Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and Its Surgery

Doctoral Degree
2014

Author	**:**	**Ahmad Mahdi Ahmad**
Title	**:**	**The Fibrinolytic Response to Interval Versus Continuous Treadmill Training in Patients with Type 2 Diabetes**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
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Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Background: Patients with type 2 diabetes have impaired fibrinolytic activity associated with elevated levels of plasminogen activator inhibitor-1 (PAI-1). Enhanced fibrinolytic activity is often listed as a benefit of regular participation of aerobic exercises. However, little is known about the exercise intensity that yields the maximum benefit in fibrinolytic activity in patients with type 2 diabetes. Purpose: The purpose of the present study was to compare between the effects of high-intensity interval and moderate-intensity continuous exercises, on fibrinolytic activity measured by changes in plasma PAI-1 levels, and on glycemic control measured by blood Hb A_{1c} content, in women patients with type 2 diabetes. Patients: Twenty eight women patients diagnosed with type 2 diabetes were assigned to the study. Methods: Patients were assigned to supervised treadmill walking exercises, either high-intensity interval or moderate-intensity continuous exercises. The high-intensity interval exercise group exercised for 4 intervals of 4 min at 85–90% of HR_{peak} with 3 minutes active recovery at 65–75% of HR_{peak}, in between. The moderate-intensity continuous exercise group had to exercise continuously for 43 min at intensity of 65–75% of HR_{peak}. The exercise training was conducted three times a week for 8 weeks. The Wilcoxon and Mann-Whitney tests were used for statistical comparisons. Results: The results showed that both high-intensity interval and moderate-intensity continuous treadmill exercises reduced baseline values of plasma PAI-1, and blood Hb A_{1c} content significantly ($P < 0.05$), with no statistical significant difference was found between them ($P > 0.05$). Conclusion: The choice of high intensity interval exercise is not necessarily required to induce fibrinolytic benefits or improve glycemic control in women patients with type 2 diabetes. A less intense, moderate-intensity walking exercise can be equally effective, when the longer duration of exercise compensates for the difference in exercise intensity.

Key words	**1.**	**Type 2 diabetes**
	2.	**Fibrinolytic activity**
	3.	**PAI-1**
	4.	**High-intensity interval training**
	5.	**Moderate-intensity continuous training**
	6.	**Diabetes.**
Classification number	**:**	**616.462.AAF**
Arabic Title Page	**:**	**إستجابة تحلل الفبرين للتمرين المتقطع مقابل المتصل على جهاز السير المتحرك لدى مرضى البوال السكرى من النوع الثانى.**
Library register number	**:**	**3649-3650.**

Author	**:**	**Ahmed Abd El-Momen Mohamed Elshehawy**
Title	**:**	**Effect of exercise on polycystic ovary with diabesity females.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Mohamed Hamed Badr**
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	3.	**Fayez EL-shamy**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Background: The link of polycystic ovarian syndrome with insulin resistance was subsequently established by clinical studies characterizing the profound insulin resistance in obese and lean PCOS patients. Purpose: to compare the effect of aerobic exercise using ergonomic treadmill on polycystic ovary syndrome in obese diabetic and non diabetic females. Method: sixty obese female subjects with age ranged from 30 to 40 years old participated in this study. The practical work was recruited from Gynecology outpatient clinic of Alsaid Glal Hospital. They were assigned into two groups equal in number: Group A (study group) included 30 obese diabetic women who received controlled diet and moderate intensity aerobic exercise program performed 3 times per week for 24 weeks and treated by metformin drug (850mg every 12 hour) for diabetes treatment. Group B (control group) included 30 non diabetic obese women who received controlled diet and moderate intensity aerobic exercise program performed 3 times per week for 24 weeks treated by metformin drug (850mg every 12 hour) for PCO treatment. Fasting blood glucose, Insulin resistance, weight, waist circumference and abdominal circumference were measured at the beginning and after the study for both groups.Results: Statistical analysis revealed a significant improvement in insulin resistance, waist circumference, abdominal circumference and polycystic ovarian signs in both groups after aerobic exercise training program.Conclusion: Regular aerobic exercises improve polycystic ovarian signs. Accordingly, obese diabetic and non diabetic women with PCO are advised to perform regular aerobic exercises.

Key words	**1.**	**Aerobic exercise**
	2.	**Obesity**
	3.	**polycystic ovary**
	4.	**type 2 diabetes.**
	5.	**diabetes.**
Classification number	**:**	
Arabic Title Page	**:**	**تأثير التمرينات على تكيس المبايض فى السيدات البدينات المصابات بالسكر .**
Library register number	**:**	**3867-3868.**

Author	**:**	**Ahmed Sayed Mohamed Ahmed**
Title	**:**	**The impact of aerobic exercise intensity on the release of cardiac troponin i in obese adults.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Awny Fouad Rahmy**
	2.	**Randa A. Aziz Ghanom**
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Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Background and Purpose: Elevated cardiac troponin I (cTnI) has been reported after exercise in healthy subjects. Currently, little is known about the impact of exercise intensity on cTnI release, but also the impact of obesity on this response. The purpose of this study was to investigate the influence of the intensity of a single bout of aerobic exercise on the post-exercise release of cTnI in obese adults.Subjects and methodology: Sixty obese subjects aged 20 to 50 years were randomly assigned to light intensity aerobic exercise (group I, n=20), moderate intensity aerobic exercise (group II, n=20), vigorous intensity aerobic exercise (group III, n=20). All subjects performed a single bout of aerobic exercise. Serum samples were drawn before, immediately and 3 h after the exercise bout and were analyzed for cTnI.The results: cTnI was significantly elevated after vigorous intensity aerobic exercise but not after light or moderate intensity exercise. Conclusion: It was concluded that exercise intensity influences the release of cTnI and that vigorous intensity is required for cTnI to be elevated significantly.

Key words	**1.**	**aerobic exercise**
	2.	**cardiac troponin I**
	3.	**obesity**
Classification number	**:**	
Arabic Title Page	**:**	**تأثير شدة التمرينات الهوائية على إفراز تروبونين القلب آي لدى البالغين البدناء**
Library register number	**:**	**3869-3870.**

Author	**:**	**Elsayed Hassan Abdelsalam Mohamed**
Title	**:**	**Buteyko Breathing Technique Versus Incentive Spirometry for Coronary Artery Bypass Graft**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Hassan serry**
	2.	**Lotfy Mohamed Essa**
	3.	**Basant Hamdy El-Refay**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Purpose: The aim of this study was to compare between the effects of Buteyko breathing technique versus incentive spirometry for coronary artery bypass graft. Subjects and methods: Forty-five patients (22 women and 23 men) with age ranged 45-55 years. They were assigned into three groups with equal numbers: group I received traditional chest physiotherapy .Group II received same as group I associated with BBT. Group III received same as group I associated with IS training. ABG (PaO2, PH, Hco3 and PaCO2) and CP breathing test were measured for all groups at the beginning of the study (1st day postoperative) and after the end of five days.Results: revealed significant improvement in all measured variables for the control and Buteyko breathing technique groups but highly significant improvement for incentive spirometer group. These improvements were in the form of increase in control pause and arterial blood gases including PaO2, and PH and decrease in PaCO2 and Hco3 (P<0.05). Also, there were significant differences between each two groups, in favor of incentive spirometer group. Conclusion: BBT induces significant improvement in CP and ABG after CABG but IS is highly significant than BBT.

Key words	**1.**	**Buteyko breathing technique**
	2.	**Incentive spirometry**
	3.	**Coronary artery bypass**
	4.	**Breathing Technique.**
	5.	**Arteries.**
Classification number	**:**	**617.413.MEB**
Arabic Title Page	**:**	**تقنية بيوتيكو للتنفس مقابل الحافز التنفسى فى جراحات ترقيع الشرايين التاجية .**
Library register number	**:**	**3803-3804.**

Author	**:**	**Emad Mohamed Ibrahem Taha**
Title	**:**	**Aerobic Training versus Resistive Training on Antioxidant Enzymes and Functional Capacity in Ischemic Heart Disease Patients**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohammed Helmy**
	2.	**Abd Al Ghany Mohammed Abd Al Ghany**
	3.	**Laila Ahmed Rashed**
	4.	**Sherin Hassan Mohammed**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Background and purpose: Imbalance of oxidant/antioxidant system is considered as an independent risk factor of ischemic heart disease, exercise training has an important role for improving antioxidant activity. The study was done to compare the effect of aerobic versus resisted exercise training on oxidative biomarkers in patients with ischemic heart disease. Methods: Forty five ischemic heart disease men patients were enrolled in the study. They were divided into three groups; control, endurance training and, resisted training groups. Measurement of oxidative biomarkers in form of (glutathione, paraoxonase-1 activity, and malondialdehyde) and vo_{2max} were measured at pre and immediately at the end of the study. The control group did not receive any type of exercise while the endurance training group received exercise on treadmill, and the resisted training group did circuit weight training for large five groups. Aerobic group exercised at moderate exercise intensity from 60- 75% of HR_{max} three times a week for eight weeks and the resisted training group exercised 40-60% of the patient's 1-RM for the same period. Results: The control group showed no statistical changes of measurements. Glutathione increased by 15.9% in aerobic group, whereas in resisted group increased by 18.43%. In both groups, estimated VO_{2max} increased by 16.77%, and by 16.35% respectively. Whereas paraoxonase-1 increased in aerobic more than in resisted group 19.24%, 14.75%. There was a decrease of malondialdehyde in aerobic group by 15.25% and in resisted group by 9.9%. Conclusion: Both endurance and resisted training exercise have a favorable effect of oxidant / antioxidant system in ischemic heart disease patients .These improvements of oxidant/antioxidant balance may add additional physiologic explanation of how exercise could improve patients with ischemic heart disase

Key words	**1.**	**Glutathione**
	2.	**Paraoxonase-1**
	3.	**Malondialdehyde**
	4.	**exercise**
	5.	**Ischemic Heart Disease**
Classification number	**:**	
Arabic Title Page	**:**	**دراسة تأثير التم رينات الهوائية مقابل تمرينات المقاومة على مستوى مضادات الاكسدة في مرضى نقص تروية القلب**
Library register number	**:**	**3879-3880.**

Author	**:**	**Gaber Sayed Amin Soliman**
Title	**:**	**Impact of resisted exercise training on flammatory markers in patients with chronic heart failure.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zeinab Mohamed Helmy**
	2.	**Sherin Hassan Mohamed**
	3.	**Nadia Ibrahim Ahmed Sewelam**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Back ground and Purpose: Resisted exercise training for patients with chronic heart failure (CHF) improves exercise capacity, restores endothelial function and skeletal muscle changes. The effects of three months resisted exercise training on inflammatory cytokines in patients with CHF were studied. Patients and methodology: Forty men chronic heart failure patients as a result of coronary artery disease with age of 50-60 years were included in the present study. Their body mass index (BMI) ≥30 kg/m2.They were randomly divided into two groups, each group consisted of 20 patient, the study group (group A) received a program of resisted exercise training (40 min, resisted exercises, 3 times/week), the control group (group B)did not receive any program of exercise. Both groups received their medical treatment as prescribed by cardiologist. The biochemical changes in inflammatory markers (tumor necrosis factor-alpha and interleukin 6) were measured at the beginning of the study and after twelve weeks. The results: showed that a program of resisted exercise training had greater effect to significantly decrease tumor necrosis factor-alpha (-23.05 %) while the control group showed non statistical significant reduction. also there was non statistical difference between both groups as regards to IL-6. Conclusion: It was concluded that a program of resisted exercise training showed significant reduction in inflammatory markers; tumor necrosis factor-alpha which considered as an important inflammatory marker with non statistical significant reduction in IL-6 in chronic heart failure patients.

Key words	**1.**	**Resisted exercise**
	2.	**Inflammatory markers**
	3.	**Chronic heart failure patients**
Classification number	**:**	**616.12.SGI**
Arabic Title Page	**:**	تمرينات المقاومة على دلائل الالتهاب لدى مرضى فشل عضلة القلب المزمن.
Library register number	**:**	**3647-3648.**

Author	**:**	**Hamed Ibrahim Hamed Shalabiea**
Title	**:**	**Cupping Therapy Versus Anaerobic Exercise On Non Insulin Dependent Diabetic Patients**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Badr**
	2.	**Amir Saleh**
	3.	**Mohamoud Abd Aziz koura**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Objective: The purpose of this study was to compare between the effectiveness of cupping therapy and anaerobic exercise in non-insulin dependent diabetes mellitus. Background: Cupping therapy is a type of alternative medicine that is gaining popularity among people during last few years but the extent of its use and awareness of public towards it has not been widely studied. Anaerobic exercise is a type of exercise that has wide range of uses. 285 million people with type 2 diabetes making up about 90% of diabetes cases. Diabetes is common in both developing and developed countries all over the world. This study compares between the effect of 3 months of cupping therapy and anaerobic exercise in patient with type 2 diabetes. Subjects and Methods: Ninety type 2 diabetic patients both sexes participated in the study, their ages ranged from 30-60 years. They were divided randomly into three groups; each group 30 patients. Medical treatment group (MT) received medication. Medical treatment cupping therapy group (MCUT) received medication and cupping therapy for three months, one session of cupping therapy per month. Medical treatment anaerobic exercises group (MAE) received Medical treatment with anaerobic exercise three sessions per week for 3 months and with repetition maximum test. Results: Both cupping therapy group and anaerobic exercise group had highly significance improvement in glycated hemoglobin. Fasing blood glucose level had significant improvement in cupping therapy group and not significant changes in anaerobic group. Postprandial glucose levels had not significant in both cupping therapy and anaerobic exercise groups. Conclusion: Cupping therapy and anaerobic exorcise are effective as additional alternative therapy in management in non insulin dependent diabetes mellitus. However, further large, rigorously designed trials on its use for other conditions are wanted.

Key words	**1.**	**Cupping therapy**
	2.	**Anaerobic exercise**
	3.	**Non insulin dependent diabetes mellitus**
	4.	**Glycated hemoglobin**
	5.	**blood glucose test**
Classification number	**:**	
Arabic Title Page	**:**	**العلاج بكاسات الهواء مقابل التمرينات اللاهوائية على مرضى السكر الغير معتمدين على الأنسولين**
Library register number	**:**	**3805-3806.**

Author	**:**	**Heba ali abedel Gaphare**
Title	**:**	**Cupping therapy versus therapeutic exercise for patients of osteoporosis.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Zahra Mohamed Hassan Serry**
	2.	**Amir Mohamed Morsy Saleh**
	3.	**Mahmood Alam El Din Hafez**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Background and purpose: The aim of this study was to investigate and compare between the effectiveness of cupping therapy versus exercisetraining inosteoporotic postmenopausalwomen. Subjects and methods: Forty five postmenopausal women participated in this study, postmenopausal for at least fiveyears;with BMI less than 33kg/m^{2}were selected from the Orthopaedicout-patient clinic of EL Helal Hospital. All patients were revalued for bone mineral parameters (density and content) by DEXA pre-treatment andafter six months(post-treatment).all patients weretokening medical treatment (Vit D and Calcium)for six months. The patientswere divided into three groups equal in number. (Group A) fifteen women received cupping treatment for six months, session every month with the regularmedical treatment.(Group B) fifteen women received exercise training program for duration of 30 minutes each session, three session per week for six months with the regular medical treatment, and(Group C)fifteenwomen has only regular medical treatment for six months. Results:the cupping group exhibit that there was a significant increase in bone mineral density (BMD) by 10.97% and bone mineral content (BMC) by 8.07% in lumbar spine. The exercisegroup exhibited there was significant increase in BMDby 15.49 % and BMC by 26.76% in femoral neck and trochanter, and the control group exhibits that there was significant decrease in (BMD)by 10% and (BMC) by 14.81% of femoral head and lumber spine. Conclusion: Cupping therapy and exercise training showed better results in increasing bone mineral density and bone mineral content in postmenopausal osteoporotic women.

Key words	**1.**	**Cupping Therapy**
	2.	**Therapeutic Exercise**
	3.	**Osteoporosis**
Classification number	**:**	**616.716.GHC**
Arabic Title Page	**:**	**تقييم العلاج بالكؤوس الهوائيه مقابل التمرينات العلاجيه لمرضي هشاشه العظام.**
Library register number	**:**	**3797-3798.**

Author	**:**	**Heba Mahmoud Abbas Ali**
Title	**:**	**High intensity interval training verses endormologie on lipid profile in women**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**AzzaAbd El Aziz Abd El Hady**
	2.	**Manal Ahmed Mohamed**
	3.	**Shereen Hamed Elsayed.**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Elevated levels of total cholesterol and low density lipoprotein (LDL) and low levels of high density lipoprotein (HDL) are important risk factors for coronary heart disease in overweight woman. Purpose: to determine effect of high intensity interval training verses endormologie on lipid profile in women. Method: overweight BMI(25-29.9kg/m2) women with age ranged from 30 to 45 years old participated in this study. The practical work was randomly selected from physical therapy department of Golf specialized hospital. They were assigned into two groups equal in number: Group (A)included20 women who received high intensity interval training program for 3 times per week for 5 weeks in addition to controlled nutrition instruction. Group (B)included20 women who received LPG sessions for 3 times/ week for 5 weeks in addition to nutrition instruction. Lipid profile and thigh contour were measured before and after training program. Results: Statistical analysis revealed a significant improvement in lipid profile level in group(A)and group(B)The high intensity interval training program induced the same percentage of change in TC↓8.7%, HDL-C↑12.7% and LDL-C↓10.4% as LPG system (endormolgie). Conclusion: The high intensity interval training and LPG system (endormolgie) were effective in improving lipid profile in overweight women. The levels of TC and LDL were decreased while the level of HDL-C.

Key words	**1.**	**High intensity interval training**
	2.	**Endormologie**
	3.	**lipid profile**
	4.	**women**
	5.	**Blood--Diseases.**
Classification number	**:**	**616.15.AHH**
Arabic Title Page	**:**	**تمرين المتقطع العالى الشدة مقابل الاندرومولوجي على صورة دهون الدم للسيدات.**
Library register number	**:**	**3675-3676.**

Author	**:**	**Mahmoud Ahmed Labib Ahmed**
Title	**:**	**Left Ventricular Functions And Oxygen Saturation Response To Slow Breathing In Chronic Heart Failure Patients**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Awny Fouad Rahmy**
	2.	**Esam Balegh Ewas**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Objectives: To evaluate the effect of slow breathing exercise on oxygen saturation and left ventricular functions in chronic heart failure patients. Background: Inspiratory muscle training and slow breathing exercise are techniques that are designed to improve the level of dyspnea, inspiratory muscle strength and endurance, limb blood flow, walking distance, exercise tolerance, as well as health related quality of life in left side heart failure patients. Methods: Sixty patients were randomly selected from Cairo university hospitals (critical care department), their ages ranged from 50 to 65 years. They were divided into two equal groups study and control group, Thirty patients for each group, each patient of the study group received both slow breathing for 30 min with frequency five sessions per week and medical treatment for one month, each patient of the control group received only medical treatment, all patients are clinically and medically stable as they were on standard cardiac medications all over the study. Pre and post study O_2 saturation, Left Ventricular Ejection Fraction and Quality of life assessment were done for each patient of both groups. Result: There was a statistically difference in O_2 saturation and Quality of life that showed improvement in patients in both control and study group but this improvement was high statistically significant in study group. Conclusions: It is recommended to use slow breathing exercise training for cardiac muscle function regarding and quality of life in patients with chronic heart failure.

Key words	**1.**	**Chronic Heart Failure**
	2.	**slow breathing**
	3.	**Oxygen Saturation**
	4.	**Left Ventricular Functions.**
	5.	**Heart failure.**
Classification number	**:**	**616.12.AML**
Arabic Title Page	**:**	**استجابة وظائف البطين الأيسر وتشبع الأكسجين بالدم للتنفس البطئ لمرضى فشل عضلة القلب المزمن.**
Library register number	**:**	**3711-3712.**

Author	**:**	**Walid Kamal Mohamed Abd El Basset.**
Title	**:**	**Outcomes of resisted exercise on liver enzymes in hepatic patients with diabesity.**
Dept.	**:**	**Physical Therapy Department for Cardiopulmonary Disorder and Geriatrics and its Surgery.**
Supervisors	**1.**	**Nagwa Mohamed Badr**
	2.	**Shereen Hamed Elsayed.**
	3.	**Manal Ahmed Mohamed**
Degree	**:**	**Doctoral.**
Year	**:**	**2014.**
Abstract	**:**	

Forty hepatic women patients with diabesity with age of 40-60 years were selected from the patients of out clinic of internal medicine department in Cairo University Hospitals for this study. Their body mass indexes were $\geq$ 35 kg/m^2. The forty patients were classified into two groups; each group consisted of twenty subjects. The first received a program of resisted exercise (50 minutes 3 times/ week) with a low-calorie diet (1500 cal/day); the second received the same low-calorie diet only without any exercise program. The biochemical changes in liver enzymes and insulin resistance were measured at the beginning of the study and after twelve weeks. The results showed that resisted exercise had significant improvement in ALT (-6.95 mg/dL; P<0.05 vs. - 0.84 mg/dL; P>0.05), in AST (-6.0 mg/dL; P<0.05 vs. -0.59 mg/dL; P>0.05), in ALP (-14.19 mg/dL; P<0.05 vs. -1.45 mg/dL; P>0.05), in Bilirubin (-0.11 mg/dL; P<0.05 vs. -0.01 mg/dL; P>0.05) and significant improvement in blood glucose level (fasting blood glucose and in 2 PP. blood glucose), but changes in the second group was not statistically significant (P>0.05). It was concluded that the resisted exercise is associated with significant improvement in liver enzymes in hepatic patients with diabesity in a short term (up to twelve weeks).

Key words	**1.**	**Resisted Exercise**
	2.	**Diabesity**
	3.	**NAFLD**
	4.	**Obesity**
	5.	**Type II Diabetes mellitus**
	6.	**ALT**
	7.	**AST**
	8.	**ALP and Bilirubin**
	9.	**Diabetes.**
Classification number	**:**	**616.462.AWO**
Arabic Title Page	**:**	**مخرجات تمارين المقاومه على إنزيمات الكبد لمريضات الكبد المصابات بالسمنه والبوال السكرى.**
Library register number	**:**	**3689-3690.**