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

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Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and Its Surgery

Doctoral Degree 2020

Author	**:**	**Alyaa Abdallah Altallah Ahmed Zeid.**
Title	**:**	**Effect of elliptical trainer on lipid profile, oxidative stress indicators and antioxidant status in diabetic women type 2.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serry**
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Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Background: There is a strong relationship between hyperglycemia, oxidative stress (OS) caused by hyperglycemia, systemic inflammation, and type 2 diabetes mellitus (DM) development and progression. Objective: The aim of this study was to find out the response of lipid profile, OS indicators and antioxidant status to elliptical trainer (ET) in diabetic women type 2. Method: The study was done on 60 diabetic type 2 women with ages ranged from 40-50 years old and body mass index (BMI) varied from 30-34.9 kg/m^2. All patients were randomly assigned to two equal groups in number. The study group (n = 30) received 40-minute aerobic exercise on ET - 3 times weekly for 16 weeks in addition to home walking program for 30 minutes day after day out of exercise session day while the control group (n= 30) received hypoglycemic drug only. Fasting blood glucose, homeostasis model assessment of insulin resistance, glycosylated hemoglobin A protein test, lipid profile [serum concentrations of total cholesterol, triglycerides, high density lipoprotein-cholesterol (HDL-c), non-HDL-c, lipoprotein phospholipase enzyme, pro-inflammatory markers [tumor necrosis factors-alpha and interleukin-6], malondialdehyde (OS marker), and antioxidants as erythrocyte superoxide dismutase and reduced glutathione were measured before and after the study period. Results: The study group showed a highly statistical significant difference in all measures while the control group revealed no significant statistical improvement in any measure. Conclusion: ET decreased the insulin resistance, hyperglycemia, dyslipidemia, systemic inflammation, and OS in addition to the increase of antioxidants through 16-week aerobic training in type 2 DM women.

Key words	**1.**	**Elliptical trainer.**
	2.	**Oxidative stress.**
	3.	**Type 2 diabetes mellitus.**
	4.	**Proinflammatory markers**
	5.	**Antioxidant status.**
	6.	**Diabetic women type 2.**
	7.	**Dyslipidemia**
Classification number	**:**	**000.000.**
Pagination	**:**	**128 p.**
Arabic Title Page	**:**	**تأثير التمرين المغزلى على دهون الدم و مؤشرات الإجهاد التأكسدى و حالة مضادات التأكسد لدى مريضات السكر النوع الثانى.**
Library register number	**:**	**7241-7242**

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

Author	**:**	**Amr Ali Ali El khodary.**
Title	**:**	**Effect Of Electroacupuncture In Diabetic Peripheral Neuropathy.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Mohamed Hamed Badr**
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	3.	**Abdou Mohamed Saleh**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Purpose: To determine the effect of electroacupuncture in diabetic peripheral neuropathy. Subject and methods: Randomized single-blinded trial design, 60 diabetic patients type 2 diabetes mellitus (T2DM) with peripheral neuropathy, not less than 5 years, from both sexes (32 males and 28 females), their age range from 50–65 years, with body mass index(BMI) range from 30 to 34.9 kg/m2 type 1 obesity. The patients were randomly assigned into 2 equal groups in numbers: group A, 30 patients were treated by electroacupuncture therapy and traditional physiotherapy sessions in form of aerobic walking exercises, balance exercises, active free range of motion foot exercises, and home routine exercises for 12 weeks, three sessions weekly 40 minutes; and group B, 30 patients were treated by only traditional physiotherapy sessions. Electroacupuncture therapy was applied 30 minutes per session, 3 sessions weekly for 12 weeks in 12 acupuncture points at the bilateral (ST36, GB39, SP9, SP6, LR3 and GB41). Motor nerves conduction velocity and quality of life were assessed before and after treatment through tibial motor nerve conduction velocity (MNCV), common peroneal motor nerve conduction velocity (MNCV) and the short form (SF-36) quality of life questionnaire. Results: Significant increase in motor nerves conduction velocity and quality of life questionnaire outcomes were detected in group (A) more than group (B) (P<0.05). Conclusion: The program of 12-week electroacupuncture therapy gained improvement of motor nerves conduction velocity and quality of life during treatment of diabetic peripheral neuropathy with type 2 diabetes mellitus (T2DM).

Key words	**1.**	**Nerves conduction velocity.**
	2.	**Electroacupuncture.**
	3.	**Diabetic peripheral neuropathy.**
	4.	**Quality of life.**
Classification number	**:**	**000.000.**
Pagination	**:**	**142 p.**
Arabic Title Page	**:**	**تأثير التنبية الكهربائي للابر الصينية علي التهاب الاعصاب الطرفية في مرضي السكري.**
Library register number	**:**	**7181-7182.**

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

Author	**:**	**Asmaa omar Ibrahim.**
Title	**:**	**Efect ef tensioning neural mobilization of brachial plexus in patients with chronic cervical radiculopathy.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nadia Abd El-Azeim Fayaz**
	2.	**Ahmed Hazem Abdelazeem**
	3.	**Karima Abdelaty Hassan**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Background: Neural tissue mobilization techniques are passive or active movements aiming for restoring the ability of the nervous system to tolerate the normal compressive, friction and tensile forces associated with daily and sports activities. The effectiveness of neural mobilization (NM) for neuromusculoskeletal conditions still unclear and limited evidence. Objectives: To determine the efficacy of tensioning neural mobilization (NM) on handgrip strength, mechano sensitivity of brachial nerves, and neck and arm pain intensity in patients with unilateral chronic cervical radiculopathy. Setting: The study was conducted at department of physical therapy in AL- Badrashin and AL-Nozha central hospitals, Cairo, Egypt. Study Design: a single-blinded randomized trial. Methods: Forty participants with chronic unilateral CR were randomly assigned either to group-A (conventional physical therapy group, n =20), that received a conventional physical therapy in the form of manual traction, flexion stretching exercise and infra-red irradiation, and group–B (neural mobilization group, n = 20) that received conventional physical therapy in addition to tensioning neural mobilization of brachial plexus. Handgrip strength, mechano sensitivity of the brachial nerves and neck and arm pain were evaluated at baseline and one week after the end of a 3-week program. Results: There were significant within-group differences in both groups regarding hand grip strength, mechanosensitivity, and pain intensity; for hand grip strength, for group (A): (P-value =0.001), and for group (B): (P-value=0.001).for mechano sensitivity; for group (A): (P-value=0.001), for group (B): (P-value=0.001). Regarding pain, P-value is less than (0.01) for group (A), and P-value is less than (0.01) for group (B). But there was no statistically significant difference between both groups regarding hand grip strength (p-value: 0.374), mechano sensitivity (p-value: 0.07) or pain intensity (p-value: 0.838).Conclusion: The addition of tensioning neural mobilization to conventional physical therapy yielded no significant additional benefits, although both groups showed post-treatment increased handgrip strength, decreased mechano sensitivity, and decreased pain intensity.

Key words	**1.**	**chronic cervical radiculopathy.**
	2.	**hand grip strength.**
	3.	**tensioning neural mobilization.**
	4.	**ULTT-1.**
	5.	**brachial plexus.**
Classification number	**:**	**000.000.**
Pagination	**:**	**86 p.**
Arabic Title Page	**:**	**تاثير التحريك التوترى للضفيرة العضدية على اعتلال الجذور الرقبية المزمن.**
Library register number	**:**	**7271-7272.**

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

Author	**:**	**Emad Kameil Gaid Abdelnour.**
Title	**:**	**Metabolic Bone Changes After Intradialytic Resistive Exercise In Regular Hemodialysis Patients.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa M. Badr**
	2.	**Sahier Omar El-Khashab**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	
Background: Mineral bone disease (MBD) and decrease in the quality of life are critical factors contributing to morbidity and mortality in Hemodialysis (HD) patients. Intradialytic resistance exercise can be useful in stimulating bone formation and improving quality of life. Objective: The aim of this study was to evaluate the metabolic bone changes and quality of life after intradialytic resistive exercise training in regular hemodialysis patients. Subjects and methods: Sixty patients, aged from 20 to 60 years old on regular HD participated in this study. Patients were divided into two groups, low PTH group (PTH below 200), and high Parathyroid hormone (PTH) group (PTH over 800), both of them randomly subdivided into study and control groups. They received intradialytic resistive exercise three times per week for three months. Calcium, Phosphorus, PTH and quality of life were evaluated before and after the exercise period. Results: The results of the present study revealed that, in the high PTH group, PTH and P decreased significantly and Ca increased significantly in the exercise group. In the low PTH group, PTH increased significantly in the control group with non-significant increase in the exercise group, P decreased significantly and Ca non-significantly increased in the exercise group. Also, the high PTH group improved in the quality of life in: Symptom/ problem list, Burden of kidney disease, Cognitive function, Quality of social interaction, Sleep, Patient satisfaction, Fatigue and in all Physical function component, and the low PTH group improved in: Patient satisfaction, Overall Health and Role physical . Conclusion: it was concluded that intradialytic resistive exercise improves bone metabolism and quality of life in hemodialysis patients.		
Key words	**1.**	**Hemodialysis.**
	2.	**Bone metabolism.**
	3.	**Intradialytic resistive exercise**
	4.	**Parathyroid hormone.**
	5.	**Quality of life.**
Classification number	**:**	**000.000.**
Pagination	**:**	**114 p.**
Arabic Title Page	**:**	**التغييرات الايضية بالعظام بعد ممارسة تمرينات المقاومة اثناء جلسة الغسيل الكلوى فى المرضى المنتظمين على الغسيل الكلوى.**
Library register number	**:**	**7039-7040.**

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

Author	**:**	**Hend Abd El-Monaem Abd El-Monaem.**
Title	**:**	**Response of glycemic control to low level laser therapy in type 2 diabetic patients.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serri**
	2.	**Sahier Omer El-Khashab**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Background: diabetes mellitus (DM) is a complex, chronic metabolic illness requiring continuous medical care to prevent acute complications and reducing the risk of long-term complications. Egypt is considered as the ninth country in the world, according to number of people with diabetes for the year 2019. The purpose of this study was investigating the effectiveness of low-level laser therapy (LLLT) (extravascular laser blood irradiation (LBI)) on glycemic control in type 2 diabetes mellitus (T2DM) patients. Subjects: Sixty patients both gender (8 men and 22 women in group A/ 6 men and 24 women in group B) who had T2DM more than one year, their ages ranged from 45 to 60 years, and were on two types of medications (metformin and sulphonylurea). Methods: Patients were assigned to two equal groups in number, group (A): The laser group received combined laser therapy CLT (LLLT (3sessions/week for 12 weeks) with their prescribed hypoglycemic medications). Group (B): comparative group received prescribed hypoglycemic medications only. All patients underwent measurement of glycated hemoglobin (HbA1c), fasting plasma glucose (FPG), 75-gram oral glucose tolerance (OGT), fasting c-peptide (FC- peptide) levels and regarding to HOMA-IR the beta cells function (%B), insulin sensitivity (%S) and insulin resistance (IR) could be measured. All parameters were evaluated for both groups at baseline and after the treatment program. While the glycemic level was checked pre and post every laser session to determine the acute effect of laser. Results: Showed improvement at all parameters for group (A) more than the improvement in group (B). There was a significant post-treatment improvement for HbA1c, FPG, OGT and %B at the laser group compared with the comparative group. The Hb1Ac decreased by (15.42%) for group (A), while decreased by (8.29%) for group (B). The FBG decreased by (14.95%) for group (A), while decreased by (8.77%) for group (B) .The OGT decreased by (16.98%) for group (A), while decreased by (12.03%) for group (B) .The % B improved by (25.11%) for group (A), while the improvement in group (B) was (6.84%). On the other hand, there was no significant difference post-treatment in FC-peptide, %S and IR between groups. The percentage of improvement in FC-peptide was (3.23%) for group (A), and it was (1.87%) for group (B). While the percentage of increase in insulin sensitivity %S was (6.17%) for group A and it was (2.43%) for group B. in relation to; insulin resistance IR, it decreased by (5.84%) for group A and decreased by (1.97%) for group B. According to the acute effect of laser, there was a significant decrease in the blood glucose level post-laser sessions by the mean difference 22.73 mg/dl. Conclusion: This study showed a considerable positive effect of low-level extravascular Laser blood irradiation combined with hypoglycemic mediations on the glycemic levels, glycated hemoglobin and enhance beta cells function in T2DM patients.

Key words	**1.**	**Extravascular laser blood irradiation.**
	2.	**fasting c-peptide.**
	3.	**glycosylated hemoglobin.**
	4.	**HOMA-IR.**
	5.	**glycemic control.**
	6.	**low level laser therapy.**
	7.	**type 2 diabetic patients.**
	8.	**fasting blood glucose**
	9.	**insulin sensitivity.**
Classification number	**:**	**000.000.**
Pagination	**:**	**114 p.**
Arabic Title Page	**:**	**إستجابة مستوي السكري لليزر منخفض الشده لدي مرضي السكري النوع الثاني.**
Library register number	**:**	**7069-7070.**

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

Author	**:**	**Nehal Ahmed Shawky Kareem**
Title	**:**	**Effect of breathing retraining on functional capacity in pickwickian Syndrome patients**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Azza Abd El Aziz Abd el Hady**
	2.	**Nesreen Ghareeb El Nahas**
	3.	**Safy Kaddah**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Background: Pickwickian syndrome is a condition in which severe obese patients fail to breathe rapidly or deeply enough, resulting in low oxygen levels and high blood carbon dioxide (CO2) levels. Purpose: To investigate the effect of breathing retraining using breathslim device on functional capacity in pickwickian syndrome patients. Subjects and methods: Sixty patients of both sexes with BMI more than 35kg /m^2 were recruited from outpatient clinic of Tanta Police Hospital; they were randomly and equally allocated into 2 different groups using select the card method into: Group A (study group): of 13 men and 17 women who received breathing retraining plus controlled diet (1200-1700 kcal) and physician advices and Group B (control group): 15 men and 15 women received controlled diet (1200-1700kcal), medications, (medroxyproges terone and acetazolamide), (CPAP) and physician advices. Arterial blood gases were analyzed using an analyzer; FEV1 and FVC were assessed using spirometry besides recording the score of 6MWT. Results: All variables showed statistical significant improvement (P>0.000) in study group with significant difference regarding post values when compared to control group (P>0.001). The results showed that the percent of change for PO2, PCO2, HCO3, FEV1, FVC and 6MWT for group (A) were increased by9.54%, 80.33%, 94.54% and 12.69% and decreased by14.93%, 15.38% respectively, and for group (B) also increased by 0.37%, 0.75%, 2.48%, 2.31%, 0.7% and decreased by 2.2%, respectively. Conclusion: It was concluded that breathing retraining using breath slim device have a modulating effect on functional capacity in pickwickian syndrome patients.

Key words	**1.**	**Pickwickian**
	2.	**Breathslim**
	3.	**breathing retraining**
	4.	**6MWT**
	5.	**Syndrome patients**
Classification number	**:**	**000.000.**
Pagination	**:**	**101 p.**
Arabic Title Page	**:**	**تأثيرات اعادة تدريبات التنفس على القدرة الوظيفية في مرضى متلازمة بيكويكيان.**
Library register number	**:**	**7207-7208.**

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

Author	**:**	**Zeezy Soliman Soliman Taha Eraky.**
Title	**:**	**Effect Of Aerobic Training On Selected Cardiopulmonary Parameters In Myocardial Infarction Patients With Stroke.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nesreen Ghareb El-Nahas**
	2.	**Naguib Mohamed Salem**
	3.	**Samir Abdelfattah El-gazar**
	4.	**Ahmed Ali Mohamed**
Degree	**:**	**Doctoral.**
Year	**:**	**2020.**
Abstract	**:**	

Background: Patients in cardiac rehabilitation are typically advised to complete a period of maintenance phase. The purpose of this study was to determine the effect of aerobic training on selected cardiopulmonary parameters in myocardial infarction patients with stroke. Methodology: Forty patients of both sexes (31 men and 9 women) with age 40-50 years with chronic myocardial infarction with stroke after 6 months participated in the study selected from out-patient clinic of Physical Therapy Center, Modern University for Technology and Information. Patients were assigned into two groups equal in number: group (A) received aerobic training (treadmill training) and traditional physical therapy program (relaxation technique, facilitatory technique, stretching exercise to prevent shortening, proprioceptive neuromuscular facilitation and trunk control training) and group (B) which received traditional physical therapy program. Patients were assessed pre and post treatment using through Stress exercise test unit (Modified Bruce protocol) and modified ashwarth scale. Results: This study revealed that there is significant improvement in resting heart rate (↑ 10.10%), maximum heart rate (↑ 4.67%), METs (↑ 64.95%), maximum systolic blood pressure (↑ 4.45%), maximum diastolic blood pressure (↑ 9.45%) and VO2 max (↑ 35.36%) variables in group (A) treated by aerobic training than those of traditional physical therapy program only. Conclusion: Aerobic training was an energy-generating process in management of myocardial infarction patients with stroke.

Key words	**1.**	**Myocardial Infarction,**
	2.	**Cardiopulmonary Parameter**
	3.	**Stroke.**
	4.	**Aerobic Training.**
	5.	**Myocardial Infarction Patients With Stroke.**
Classification number	**:**	**000.000.**
Pagination	**:**	**103 p.**
Arabic Title Page	**:**	**تأثير التدريبات الهوائية على القياسات القلبية الرئوية المختارة لدى مرضى احتشاء عضلة القلب مع السكتة الدماغية.**
Library register number	**:**	**7295-7296.**