنفيخ اليدوي واستطالة الحجاب الحاجز على انهاء التنفس الصناعي في مرضى الأنبوبة الحنجرية.
Library register number	:	5397-5398.

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Author	:	Mohamed Farouk Abdel-Latif Soliman
Title	:	Efficacy of low intensity ultrasound in treatment of postmenopausal low bone mineral density,
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Lilian Albert Zaky
	2.	Khaled Ahmed Olama
	3.	Hatem Mohamed Al-Azizi
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Abstract: <i>Background:</i> Osteoporosis is a disease characterized by weak bone. It is a major public health problem, affecting hundreds of millions of people worldwide, predominantly postmenopausal women. The main clinical consequence of the disease is bone fractures. <i>Objectives:</i> The aim of this study was to investigate the efficacy of low intensity pulsed ultrasound in treatment of low bone mineral density (BMD) of femoral neck in postmenopausal women. <i>Methods:</i> Thirty-six postmenopausal women with low femoral neck bone mineral density ageing between 45 to 75 years with BMI between 28.2 to 45.7 kg/m² participated in this study. They were assigned randomly into two study groups (18 Osteopenic subjects: with a T-score between -1.0 and -2.5, and 18 Osteoporotic subjects: with a T-score at or below -2.5) as each subject was her control in a single group pretest posttest study design. All participants received the treatment of low intensity pulsed ultra sound (LIPUS) for successive six months. Young-adult T-score, age-matched Z-score and both 10-years probability of major osteoporotic hip fracture and 10-years probability of hip fracture were screened using Dual Energy X-ray Absorptiometry (DEXA) and assessed by FRAX[®] desktop individual entry model (version 3.91). All participants were tested twice; before and after the application of LIPUS therapy. <i>Results:</i> The statistical analysis revealed that there was a significant difference between mean values of the relative differences of femoral neck BMD, femoral neck BMD young-adult T-scores, femoral neck BMD age matched Z-scores, FRAX[®] (hip fracture) and FRAX[®] (major osteoporotic hip fracture) of Osteopenic group and Osteoporotic group. It was clear that LIPUS could decrease both parameters of FRAX[®] in both groups. There was a statistically significant decrease in relative values of both 10-years probability of major osteoporotic hip fracture and 10-years probability of hip fracture in the post-treatment condition compared with the pre-treatment (p<0.05). Moreover, there was a more significant improvement of FRAX[®] results in osteopenic group compared to FRAX[®] results in osteoporotic group (p<0.05). <i>Conclusions:</i> low intensity pulsed ultrasound therapy may be considered as one of the most helpful methods of physiotherapy in management of low bone mineral density in postmenopausal women.</p>		
Key words	1.	Osteoporosis
	2.	Fracture risk assessment tool
	3.	FRAX [®] .
	4.	Low Intensity Pulsed Ultrasound
	5.	postmenopausal low bone mineral density
	6.	low bone mineral density
Classification number	:	000.000.
Pagination	:	150 p.
Arabic Title Page	:	تأثير الموجات فوق الصوتية منخفضة الشدة في علاج انخفاض كثافة العظام بعد سن اليأس.
Library register number	:	5347-5348.

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Author	:	Mohamed Nabil Abdelfattah Ahmed Asker
Title	:	Effect of Whole Body Vibration versus Aerobic Exercise on Arterial Stiffness in Elderly
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Zahra M.H.Serry
	2.	Gihan Samir Mohamed
	3.	Nadia Marie
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Background and Objective: Arterial stiffness is considered as one of the major causes of cardiovascular disease in elderly persons. The purpose of the study were to investigate the effect of whole body vibration versus aerobic exercises on arterial stiffness in elderly. Material & Methods: Forty elderly patients was selected from both sex and their age was ranged from 60 to 70 years and they was divided into two groups equal in number: Group (A) Twenty patients was selected from both sexes (equal in number) was performed whole body vibration (WBV) exercise & Group (B) Twenty patients was selected from both sexes (equal in number) was performed Aerobic exercise. The Test in both groups was performed 3 times per week for 2months. Arterial stiffness was measured by brachial & ankle Pulse Wave Velocity (baPWV) 3 times throughout the program at 1st, 4th and 8th week. Results: In Group (A) when post treatment results compared with pre treatment results there was a significant decrease in Brachial PWV by 11.84% and Ankle PWV there was a significant decrease by percent of change by 7.7%. In Group (B) when post treatment results compared with pre treatment results there was a significant decrease in Brachial PWV by 9.44% and Ankle PWV there was a significant decrease by percent of change by 8.6%. While Group A results versus Group B results there was NO significant difference in mean values of baPWV. Conclusion: There was a significant decrease in baPWV values in both groups. But when comparing result of Group (A) versus Group (B) there was NO significant difference in mean values of baPWV so both modalities had same decreasing effect on arterial stiffness. Both methods can help the patients of arterial stiffness moderately.</p>		
Key words	1.	Whole Body Vibration
	2.	Arterial stiffness
	3.	Elderly
	4.	Aerobic Exercise on Arterial Stiffness in Elderly
Classification number	:	000.000.
Pagination	:	104 p.
Arabic Title Page	:	تأثير أوضاع الكوع المختلفة على قوة قبضة اليد والنشاط الكهربى للعضلات القابضة للرسغ في الأشخاص الأصحاء.
Library register number	:	5529-5530.

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Author	:	Nesreen Hamdi mohammed Zahran
Title	:	Evidence based effect of aerobic exercise program on immunosenescence in young elderly
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Nagwa Hamed Badr
	2.	Bassant Hamdy El-Refaey
	3.	Hoda Ibrahim Fahiem
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Back ground Aging in the humans refers to a multidimensional process of physical, psychological, social changes, and deterioration of body functions. Exercise in advanced age still offer a lot of health benefits. While deterioration of body functions is inevitable, proper exercise slows down the aging process. The purpose of this study was to evaluate the effect of aerobic exercise training on immunosenescence in sedentary young elderly. Sixty elderly subjects participated in this study. The methods The subjects divided randomly in to two equal groups, control group and study group and each group consisted of fifteen men and fifteen women. The age of the participants was between 60 to 75 years old. The study group had participated in aerobic exercise program with intensity of 60-85% of maximum heart rate for 1hour/day, 3 times/week for three months, while the control group was sedentary. The outcome measurements were NK number, NK activity and macrophages activity (Interleukin-6). The results of this study revealed that moderate intensity aerobic exercise training program produced a significant changes in NK cells numbers and activity and IL-6 level in comparison with the control group ($p < 0.05$). In conclusion: Aerobic exercise program is effective and beneficial for NK cells percentage, activity, and also macrophages activity in the elderly subjects.</p>		
Key words	1.	Aerobic exercise on immunosenescence.
	2.	macrophages
	3.	young elderly
	4.	natural killer cells
Classification number	:	000.000.
Pagination	:	128 p.
Arabic Title Page	:	التأثير المبني علي الدليل لبرنامج تمارينات هوائية علي الإضطراب المناعي في صغار المسنين.
Library register number	:	5257-5258.

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PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Zainab Seed Al
Title	:	Serum serotonin response to aerobic exercise versus Phoenix
Dept.	:	Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.
Supervisors	1.	Zahra M.H.Serry.
	2.	Nagwa Mohamed Ammar,
	3.	Nesreen Ghareeb Mohamed El Nahas
Degree	:	Doctoral.
Year	:	2017.
Abstract	:	
<p>Background and Purpose: Aerobic training and Phoenix dactylifera (dates) for elderly patients with mild depression can alter the level of serum serotonin either by increasing its synthesis or increasing its uptake by the serotonergic receptors .This alteration of the serum serotonin level can improve the patient's depression symptoms. Patients and methods: one hundred patients(50 men and 50 women) with mild depression aged 60-70 years old were participated in the present study. They were randomly assigned into two groups equal in number, Group (I) consisted of 25 men and 25 women participated in a specialized program of date consumption in form of eating three dates daily one before each meal by one hour for 24 weeks, group (II) consisted of 25 men and 25 women participated in a program of aerobic exercise in form of walking on a computerized treadmill for about 30-40 min (5-10 min warming up, 5-10 min cooling down and 20 min active phase) three times per week for 24 weeks . The study was conducted at PT department of Elobour Medical Center in Kaliobia in the period from January till June 2015. Patients were referred from the out clinic of Psychiatry. The serum serotonin levels and patients scores on the geriatric depression scale were measured for all patients in the two groups at the beginning of the study and after twenty four weeks. The results: The results of this study concerning serum serotonin level revealed a significant increase in Group (I) by 75.77% and significant decrease in group (II) by 38.9%. For geriatric depression scale the patients' scores showed a significant decrease in both group with no significant difference. Conclusion: It can be concluded that both aerobic exercise and Phoenix dactylifera can produce a significant improvement for patients with mild depression.</p>		
Key words	1.	serum serotonin
	2.	aerobic exercise
	3.	Phoenix
Classification number	:	000.000.
Pagination	:	115 p.
Arabic Title Page	:	استجابة السيروتونين للتمرينات الهوائية مقارنة بالفونيكس.
Library register number	:	5305-5306.