ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR CADIOPULMONARY 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 2019

Author	**:**	**Abdelrahman Agamy Hassanagamy.**
Title	**:**	**Control Of Tuberculosis Growth And Activity By Electromagnetic Impulses At Resonance Frequency.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Tuberculosisas a major worldwide human disease, caused by Mycobacterium tuberculosis (MTB), is the second most fatal infectious disease after AIDS and one of the most prevalent pathogen that is responsible for socioeconomic disaster for millions of people than any other microorganism. For this purpose, MTB strain H37Rv was exposed to different square electric pulses of extremely low frequency (ELF) generated between two parallel plate electrodes, at different frequencies in the range 0.1 to 1Hz for a period of 30 minutes. The field strength between the electrodes was 400V/m. From the growth characteristics of the microbe for control (non-exposed) and exposed samples, it was found that maximum inhibition in the growth characteristic of the microbe occurred for samples exposed to 0.6 Hz for 45 minutes. Transmission electron microscope (TEM) examination of the treated samples as compared with control indicated remarkable morphological changes in the cell walls and inter-constituents of microbe. Antibiotic Sensitivity test indicated significant increase in theinhibitors for protein synthesis susceptibility, cell wall biosynthesis and RNA as the result of exposure. It was concluded that this new non-invasive treatment of MTB is a promising technique to treat and resist this disease.

Key words	**1.**	**Electromagnetic Fields**
	2.	**Mycobacterium tuberculosis**
	3.	**Resonance Frequency**
	4.	**Extreme Low Frequency**
Classification number	**:**	**000.000.**
Pagination	**:**	**90 p.**
Arabic Title Page	**:**	**التحكم في نمو ونشاطالسل بواسطة النبضات الكهرومغناطيسية على التردد الرنينى.**
Library register number	**:**	**6719-6720.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR CADIOPULMONARY DISORDER AND GERIATRICS AND ITS SURGERY

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	**:**	**Ahmed Mohamed Abdel-Halim El-Fahl.**
Title	**:**	**Aerobic Exercises Versus High Intensity Interval Training on Ventilatory Functions In Smoker students.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Azza A.Aziz A.Hady**
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Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background and purpose: Cigarette smoking is an important worldwide health problem. Cigarette smoking carries major health risks with the most cause-specific mortalities being those of respiratory and cardiovascular diseases. Therefore, smoking habits may affect the respiratory function of youths. The aim of this study was to compare between the effects of continuous moderate aerobic exercise versus high intensity interval training (HIIT) on ventilatory functions in smoker students.Subjects and Methodology: sixty smoker men and thirty nonsmoker men participated in this study. Their age ranged from 18 to 25 years old, their body mass index (BMI) ranged from 20 to 30 kg/m^2 and they were moderate smoker. They were assigned into three equal groups: Group (A): 30 smoker men received moderate aerobic exercise program for eight weeks as three times per week. Group (B): 30 smoker men received high intensity interval training (HIIT) for eight weeks as three times per week. Group (c): 30 men nonsmoker (controlled group) not received any type of exercise; they performed their normal daily living activities. Results: There was significant improvement for group (A) and group (B) in FVC (0.66% ↑, 0.87% ↑), FEV1 (1.83 %↑, 3.76 %↑), FEV1/FVC (0.48 %↑, 0.43 %↑), FEF 25 – 75 % (3.51 %↑, 4.9 %↑) respectively, but there was statistical significance in favor of group B (HIIT), with no significant difference for group C. Conclusion: HIIT produce more significant benefits on ventilatory functions than continuous aerobic exercise in smoker students.

Key words	**1.**	**Smoker.**
	2.	**Aerobic exercise.**
	3.	**FVC, FEV1, FEVI/FVC, FEF 25**
	4.	**Ventilatory Functions.**
	5.	**High Intensity Interval Training (HIIT).**
	6.	**Students – Smokers.**
Classification number	**:**	**000.000.**
Pagination	**:**	**105 p.**
Arabic Title Page	**:**	**التمرينات الهوائية المستمرة مقابل العالية الشدة المتقطعة على وظائف الرئة عند الطلاب المدخنين**
Library register number	**:**	**6267-6268.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR CADIOPULMONARY DISORDER AND GERIATRICS AND ITS SURGERY

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	**:**	**Ahmed Rageh Saber Ali.**
Title	**:**	**Low Level Laser Versus Trunk Stabilizing Exercises on Sternotomy Healing After Coronary Artery Bypass Grafting.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohammed Helmy**
	2.	**Sherin Hassan Mohammed**
	3.	**Basant Hamdy El-Refaey**
	4.	**Eman Hassan Abd Al-Salam**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Purpose: The aim of this study was to investigate the effects of low level laser versus trunk stabilizing exercises on sternotomy healing post coronary artery bypass graft (CABG) surgery. Subjects & Methods: Forty five male patients who had early sternal instability post CABG surgery with age ranged from 45-65 years were divided randomly into three equal groups (each, n = 15). Group "A" received low level laser therapy (LLLT) while group "B" received trunk stabilizing exercises. Group "C" (control group) received only routine cardiac rehabilitation program which also applied for both groups "A" and "B". Sternal separation, median sternotomy photographic analysis, pain and activities of daily life (ADL) performance were used to evaluate patients at two intervals (pre-treatment and post-treatment). This study was carried out from March to August 2018 at National Heart Institute. Results: There was a significant decrease within-laser group of upper sternal separation while exercise and control groups showed non-significant decrease. Laser and exercise groups showed a significant decrease in mid sternal separation while control group showed non-significant decrease. Exercise group showed a significant decrease in lower sternal separation while laser and control groups showed non-significant decrease. Post-treatment between-groups analysis showed a significant difference only between laser and control groups of upper sternal separation while laser and exercise, exercise and control groups of upper sternal separation and between-groups comparison of mid and lower sternal separation showed non-significant difference. Conclusion: LLLT and trunk stabilizing exercises were most effective methods for sternotomy healing post CABG surgery with superiority for LLLT at upper sternum while trunk stabilizing exercises were at lower sternum.

Key words	**1.**	**Coronary artery bypass grafting.**
	2.	**Trunk stabilizing exercises.**
	3.	**Sternotomy healing.**
	4.	**Low level laser therapy.**
Classification number	**:**	**000.000.**
Pagination	**:**	**184 p.**
Arabic Title Page	**:**	**الليزر منخفض الشدة مقابل تمرينات الثبات الجذعية على إلتئام شق العظمة القصية بعد جراحة الوصلة الشريانية.**
Library register number	**:**	**6209-6210.**

Author	**:**	**Ebtesam Nabil Abdel-Mohsen Nagy.**
Title	**:**	**Low Level Laser Impact On Hypertension And High Blood Viscosity For Coronary Artery Disease Prevention.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohamed Helmy.**
	2.	**Sherin Hassan Mohamed.**
	3.	**Samah Mahmoud Ismail.**
	4.	**Esam Balegh Ewas.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background: **Coronary artery disease (CAD) is the leading cause of death globally, currently accounting for 17 million deaths per year, and projected to increase to more than 23 million by 2030. Although the death rate from CAD has fallen, the prevalence of risk factors continues at an alarming level. Lowering the prevalence of CAD is the most urgent matter, and is pleiotropic since it caused by widespread risk factors as blood pressure, lipid profiles, glucose metabolism, inflammation, blood rheology and atherothrombotic immunological disease progression indicators.** ***Purpose*****: This study payed an interest to laser watch effect on interfered risk factors (hypertension, high blood viscosity, hypercholesterolemia and immunological elements that correlated closely to the pathogenesis of coronary artery disease in high risk stage I hypertensive women.** ***Patients and Methods*****: One hundred stage I hypertensive women, from 55-65 years old, were recruited in this controlled randomized study form Sers El-layan General Hospital, Mnofia, Internal Medicine, Outpatient Clinic. Patients divided into control and study groups. The study group received low level laser (650 nm) by application of laser watch, diet recommendations and traditional medications for 3 months. The control group followed the same procedure but received placebo laser. Blood pressure, CD8+, IL-17A, blood viscosity and lipid profile were measured for both groups before and after the study period.** ***Results:*** **The study findings showed that, there was no significant changes of the measured parameters in the control group (at the beginning and the end of the study) while in the study group, there were significant reduction of both systolic and diastolic pressures (3.4% and 7.73% respectively), CD8+ and IL-17A levels (25.06 and 18.34% respectively), PCV (3.34%), ESR (7.34%) in addition to T.C, T.G and LDL levels (18.34%, 31.84% and 22.06% respectively). It was noticed that, there was significant increase on HDL level in the study group by 6.51% but it didn't reflect any significance when compared by the control group.** ***Conclusion*****: This was the first study investigating the positive impact of laser watch as an alternative complementary treatment for controlling and modulation of coronary artery risk factors and open the way to its innovative use for prevention of cardiovascular disorders.**

Key words	**1.**	**Low level laser.**
	2.	**Blood viscosity.**
	3.	**Hypertension..**
	4.	**Coronary artery disease.**
Classification number	**:**	**000.000.**
Pagination	**:**	**116 p.**
Arabic Title Page	**:**	**تأثير الليزر منخفض الشدة علي إرتفاع ضغط الدم ولزوجته للوقاية من أمراض الشريان التاجي.**
Library register number	**:**	**6503-6504.**

Author	**:**	**Ghada Saeed Hussian.**
Title	**:**	**Response Of Fatty Liver To Aerobic Versus Resisted Exercise With Low Carbohydrate Diet In Women.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serry.**
	2.	**Mona Ahmed Taha.**
	3.	**Mohamed Shehata Abdullah.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Sixty nonalcoholic fatty liver obese women their age ranged from 40-50 years were selected from outpatient clinic of National Nutrition Institute; their body mass indices were 35:39.9 kg/m^2. The sixty patients were classified into two groups equal in number (A & B). The first received a program of Aerobic exercise combined with low carbohydrate diet (group A) 3times/week for twelve weeks and the second received a program of resisted exercise combined with low carbohydrate diet (group B) 3times/week for twelve weeks. The changes in liver enzymes and erythrocyte sedimentation rate were measured at the beginning of the study and after twelve weeks. The results showed that resisted exercise combined with low carbohydrate diet had significant improvement vs. aerobic exerise in ALT (↓17.96 %; P<0.05 vs. ↓9.18%; P<0.05), in AST (↓13.30%; P<0.05 vs. ↓7.02 %; P<0.05), in AP (↓9.64%; P<0.05 vs. ↓3.97%; P>0.05), in Bilirubin (↓12.38%; P<0.05 vs. ↓1.98%; P>0.05), in ESR (↓2.92%; P<0.05vs. ↓2.87%;P>0.05) but changes in aerobic exercise were not statistically significant in AP and Bilirubin (P>0.05). It was concluded that the resisted exercise combined with low carbohydrate diet was associated with significant improvement↓ in liver enzymes and erythrocyte sedimentation rate↓ greater than aerobic exercise combined with low carbohydrate diet.

Key words	**1.**	**Aerobic.**
	2.	**Obesity.**
	3.	**Resisted Exercise.**
	4.	**Bilirubin and ESR.**
	5.	**low carbohydrate diet.**
	6.	**Fatty Liver – Aerobic.**
	7.	**Women in Low Carbohydrate Diet.**
	8.	**Low Carbohydrate Diet In Women.**
Classification number	**:**	**000.000.**
Pagination	**:**	**115 p.**
Arabic Title Page	**:**	**استجابة الكبد الدهنى للتمرينات الهوائية مقابل تمرينات المقاومة مدعوما بنظام غذائي قليل النشويات للسيدات البدينات.**
Library register number	**:**	**6325-6326.**

Author	**:**	**Hagar Ahmed El-Sayed.**
Title	**:**	**Effect of respiratory muscle training on ventilatory functions of chronic obstructive pulmonary disease patients.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Mohamed Hamed Badr.**
	2.	**Basant Hamdy El-Refay.**
	3.	**Heba Allah Ahmed Moussa.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	
Objective: To assess the effect of respiratory muscle training on pulmonary functions of chronic obstructive pulmonary disease patients Design: Sixty men (40-60 yrs old) with Chronic Obstructive Pulmonary Disease (COPD) were enrolled for this study. They were assigned randomly with 30 patients allocated to the control group and another 30 patients allocated to the study group. The control group received a conventional chest physiotherapy in addition to medical treatment, whereas the study group received the same program in addition to respiratory muscle training using powerlung device. Both groups received the treatment sessions three times per week for 3 successive months. Measurement of ventilatory function and respiratory muscle Strength by using the spirometry and the COPD Assessment Test (CAT) was done before and after the 3 month intervention period . The data concerned with the ventilatory functions included forced vital capacity (FVC), forced expiratory volume in one second (FEV1), FEV1/FVC ratio, peak expiratory flow rate (PEFR), peak inspiratory flow rate (PIFR) , maximum voluntary ventilation (MVV) , maximal inspiratory pressure (MIP) and maximal expiratory pressure (MEP). Results:Each group demonstrated significant improvements in pulmonary function and respiratory muscle Strength after treatment, with significantly greater improvements seen in the experimental group when compared with the control group. Conclusions: Training both inspiratory and expiratory muscles had significant effects on pulmonary function and respiratory muscle strength in Chronic Obstructive Pulmonary Disease.		
Key words	**1.**	**Chronic obstructive Pulmonary disease.**
	2.	**pulmonary functions.**
	3.	**Respiratory muscle training.**
	4.	**ventilatory functions.**
Classification number	**:**	**000.000.**
Pagination	**:**	**125 p.**
Arabic Title Page	**:**	**تأثير تدريب العضلة التنفسية على التهوية الرئوية لمرضى الضيق الشعبي الهوائي المزمن.**
Library register number	**:**	**6575-6576.**

Author	**:**	**Hanan Alhoussin Alnahas.**
Title	**:**	**T – lymphocytes and cortisol response to resistance training in type 2 diabetics.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Azza Fikry Ismail**
	2.	**Aisha Abdelmonem Hagag**
	3.	**Heba Ibrahim Hamed Mohamed**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Diabetes mellitus is one of the largest global health emergencies of the 21th century. Each year more and more people live with this condition, which can result in life-changing complications. This study was designed to find out the effect of resistance training on T-lymphocytes, HbA1c% and cortisol hormone in type 2 diabetic patients. Sixty patients with type 2 diabetes. Their Age ranged from 40-50 years old, the chronicity of the disease was 4 to7 years, Patients were of both sex. BMI between (25-34.9)kg/m^2,their HbA1c was not exceed 8% . The evaluation of serum cortisol level , T-lymphocytes (CD4)% and glycosylated haemoglobin (HbA1c)%was done before and after the study period for each patient. patients were classified randomly into two groups, equal in number. (control group, Group A)and (study group, Group B). Group (A) received their hypoglycemic drugs only. Study group (B) participated in 12 weeks resisted training program (3 sessions per week). Results showed a significant difference between (GA) comparing with the (GB) in post training values of serum cortisol level ,T- lymphocytes (CD4)and (HbA1c) in favor of group(G B). So, it could be concluded that resistance training for 12 weeks in a diabetic patients caused a significant increase in values of T- lymphocytes (CD4),and a significant decrease in serum cortisol level and Glycosylated haemoglobin So this type of exercise must be provided to diabetics to improve their quality of life.

Key words	**1.**	**Diabetes, Resisted training.**
	2.	**Glycosylated haemoglobin**
	3.	**Cortisol.**
	4.	**T-lymphocytes.**
	5.	**Resistance training in diabetics.**
	6.	**type 2 diabetics – cortisol.**
Classification number	**:**	**000.000.**
Pagination	**:**	**100 p.**
Arabic Title Page	**:**	**تمرينات المقاومة على الليمفاويات التائيه وهرمون الكورتيزول فى مرضى السكري(النوع الثانى).**
Library register number	**:**	**6369-6370.**

Author	**:**	**Hany Mohamed Ghanem.**
Title	**:**	**Mild Exercise Versus Moderate Exercises On Anti Inflammatory Cytokines In Patients With Type 2 Diabetes Mellitus.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serry**
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	4.	**Gihan Samir Mohamed**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	
_Study objective:_was to asses the effect of mild versus moderate exercise on anti inflammatory cytokines in patients with type 2 diabetes mellitus. _Setting and participants:_40 patients(men and women) diagnosed with type 2 diabetes mellitus (non-insulin dependant diabetes mellitus) age ranged from 50 to 60 years old. They were selected from medical health insurance clinic in heliopolies. The study was conducted from march 2016 to july 2016. Theywere divided into two groups. Group A included20 patients participated in mild exercise in form of 10 minute walking program 3 times weekly for 8 weeks less than 50% of their MHR and Group B 20 patients participated in a moderate exercise in form of 10 minute walking program 3 times weekly for 8 weeksup to 50% to 60% of their MHR. Blood sample for measuringinflammatory cytokines level (IL1 and IL6) and blood glucose level (fasting and postprandial) were taken before and after exercise program. Results and conclusion: the results that used descriptive analysis(mean ±SD) and T paired test showed that in most measures that rate of decrease of inflammatory cytokines and blood glucose level in group B who participated moderate exercise is greater than Group A who participated mild exercise. Moderate exercise had a greater effect on decreasing inflammatory cytokines than mild exercise.		
Key words	**1.**	**mild exercise.**
	2.	**diabetes mellitus.**
	3.	**moderate exercise.**
	4.	**anti inflammatory cytokines.**
	5.	**blood glucose level.**
Classification number	**:**	**000.000.**
Pagination	**:**	**67 p.**
Arabic Title Page	**:**	**التمرينات الخفيفة مقابل التمرينات المتوسطة علي السيتوكين المضادة للالتهاب للنوع الثاني لمرضي البوال السكري.**
Library register number	**:**	**6257-6258.**

Author	**:**	**Hend Salem Ahmed.**
Title	**:**	**Efficacy of High Intensity Interval Training on Endothelial Function in Diabetics with Peripheral Arterial Insufficiency.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohammed Helmy.**
	2.	**Heba Ahmed Ali Abdeen.**
	3.	**Manal Ahmed Mohamed.**
	4.	**Ahmed Abdallah Emam.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	
Background and purpose: Peripheral Arterial Disease (PAD) due to diabetes affects quality of life, contributing to long-term disability and functional impairment that is often severe; Patients with claudication have a slower walking speed and a limited walking distance and impaired endothelial function. This may result in a cycle of disability with progressive deconditioning. High Intensity Interval Training (HIIT) has been shown to induce significant improvements in diabetic patients with PAD. Aim of the study : to investigate the effect of HIIT on pain free walking time, maximum walking time, maximum walking distance and nitric oxide in diabetics with PAD. Materials and methods: Thirty eligible male patients with PAD secondary to type 2 diabetes were selected from National Heart Institute (peripheral vascular outpatient clinic) , their ages ranged from 50-60 years old, their Body Mass Index (BMI) <30 kg/m2, their Ankle Brachial Index (ABI) ranged between (0.6) and (0.9), had intermittent claudication (IC) ,they were randomly assigned into two groups : study group which received HIIT for 5-30 min at 85-90% of the maximal heart rate, three times per week for 12 weeks in addition to their traditional medical treatment and received instructions about risk factor modification (n=15) and control group which received instructions about risk factor modification in addition to their traditional medical treatment (n=15), Before and after intervention, the following measures were obtained: pain free walking time, maximum walking time, maximum walking distance and nitric oxide. Results: Comparing study group which received HIIT there were greater improvement in pain free walking time by129.63%, maximum walking time101.21%, maximum walking distance by 87.5% and nitric oxide by 30.19%, while there was no significant improvement in control group. Conclusion: The study concluded that application of HIIT in diabetics with PAD resulted in significant improvement in pain free walking time, maximum walking time, maximum walking distance and nitric oxide in diabetic patients with PAD.		
Key words	**1.**	**Peripheral Arterial Disease.**
	2.	**Intermittent Claudication.**
	3.	**High Intensity Interval Training.**
	4.	**Ankle Brachial Index.**
	5.	**Endothelial Function in Diabetics.**
	6.	**Nitric Oxide.**
Classification number	**:**	**000.000.**
Pagination	**:**	**108 p.**
Arabic Title Page	**:**	**فعالية التمرينات المتقطعة عالية الشدة على وظيفة بطانة الاوعية الدموية فى مرضى السكرى مع قصور الشرايين الطرفية.**
Library register number	**:**	**6299-6300.**

Author	**:**	**Mohamed Ahmed Mohamed Gadallah.**
Title	**:**	**Response of inflammatory markers to circuit weight training in diabetic patients.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Prof. Dr.AzzaAbd El-Aziz Abd El-Hadi**
	2.	**Prof. Dr. Mohammed HosamMaghraby**
	3.	**AssistantProf. Dr.Heba Ahmed Ali Abdeen**
	4.	**Dr. Mohamed Ahmed Elbedewy**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background: Diabetes mellitus is a syndrome causing long-term damage and failure of various organs. Purpose: was to determine the response of inflammatory markers as a cardiovascular risk factor to circuit weight training in diabetic patients. Subjects and Methods:Forty men diabetic patients were included in this study. They were divided randomly into thirty patients as study group, Their ages ranged from (45-55 years) with mean age (50.17±3.5 years), their mean weight (72.07±8.32 kg), mean height (170.53±7.9 cm) and with mean body mass index (24.91±6.9 kg/m^2) and ten patients as control group their age ranged from (45-55 years) with mean age (49±3.2 years), their mean weight (75.27± 5.87 kg),with mean height (170±5.72 cm) and with mean body mass index (25.95±4.7kg/m2) .The study groupparticipated in Circuit weight training program performing 60 minutes training 3 times per week for 12 weeks in addition to their medical treatment. While the control group receivedtheir medical treatment only. Results: The seruminterleukin 6decreased by 64.74% in study group while was 51.08% in control group. The serum tumor necrosis factor alpha decreased by 68.3% in study group while was 55.83% in control group.The results of this study showed that interleukin 6 and tumor necrosis factor alpha levels significantly decreased when compared pre and post treatment in each group. Conclusion: circuit weight training had significant effect on inflammatory markers in diabetic patients.

Key words	**1.**	**diabetes mellitus**
	2.	**interleukin 6**
	3.	**tumor necrosis factor alpha**
	4.	**circuit weight training**
Classification number	**:**	**000.000.**
Pagination	**:**	**88 p.**
Arabic Title Page	**:**	**مدى استجابة دلالات الالتهاب للتدريب بحلقة الاوزان لدى مرضي السكري.**
Library register number	**:**	**6653-6654.**

Author	**:**	**Moustafa Ibrahim Ahmed.**
Title	**:**	**Antiremodeling and Prognostic Values of different aerobic training intensities in chronic heart failure.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohammed Helmy.**
	2.	**Bassem Sobhy Ibrahim.**
	3.	**Heba ahmed ali Abdeen.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background and purpose: Cardiac remodeling involves changes that manifest clinically as changes in size, shape, and function of the heart after injury. Long-term exercise training has been shown to induce reverse remodeling in patients with stable CHF, improvements in exercise capacity in CHF patients led to increased metabolism, strength and significant reductions in depressive symptoms. Aim of the study: to determine the efficacy of different aerobic exercise training intensities on left ventricular remodeling, prognostic biomarkers in patients with chronic heart failure. Materials and methods: : Forty five eligible male patients with chronic heart failure secondary to ischemic heart disease were selected from National Heart Institute heart failure outpatient clinic , their ages ranged from 50-60 years old and their ejection fraction ranged from 30-40% ,they were randomly assigned into three groups :HIT Group: received High Intensity aerobic Training in the form of bicycle ergometer exercise for the lower limbs three times /week for three months.(n=15) MIT Group: received moderate Intensity aerobic Training in the form of bicycle ergometer exercise for the lower limbs three times /week for three months. .(n=15) LIT Group: received low Intensity aerobic Training in the form of bicycle ergometer exercise for the lower limbs three times /week for three months, Before and after intervention, the following measures were obtained: Echocardiograph parameter (EF%, and left ventricular internal dimension) , prognostic biomarkers (proBNP), and quality of life . Results: Comparing group who received HIT showed greater improvement in EF%,PNB and MLWHF. Conclusion The study concluded that the high intensity aerobic training is the best in improving in parameters of EF%,BNP and QOL in selected CHF.

Key words	**1.**	**chronic heart failure.**
	2.	**aerobic exercises**
	3.	**ventricular remodeling.**
Classification number	**:**	**000.000.**
Pagination	**:**	**108 p.**
Arabic Title Page	**:**	**اعادة الهيكلة والقيم التنبؤية لتمرينات هوائية مختلفة الشدة في مرضي فشل القلب المزمن.**
Library register number	**:**	**6219-6220.**

Author	**:**	**Naglaa Fathey Moustafa.**
Title	**:**	**Efficacy Of Pulsed Ultrasound On Fracture Healing Time And Bone Turnover Markers In Osteoporotic Elderly Women.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Mohamed Badr.**
	2.	**Heba Ahmed Ali Abdeen.**
	3.	**Waleed A El Tohamy.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	
Background: Osteoporotic fractures are an important public health issue as it results in disability and diminishes quality of life. The aim of the current study was to investigate the efficacy of low intensity pulsed ultrasound (LIPUS) on fracture healing time and bone turnover markers in osteoporotic elderly women. Methods: Forty osteoporotic postmenopausal women ageing between 64 to 76 years diagnosed with stable intertrochanteric hip fracture underwent internal fixation with dynamic hip screw (DHS) were recruited and randomly assigned into two equal treatment groups ;(LIPUS group and Control group). LIPUS group received post-operative physical therapy program, In addition to low intensity pulsed ultrasound over the fracture site, three days per week for 16 successive weeks. While Control group participated only in a post-operative physical therapy program .All patients were assessed by several clinical and radiological outcome measures at different intervals, at the beginning of the study, 4^{th} weeks, 12^{th} weeks, and 16^{th} weeks for fracture healing assessments using the radiographic union scale for hip (RUSH score),Modified Harris hip score and bone markers assessment (osteocalcin and bone alkaline phosphatase) Results: showed significant difference in healing time between (LIPUS) group and Control group, which reflected a decrease in radiographic healing time in (LIPUS) group compared to Control group ($p<0.05$). The results also indicated that the overall percentage of changes for Rush score, Modified Harris hip score, Osteocalcin, and Bone alkaline phosphatase improved in patients included in LIPUS group compared to Control group from zero time to 16^{th} week . Conclusion: low intensity pulsed ultrasound can accelerate fracture healing process in osteoporotic elderly women as obtained from the selected scoring systems and bone markers assessment results. Consequently, LIPUS considered a beneficial non-invasive physical therapy modality could be added to the rehabilitation program as a treatment option proved to have a clinical benefits.		
Key words	**1.**	**Osteoporotic hip Fracture.**
	2.	**Bone alkaline phosphatise.**
	3.	**Low Intensity Pulsed Ultrasound.**
	4.	**Healing time.**
	5.	**Osteocalcin.**
	6.	**Elderly Women In Osteoporotic.**
Classification number	**:**	**000.000.**
Pagination	**:**	**125 p.**
Arabic Title Page	**:**	**تأثير الموجات فوق الصوتية منخفضة الشدة على معدل التئام الكسور ودلالات تكون العظام في السيدات المسنات المصابات بترقق العظام.**
Library register number	**:**	**6311-6312.**

Author	**:**	**Noha Mohamed Kassem.**
Title	**:**	**Effect of inspiratory muscle trainer on selected pulmonary function testing in patients post liver transplantation.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Azza Abdel Aziz Abdel Hady.**
	2.	**Hazem Abdel Mohsen.**
	3.	**Nesreen Gharib El- Nahas.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Purpose: This study was conducted to determine the effect of inspiratory trainer on selected pulmonary function testing specially (DLCO) in patients post liver transplantation. Subjects: Thirty-three patients of both sexes (10 women and 23 men) with age ranged from 35-45 yrs post liver transplantation surgery participated in this study, received inspiratory muscle training by IMT plus traditional physical therapy program which include deep breathing exercise in form of diaphragmatic, apical and costal breathing, training about right way of cough and early ambulation from bed twice daily for 4 weeks. Blood gases were measured (pH, PaO_2 , $PaCO_2$, HCO_3 , DLCO/ HCO_3 , Blood lactate and Base excess) before the study and after 4 weeks. Results: The results of the present study showed that inspiratory muscle trainer has a significant effect on some parameters of the measured blood gases post liver transplantation, showed in significant decrease of HCO_3 by 18.27%, lactate level by 26.14% and increased DL_{CO} by 6.5%. While the other parameters showed non-significant results appeared in a percentage of change of PaO_2 by 3.5%, $PaCO_2$ by 4.52%, pH by 0.14% and Bx by 11.32%, after training. Conclusion: Inspiratory muscle training is an effective modality added to traditional physical therapy methods post liver transplantation, as an attempt to modulate the diffusion capacity, which considered an important transfer factor for this important operation

Key words	**1.**	**Liver transplantation.**
	2.	**Diffusion capacity.**
	3.	**inspiratory trainer.**
	4.	**Blood gases.**
	5.	**Pulmonary function testing.**
Classification number	**:**	**000.000.**
Pagination	**:**	**70 p.**
Arabic Title Page	**:**	**تأثير جهاز تمرينات التنفس على أختبار أداء الرئتين في مرضي زراعة الكبد.**
Library register number	**:**	**6755-6756.**

Author	**:**	**Omnia Saeed Mahmoud Ahmed**
Title	**:**	**Response Of Lung Flute Training On Functional Capacity In Patients With Chronic Obstructive Pulmonary Disease.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nesreen Gharib El Nahas.**
	2.	**Awny Fouad Rahmy.**
	3.	**Moheb Wadeea El Faizy.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Acute exacerbation of chronic obstructive pulmonary disease(AECOPD)is characterized by increased airways mucus secretions. The purpose of this study was to determine the effect of lung flute training on AECOPD. Subjects: Sixty men patients aged from 40-60 years old having AECOPD were included from the Chest department at El Sahel Teaching hospital . Patients were assigned into two equal groups in number. Group (A) received traditional chest physiotherapy only including (pursed lip breathing , diaphragmatic breathing , percussion ,vibration , coughing &postural drainage) while group (B) received Lung Flute training in addition to traditional chest physiotherapy including 3sessions per week for eight weeks . The data concerned with the ventilatory functions included forced expiratory volume in one second (FEV1) ,forced expiratory volume in sixth second (FEV6) , the ratio between forced expiratory volume in one second to forced expiratory volume in sixth second (FEV1/FEV6) and maximum voluntary ventilation (MVV) were measured at the baseline of training and after training . Six minute walk test and COPD assessment test (CAT) were also calculated. Results: The study group which used the lung flute device showed a statistical significant increase in FEV6 , FEV1 , MVV and 6MWT and there was no statistical significant difference between the value of difference of FEV1/FEV6 and CAT in the two groups. It was concluded that lung flute training provided an adequate physiotherapy method to the patients with AECOPD, helped in sputum expectoration and improvement of ventilatory functions , enhances patients' compliance and independence.

Key words	**1.**	**Chronic Obstructive Pulmonary Disease (COPD).**
	2.	**Acute Exacerbation.**
	3.	**Lung Flute.**
Classification number	**:**	**000.000.**
Pagination	**:**	**119 p.**
Arabic Title Page	**:**	**تأثير التدريب بناي الرئة علي القدرات الوظيفية لدي مرضي الضيق الشعبي الهوائي المزمن.**
Library register number	**:**	**6307-6308.**

ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL THERAPY DEPARTMENT FOR CADIOPULMONARY DISORDER AND GERIATRICS AND ITS SURGERY

PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED

Author	**:**	**Ramy Salama Ateia Draz.**
Title	**:**	**Interval Training Versus Electro Acupuncture On Liver Functions In Patients With Fatty Liver.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra M.H Serry.**
	2.	**Awny Fouad Rahmy.**
	3.	**Mona Mohamed Taha.**
	4.	**Maha saber El Bardesi.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Purpose: The aim of this study was to compare the effect of electro acupuncture versus aerobic interval training exercises on liver functions in patients with non-alcoholic fatty liver. Subjects and methods: Fifty patients suffering from Non-alcoholic fatty liver disease (NAFLD) were recruited in this study with age ranged from 30-55 years old from both sexes, were chosen from internal medicine department at Kasr El Aini hospital and from outpatient clinic of nutrition and cardiovascular disorders, faculty of physical therapy, Cairo university. They were divided into two equal Groups. (group A= 25 patients) received their standard medications In addition to electro-acupuncture at points of liver 3 (LR3) (Taichong), liver 14 (LR14) (Qimen), gall bladder 34 (GB34) (Yanglingquan) and stomach 36 (ST36) (Zu San Li) 3 times per week for 6 weeks.(group B = 25 patients) received their standard medications in addition to aerobic interval training exercise 3 times per week for 6 weeks. Lab investigations of: Aspartate aminotransferase (AST), Alanine aminotransferase (ALT), Triglycerides (TG) and C-reactive protein (CRP) were applied to evaluate patients at two intervals (pre-treatment and post-treatment). Results: Statistical significance was set at P < 0.05.in (group A): there were significantly decreased of all variables at post treatment compared to pre-treatment with improvement percentage in ALT (55.79%), AST (46.64%), TG (27.95%) and CRP (17.71%).in (group B): there were significantly decreased of all variables at post treatment compared to pre-treatment with improvement percentage in ALT (43.34%),AST (35.84%), TG (15.12%) and CRP (13.68%). In between groups post treatment, there were significant difference in ALT, AST and TG. However, there was no significant difference in CRP. Conclusions: It was concluded that electro acupuncture and aerobic interval training exercises are effective methods for management of non-alcoholic fatty liver persons with most effect to electro acupuncture

Key words	**1.**	**Electro acupuncture.**
	2.	**non-alcoholic fatty liver disease**
	3.	**Aerobic interval training exercises.**
	4.	**Fatty Liver.**
	5.	**Liver Functions.**
Classification number	**:**	**000.000.**
Pagination	**:**	**205 p.**
Arabic Title Page	**:**	**تأثير التمرينات المتقطعة مقابل الاستثارة الكهربية للعلاج بالوخز وتأثيرها على وظائف الكبد لدي مرضي زيادة دهون الكبد.**
Library register number	**:**	**6693-6694.**

Author	**:**	**Shymaa Hussein Ahmed Roshdy.**
Title	**:**	**Impact of early pulmonary rehabilitation on post liver transplantation.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Azza Abdel Aziz Abdel Hady**
	2.	**Nesreen Gharib El- Nahas,**
	3.	**Moheb Wadeea El Faizy**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background: Postoperative pulmonary complications (PPC) are a noteworthy reason of mortality Post liver transplantation (LT), occur in approximately 35% to 50% of the recipients. Pulmonary dysfunction has likewise been widely reported among patients anticipating LT. Objectives: This study was conducted to estimate the impact of early pulmonary rehabilitation post liver transplant. Subjects: 30 men patients selected from Wadi El Neel Hospital with mean age (49.27 ± 7.12 yrs)post liver transplantation surgery participated in this study, All patients received traditional Physical therapy program which include deep breathing exercise in form of diaphragmatic ,apical ,costal breathing and POWERbreathe Plus device with early ambulation .This program was done 14 sessions / week twice daily for 21 days. Arterial blood gases analysis were measured on 1st day before training on the 7th day, in Intensive care unit (ICU), then re measured after 21 days in the ward .Distance in 6 minute walk test was measured in the 7th day and after 21 days , Borg scale was also assessed before and after training. Results: There was a statistical significant difference in PH, PCO2, PO2, Lactate, HCO3 measured in the 1st day, in the 7th day then after 21 days and distance in 6 minute walk test and borge scale in the two times measured in the 7th day and after 21 days. Conclusion: It was concluded that the POWERbreathe Plus device was effective in rehabilitation in post liver transplantation patients and helped in improvement of quality of life, enhances patients' compliance and idependence

Key words	**1.**	**Liver transplantation.**
	2.	**power breath plus device**
	3.	**Pulmonary complications.**
Classification number	**:**	**000.000.**
Pagination	**:**	**116 p.**
Arabic Title Page	**:**	**تأثير اعاده التأهيل الرئوي المبكر علي زرع الكبد.**
Library register number	**:**	**6457-6458.**

Author	**:**	**Shymaa Mohamed Ali Abdu Abu-Tawoos.**
Title	**:**	**Outcome measures of two different positive end expiratory pressure applications post CABG surgery.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohamed Helmy.**
	2.	**Sherin Hassan Mohamed.**
	3.	**Lotfi Mohammed Eissa.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background and purpose: Pulmonary complications are among the most frequently reported complications after Coronary Artery Bypass Graft (CABG) surgery. However, the risk of postoperative pulmonary complications is not equal for all patients. In the intensive care unit, patients have different adherence to two commonly used positive-expiratory-pressure (PEP) therapy devices: the PEP mouth piece and the PEP mask. The reason for this difference is not clear. The aim of this study was to investigate outcome measures of two different positive end expiratory pressure applications post CABG surgery. Subjects and Methodology: Sixty male and female patients who underwent off pump CABG aged from 40-60 years old and recruited from the National Heart Institute enrolled in that study for two weeks. They were assigned into three matched groups: Group (A): consisted of 20 patients, which received PEP with face mask Group (B): consisted of 20 patients, which received PEP with mouth piece. Group (C): The control group consisted of 20 patients, which received routine cardiac rehabilitation physiotherapy program (postural drainage, percussion, vibration, deep breathing exercises, arm ergometer, acupuncture like TENS, gait training). The program continued for two weeks. Data obtained from the three groups at the beginning of the study and after the end of two weeks regarding respiratory muscle strength (Maximum Inspiratory Pressure MIP, Maximum Expiratory Pressure MEP), Six-minute walking distance and dyspnea scale were statistically analyzed and compared. Results: group A showed a significant increase in the MIP (percent of change 26.42%), Six-minute walking distance (percent of change 108.15%) and a significant decrease in the dyspnea index at rest and during activity compared with that of group C ($p < 0.05$), while there was no significant difference between groups in MEP; and no significant difference between group A and B and between group B and C in MIP, Six-minute walking distance and dyspnea index at rest and at activity ($p > 0.05$). Conclusion: Using PEP with face mask and mouth piece are both effective post off pump CABG surgery and the difference between them is not enough to be statistically significant; however, patients were more compliant, comfortable and cooperative with mouth piece more than face mask.

Key words	**1.**	**off pump CABG, PEP,**
	2.	**Six-minute walking distance.**
	3.	**Respiratory muscle strength.**
	4.	**Dyspnea index.**
Classification number	**:**	**000.000.**
Pagination	**:**	**115 p.**
Arabic Title Page	**:**	**القياسات المستخرجة عن تطبيق نوعين مختلفين من الضغط الايجابى النهائى للزفير بعد جراحة الوصلة الشريانية التاجية.**
Library register number	**:**	**6417-6418.**

Author	**:**	**Tarek Hanafy Mahmoud Hanafy.**
Title	**:**	**Effect of Strenghthing Exercise Versus Intermittent Pneumatic Compression Device to Calf Muscle on Blood Flow in Patients with Varicose Veins.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serry.**
	2.	**Awny Fouad Rahmy.**
	3.	**Hany Farid Eid Morsy Elsisi.**
	4.	**Nasr Mohamed Mohamed Osman.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Background & purpose: Varicose veins are not only a cosmetic annoyance; they can lead to complications that result in losing time of work. Treatment has improved to reduce recovery time and complications. Purpose of the study was to compare between the effect of strengthening exercise versus intermittent pneumatic compression on maximal blood flow velocity, mean blood flow velocity, refilling time, pain intensity level and calf muscle circumference in varicose veins patients. Methods: fifty patients 23 men and 27 women patients complaining from symptomatic varicose veins. Their ages ranged between 35 to 55 years old. They were divided into two groups equal in number; Group (A) was consisted of 25 patients 11 men and 14 women who were performed intermittent pneumatic compression device three times per week for twelve weeks. Group (B) was consisted of 25 patients 12 men and 13 women who were performed tip-toe strengthening exercise, ergometer exercise, with elastic compression stocking three times per week for twelve weeks. Blood flow was measured by duplex and pain intensity level by visual analogue scale (VAS) and calf muscle circumference by tape measurement for all patients in both groups before and after treatment program. Results: The result of this study indicated that there were statistical significant improvements of the maximum blood flow, mean blood flow; and pain intensity level in both groups favor of IPC more than exercise. Conclusion: Based on the finding of this study it was concluded that there was significant beneficial effect of IPC more than exercise. IPC improvement on the maximal blood flow velocity was 51.75%, mean blood flow velocity improvement was 69.64%, refilling time improvement was 23.14% and pain intensity level improvement was 51.69%. While exercise group improvement on the maximal blood flow velocity was 22.86%, mean blood flow improvement was 33.33%, refilling time improvement was 12.89% and pain intensity level velocity improvement was 42.37%.While there was no significant effect on calf muscle circumference in both group.

Key words	**1.**	**Varicose vein**
	2.	**intermittent compression**
	3.	**Exercise**
	4.	**open toes stocks.**
	5.	**Calf Muscle on Blood Flow.**
	6.	**Blood flow.**
	7.	**Pain.**
Classification number	**:**	**000.000.**
Pagination	**:**	**125 p.**
Arabic Title Page	**:**	**تأثير تمرينات التقوية مقابل ضغط الهواء المتقطع لعضلة باطن الساق (العضلة السمانية) على تدفق الدم لدى المرضى المصابين بدوالى الساقين .**
Library register number	**:**	**6433-6434.**

Author	**:**	**Zeinab Sami Ali Ahmed.**
Title	**:**	**Effect Of Laser Puncture On Arterial Blood Gases For Mechanically Ventilated Patients.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Hany Farid Eid Morsy Elsisi.**
	2.	**Azza Fekry Ismail.**
	3.	**Amany Raafat Mohamed.**
	4.	**Rania Mostafa El-Hoseiny.**
Degree	**:**	**Doctoral.**
Year	**:**	**2019.**
Abstract	**:**	

Purpose: To determine the effect of laser puncture on arterial blood gases for mechanically ventilated patients. Design: single blind randomized controlled trial. Methods: Forty patients participated in the study. They were recruited from the Critical Care Unit in Cairo University hospitals (Kasr El Einy Hospital), Cairo, Egypt. Their ages ranged from 50-70 years old, through a period of 33 months (from May 2016 to February 2019). Confidentiality was assured. They were assigned randomly into two groups matched in age, sex and equally in number; 20 patients each: Group (A) patients received both Laser puncture with an output of 5–20 mW, wavelength of 905 nm and frequency of 5000 Hz. laser probe stimulated on each point for 1 min, once daily for 10 days and routine intensive care physical therapy program twice per day. Group (B) patients received a routine intensive care physical therapy program (modified postural drainage, airway clearance techniques, lung expansion techniques and circulatory exercises for lower limbs) twice per day for 10 days. Pre and post Blood gas analysis for assessment of arterial blood gases (PaO2, PaCO2, O2%, and PaO2/FiO2) for all patients. Results: This study revealed improvement in PaO2/FiO2 in group (A), non-significant change in PaO2, PaCO2 level, O2% after 10 days in both groups. Conclusion: Laser puncture had a significant effect in PaO2/FiO2, so this study supports the value of laser puncture on arterial blood gases for mechanically ventilated patients.

Key words	**1.**	**Arterial blood gases**
	2.	**Laser puncture**
	3.	**Mechanically ventilated patients.**
Classification number	**:**	**000.000.**
Pagination	**:**	**133 p.**
Arabic Title Page	**:**	**تأثير الليزر النقطي على غازات الدم الشريانية للمرضى الخاضعين للتنفس الصناعي .**
Library register number	**:**	**6529-6530.**