Physical Therapy Department for Musculoskeletal Disorder and Its Surgery

Master Degree
2010

Author	**:**	**Amany Mahmoud Helmy Mohamed.**
Title	**:**	**Assessment of static plantar pressure distribution in adolescent idiopathic scoliosis.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	
Background: The Adolescent idiopathic scoliosis (AIS) is the most common type of scoliosis, it is a twisting deformity in the curve of vertebral column to the lateral side with rotation of the ertebrae, which occurs during the growing years from 10 years to the puberty. Purpose: this study assessed the alterations in plantar pressure distribution between AIS and normal subjects. Subjects: this study included fifteen patients with AIS with mean age of (18.4±1.35) year's group (A) and fifteen healthy normal subjects with mean age of (18.73±0.88) years group (B). The Cobb's angle in the AIS ranged from 20° to 40°. Both groups were assessed for the static plantar pressure distribution. Results: There was a significant difference between both groups in which right total plantar pressure distribution increased in AIS patients compared to right total plantar pressure distribution in normal subject and left total plantar pressure distribution decreased in AIS patients compared to left total plantar pressure distribution in normal subjects. Conclusion: As there was a significant difference between both groups in plantar pressure distribution, it is recommended to add a medical insole to reduce plantar pressure in AIS patients.		
Key words	**1.**	**Adolescent Idiopathic Scoliosis.**
	2.	**Plantar Pressure Distribution.**
	3.	**Assessment of static plantar pressure.**
Arabic Title Page	**:**	**تقييم توزيع الضغط الثابت لأخمص القدم للجنف الغير محدد الأسباب في المراهقين.**
Library register number	**:**	**2263-2264.**

Author	**:**	**Bishoy Samir Lobbos.**
Title	**:**	**Effectiveness of postural training in management of emporomandibular dysfunction.**
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Year	**:**	**2010.**
Abstract	**:**	

Temporomandibular dysfunction and postural abnormalities are prevalent and associated in many patients. The purpose of this study was to investigate the effect of postural training in management of myogenic temporomandibular joint dysfunction and in changing craniocervical posture. Methods: Twenty female patients having muscular temporomandibular dysfunction were recruited for this study. Their age ranged from 20-40 years with mean 26.9± 4.6. Each patient received a physical therapy program consisting of kinesthetic training, strengthening of deep cervical flexors and the scapular retractors, stretching of the sub-occipital muscle and stretching of the pectoralis major muscle. Range of motion of active mouth opening, pain and posture were evaluated pre and post- treatment. Results: Postural correction program decreased the angles of craniocervical posture (NSL/OPT and NSL/CVT). The same program decreased angle of cervical curvature (CVT/OPT) and decreased also the angle of the head posture in relation to environmentally determined vertical (NSL/VER). While this program had no significant change on position of the cervical spine in relation to environmentally determined horizontal (CVT/HOR and OPT/HOR). Also the program applied decreased the level of pain of the masticatory system while it increased the range of motion of active mouth opening. Conclusion: Postural correction program was shown to be effective in improving head posture and range of motion of active mouth opening and reducing pain of the masticatory system.

Key words	**1.**	**Temporomandibular dysfunction.**
	2.	**Head postural training.**
	3.	**postural training.**
	4.	**emporomandibular dysfunction.**
Arabic Title Page	**:**	**تأثير تدريب القوام في علاج الخلل الوظيفي للمفصل الصدغي الفكي.**
Library register number	**:**	**2249-2250.**

Author	**:**	**Dina Othman Shokri Morsi.**
Title	**:**	**Assessment of lumbar Lordosis and Sagittal mobility in patients with lumbar disc prolapse compared with normal subjects.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Physical therapists are interested in quantifying the impairments of lumbar spine in patients with lumbar spine dysfunction. Purpose: The first purpose of this study was to compare lumbar lordosis, total and segmental lumbar sagittal mobility between patients with lumbar disc prolapse and normal subjects. A second purpose of this study was to find the relationship between lumbar lordosis and total lumbar sagittal mobility. Subjects: Eighty subjects (males and females) were assigned into two equal groups; the patients group which consisted of 40 patients with mean age of 41.7(±1.10) years and normal subjects group which consisted of 40 subjects with mean age of 40.2(±1.09) years. Methods: Formetric II system device was used to assess the lumbar lordosis and spinal mouse device was used to assess total and segmental lumbar sagittal mobility. Results: There was non significant difference in the lumbar lordosis and total lumbar sagittal mobility and segmental lumbar sagittal mobility at the levels of L1-L2, L2-L3 and L4-L5 between the patients group and normal subjects group. While there was significant difference at the levels of L3-L4 L5-S1 between the patients group and normal subjects group. There was non significant relationship between lumbar lordosis and total lumbar sagittal mobility in both groups combined and a non significant relationship between lumbar lordosis and total lumbar sagittal mobility in the normal subjects group. On the other hand, a significant relationship was found between lumbar lordosis and total lumbar sagittal mobility in the patients group. Conclusion: It was concluded that the patients group and the normal subjects group had the same degree of lumbar lordosis, total and segmental lumbar sagittal mobility at the levels of L1-L2, L2-L3 and L4-L5. While there was significant increase only at the level of L3-L4 and L5-S1 in favor of patients group. There was no relationship between lumbar lordosis and total lumbar sagittal mobility in both groups combined and in the normal subjects group while there was a significant inverse relationship between lumbar lordosis and total lumbar sagittal mobility in the patients group.

Key words	**1.**	**Lumbar disc prolapse**
	2.	**Low back pain.**
	3.	**Lumbar lordosis.**
	4.	**Sagittal mobility.**
	5.	**Formetric II.**
	6.	**Spinal mouse.**
Arabic Title Page	**:**	**تقييم القعس القطنى والمرونة السهمية فى مرضى الانزلاق الغضروفى القطنى مقارنة بالأصحاء.**
Library register number	**:**	**2251-2252.**

Author	**:**	**Ehab Ali Abdallah.**
Title	**:**	**Effects of isotonic versus isometric exercises training on pain severity and functional performance in patients with knee osteoarthritis.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Ibrahim Magdy Elnaggar.**
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Year	**:**	**2010.**
Abstract	**:**	

Background and Purpose: Muscle strength training is important for people with knee osteoarthritis (OA). As regarding training exercises some supports the use of isometric training exercises, some supports the use of dynamic training exercise and others support the combination of both two trainings But unfortunately little studies compared between the two training programs. The purpose of this study was to compare the effects of isotonic and isometric training exercises in patients with knee OA. Subjects and Methods: thirty subjects were randomly assigned to two groups that received 5 weeks of isotonic exercise, or 5 weeks of isometric exercise. Pain, function, and range of motion of knees were examined before, during, and after intervention. Results: Significant improvement for all measures was observed in both exercise groups. There was no significant difference in any measures between GA and GB. Discussion and Conclusion: Both isotonic and isometric training exercises significantly improved clinical effects in this study. The differences between the GA and GB were not statistically significant.

Key words	**1.**	**knee osteoarthritis.**
	2.	**Isometric.**
	3.	**Pain.**
	4.	**functional performance.**
	5.	**range of motion.**
	6.	**Isotonic.**
Arabic Title Page	**:**	**تأثيرات التمرينات الحركية مقابل تمرينات الثبات على شدة الألم والأداء الوظيفي في مرضى الالتهاب المفصلي للركبة.**
Library register number	**:**	**2285-2286.**

Author	**:**	**Heba Hazzaa Abd El-Wahaab Hazzaa.**
Title	**:**	**Modulation of transverse versus longitudinal back muscles efficiency in non structural scoliosis.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Year	**:**	**2010.**
Abstract	**:**	

The purpose of this study was to compare the effect of modulation of transverse versus longitudinal back muscles efficiency in correction of non structural scoliosis in adolescent girls. The study was conducted on thirty girls ranging in age from 12 to 14 years. They were classified randomly into two groups of equal numbers control group (A) and study group (B). Group (A) received electrical stimulation and exercises for longitudinal back muscle on convex side of dorsal scoliotic curve, while group (B) received electrical stimulation and exercise for transverse back muscle on concave side of the curve. All patients were evaluated before and after three months of treatment by formetric instrument system. The post treatment mean values showed statistically significant improvement of the two groups when comparing their pre and post treatment results, but upon comparing the post- treatment results of the two groups there was statistically non-significant difference which confirms the importance of modulation of both transverse and longitudinal back muscles efficiency in correction of scoliosis, which confirms that strengthening of transverse back muscle on concave side of scoliotic curve can be used as treatment of non-structural idiopathic scoliosis.

Key words	**1.**	**non structural scoliosis.**
	2.	**Scoliosis.**
	3.	**Electrical stimulation.**
	4.	**Transverse back muscle.**
	5.	**Longitudinal back muscle.**
Arabic Title Page	**:**	**تعديل كفاءة عضلات الظهر العرضية ضد الطولية في الجنف المرن.**
Library register number	**:**	**2239-2240.**

Author	**:**	**Heba Mohamed Rashad Mohamed.**
Title	**:**	**Effect of Low Level Laser Therapy on Healing of Bone Fracture in Rats.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Low level laser therapy (LLLT) has been used to improve healing and reduce pain. This study seeks to the effect of (LLLT) on healing of bone fractures. Materials and methods: by using an experimental model 60 male wistar rats were assigned into two groups with 30 rats in each. Group (A) was the laser group and group (B) was the control group.A surgical fracture was done in middle third of femur of all rats. In group (A) a continuous wave 904 nm infrared laser was used at dose 4 j/cm^{2}each point at fracture site. It was begun immediately post operative for 7 sessions, each session was 5 minutes and were killed on the 15th,30th and 45th days after surgery, The specimens were processed and stained with Hematoxylin-eosin (H/E), special stain Masion trichrome and analyzed by light microscopy. Results: the descriptive analysis of histological imaging showed greater degree of new bone formation, osteblastic surface and collagen fiber in the irradiated group when compared with the control group. Discussion and Conclusion: Based on the results obtained this study concluded that LLLT was efficient in promoting bone healing, and increasing new bone formation in process of surgically fractured femur in animal study. In future studies, the focus should be on human bone to reduce healing time by speeding up the osseointegration process.

Key words	**1.**	**wistar rats.**
	2.	**bone healing.**
	3.	**low level laser therapy.**
	4.	**Osseointegration.**
	5.	**Healing of Bone.**
	6.	**Fracture in Rats.**
	7.	**Rats.**
Arabic Title Page	**:**	**عنوان الرسالة: تاثيرالليزر منخفض الشده على التئام كسور العظام فى الفئران.**
Library register number	**:**	**2209-2210.**

Author	**:**	**Hesham Ahmed Ali Ahmed.**
Title	**:**	**High versus low-grades mobilization techniques in treatment of adhesive Capsulitis.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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	3.	**Ihab Mohamed Emran.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Background and Purpose, Frozen shoulder is shoulder pathology commonly occurs within the age group of 40 to 60 years old. The purpose of this study was to compare the effectiveness of tow mobilization techniques, High grades mobilization techniques (HGMTs) versus low grades mobilization techniques (LGMTs) in the management of subjects with this pathology. Subjects, Thirty patients with idiopathic adhesive capsulitis were participated in this study, their age ranged from 40-65 years. These patients were randomly assigned into two equal groups; group (A) and (B). Methods, Each patient was treated for 18 sessions, 3 sessions per week. The duration of each session was 20 minutes over 6 weeks. Group (A) received (LGMTs) and group (B) received (HGMTs). Outcome measures included the Shoulder Rating Questioner and Universal Plastic goniometer. Results, Overall, subjects in both groups improved over the 6 weeks. Statistically significant improvements were found in (HGMTs) is better than (LGMTs). Discussion and Conclusion, In subjects with Frozen Shoulder, High Grades Mobilization Techniques (HGMT) or End Range Mobilization (ERM) was more effective than Low Grades Mobilization Techniques (LGMT) or Mid Range Mobilization (MRM) in increasing mobility and functional ability and decreasing the pain.

Key words	**1.**	**Mobilization.**
	2.	**Adhesive capsulitis.**
	3.	**Shoulder joint.**
	4.	**High-grades mobilization techniques.**
	5.	**low-grades mobilization techniques.**
Arabic Title Page	**:**	**التحريك العالى الشدة مقابل التحريك المنخفض الشدة فى علاج إلتهاب المحفظة الإلتصاقى لمفصل الكتف.**
Library register number	**:**	**2071-2072.**

Author	**:**	**Islam Ahmed Awad Bakry.**
Title	**:**	**Effect of rehabilitation after anterior cruciate ligament reconstruction on ankle joint motions and plantar flexors moment during stance phase of gait.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Bassem Galal El Dein El Nahass.**
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	3.	**Khaled El Sayed Ayad.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

The purpose of this study was to determine changes in ankle joint range of motion (ROM) and plantar flexors moment during stance phase of gait after 5 weeks and 12 weeks of rehabilitation after anterior cruciate ligament (ACL) reconstruction using semitendinosus-gracilis autograft (STG). Forty subjects participated in this study in two groups. The study group; twenty ACL reconstructed knee patients with mean age of 26.95 (± 5.05) years, mean weight of 80.80 (± 10.22) Kg, mean height of 1.73 (± 0.05) M and all of them were males, they were selected from El-Helal hospital, El-Sahel hospital and the out clinic faculty of Physical Therapy, Cairo University, they received the rehabilitation program after ACL reconstruction for 12 weeks, they were assessed twice at 5th week and 12th week of rehabilitation. The control group; twenty normal subjects participated in the study with mean age of 25.40 (± 4.57) year, mean weight of 85.60 (± 13.06) Kg, mean height of 1.76 (± 0.05) M and all of them were males. Three dimensional (3D) motion analysis system (Qualysis motion capture system) was used in this study in conjunction with a force plate unit to measure ankle ROM (dorsiflexion and plantar flexion), plantar flexors moment and vertical ground reaction force (GRF). The results of this study revealed that; no significant difference in ankle ROM between the study group at 5th week and at 12th week, no significant difference in ankle ROM between the study group at 12th week and normal subjects, a significant difference in plantar flexors moment between the study group at 5th week and at 12th week, no significant difference in plantar flexors moment between the study group at 12th week and normal subjects, no significant difference in vertical GRF between the study group at 5th week and at 12th week, and no significant difference in vertical GRF between the study group at 12th week and normal subjects. These results stated that the values of all parameters in ACL reconstructed patients at 12th week of rehabilitation approximately equal normal values of normal subjects. Even the defect in ankle plantar flexors torque found at patients after ACL reconstruction at 5th week of rehabilitation, it improved at 12th week of rehabilitation to reach normal values of normal subjects.

Key words	**1.**	**ACL.**
	2.	**ankle ROM.**
	3.	**Plantar flexor moment.**
	4.	**GRF,.**
	5.	**3D.**
Arabic Title Page	**:**	**أثر التأهيل بعد عملية إعادة بناء الرباط الصليبي الأمامي على حركات مفصل الكاحل و عزم عضلات الثني الأخمصي أثناء مرحلة وضع القدم على الأرض أثناء المشي**
Library register number	**:**	**2125-2126.**

Author	**:**	**Khaled Ahmed Mamdouh Elsayed Iraqi.**
Title	**:**	**Assessment of trunk muscles strength and endurance in low back pain patients and normal subjects.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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	2.	**Sherif Abd El-Latif Osman.**
	3.	**Mohamed Mohamed Ibrahim Ali.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Purpose: to obtain an assessment profile for chronic mechanical low back pain patients compared to matched normal healthy subjects. Subjects: Fifty patients diagnosed as chronic mechanical low back pain and fifty normal healthy subjects. Methods: The patients group consisted of 25 males and 25 females with a mean age 35.56 (±1.19) years, mean weight 74.00 (±1.55) Kg, mean height 168.72 (±0.94) cm, mean BMI 25.98 (±0.47) and mean duration of illness of 5.78 (±0.32) months. The normal subjects group consisted of 25 males and 25 females with a mean age of 37.20 (±1.05) years, mean weight 76.71 (±1.37) Kg, mean height 169.20 (±1.15) cm, mean BMI 26.79 (±0.39). Both groups were tested for isokinetic strength, isometric strength and isokinetic endurance of trunk flexors and extensors muscles using the Biodex system III isokinetic dynamometer. Results: chronic mechanical low back pain patients showed significant decrease in isokinetic strength, isometric strength, isokinetic endurance and time to peak torque when they were compared to healthy matched subjects, Healthy males recorded higher isokinetic strength, isometric strength, isokinetic endurance than did male patients, Healthy females also recorded higher isokinetic strength, isometric strength, isokinetic endurance than did female patients. Conclusion: chronic mechanical low back pain patients had lower isokinetic trunk flexors and extensors strength, lower isometric trunk flexors and extensors strength and lower isokinetic endurance of trunk flexors and extensors when compared to normal healthy subjects. The trunk flexors and extensors of chronic mechanical low back pain patients took more time to reach peak torque when it was compared to trunk flexors and extensors in normal subjects. Healthy males and females recorded higher peak torque than did males and females in patients group.

Key words	**1.**	**mechanical low back pain.**
	2.	**trunk muscles.**
	3.	**isokinetic.**
	4.	**isometric.**
	5.	**strength.**
	6.	**endurance.**
Arabic Title Page	**:**	**تقييم القوة و التحمل لعضلات الجذع في مرضى ألم أسفل الظهر و الاصحاء.**
Library register number	**:**	**2303-2304.**

Author	**:**	**Khaled Mohamed Nabil Ali.**
Title	**:**	**The effect of core stability training program in management of acute hamstring strain.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Salwa Fadl Abdel Mageed.**
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	3.	**Emad Samuel Boles Saweeres.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Purpose: To investigate the combined effect of core stability training program and traditional program in treatment of acute hamstring strain.
Subjects: Thirty patients diagnosed with grade II acute hamstring strain. Methods: Patients were distributed randomly into two groups. The first experimental group consisted of 15 patients with a mean age of 24.1 (±4.9) years; received traditional program consisted of (ice followed by ultrasound therapy, static stretching, and strengthening exercise). The second group consisting of 15 patients with a mean age of 24.9 (±5.7) years; received core stability training program in addition to traditional treatment. Treatment was given 3 times per week, each other day, for 4 consecutive weeks. Patients were evaluated pre-treatment and post-treatment for pain severity and functional scale. In addition time needed for equalization of active knee extension (AKE) and recovery time were measured. Results: patients in both groups show significant improvement in all the measured variables without significant difference for any program in favor to the other. Conclusions: Both traditional program and combined traditional and core stability training program had significant effect in management of acute hamstring strain without significant difference between both groups.

Key words	**1.**	**core stability training.**
	2.	**acute hamstring strain.**
	3.	**traditional program.**
Arabic Title Page	**:**	**تأثير برنامج تدريب الثبات الجذعي في علاج التمزق الحاد للعضلة الخلفية بالفخذ.**
Library register number	**:**	**2061-2062.**

Author	**:**	**Mariam Abd El-Rhman Mohamed Abd-Allah.**
Title	**:**	**Effect Of Adding Plyometric Exercises To The Conventional Physical Therapy Program Of Lateral Elbow Tendinopathy.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Salwa Fadle Abd El-Majeed.**
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	3.	**Khaled El-Sayed Ayad**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Back ground: Lateral elbow tendinopathy (LET) is one of the most common lesions of the arm, The dominant arm is commonly affected, with a prevalence of 1-3% in the general population. Purpose: to investigate the effect of adding plyometric exercises to the conventional physical therapy program of LET. Subjects: Thirty throwing athletes age ranged between 20- 40 years, from both genders, not more than 3 weeks from onset of injury. They were randomly assigned into 2 groups, Group A (10 female, 5 male) received the conventional physical therapy program and group B (9 female, 6 male) received plyometric exercises in addition to the same conventional physical therapy program. Both groups received 8 weeks of training. Methods: Patients were evaluated pre and post treatment for pain, grip strength, and tendon structure (represented as echo-texture, vascularity, and tendon thickness compared to the contralateral healthy side) using visual analogue scale, hand-held dynamometer and ultrasonography respectively. Results: There was significant improvement in both groups for pain and tendon structure with no significant difference between both groups. Additionally, there was significant improvement in both groups for grip strength, but there were significant improvement in group B more than group A. Conclusion: The results proved that plyometric exercises resulted in more improvement of muscular strength.

Key words	**1.**	**Plyometric exercises.**
	2.	**conventional physical therapy.**
	3.	**lateral elbow tendinopathy.**
Arabic Title Page	**:**	**تأثير إضافة تمرينات البليوميترك لبرنامج العلاج الطبيعى التقليدى لاعتلال الوتر الخارجى للكوع.**
Library register number	**:**	**2245-2246.**

Author	**:**	**Mohamed Salah Aldin Ahmed Romy.**
Title	**:**	**Effect of Unilateral Great Toe Amputation on Planter Pressure Distribution in Diabetic Patients.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Ahmed Hassan Hussein.**
	2.	**Ayman Abd El-Hameed Salem.**
	3.	**Khalid Al-Sayed Ayad.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	
The aim of this study was to investigate the effect of a unilateral great toe amputation on plantar pressures distribution under the sole of the foot (both the amputated and contralateral intact foot) in non insulin dependent diabetic patients. This study comprised fifteen non insulin dependent diabetic subjects (nine males and six females) who had a unilateral great toe amputation, their age ranged from 46 to 65 years. Peak foot pressures distribution under the first metatarsal head, lesser metatarsal heads, lesser toes and heel in both feet were measured during standing and walking over the platform then compared to matched normal. There were significant increase in foot pressures under the first metatarsal head, and lesser metatarsal heads on the amputated side and on the heel on the contralateral intact side during the dynamic test compared to normal, while there was significant increase in foot pressure under the heel on both sides during the static test compared to normal.		
Key words	**1.**	**Unilateral great toe amputation.**
	2.	**diabetic patients.**
	3.	**plantar pressures distribution.**
Arabic Title Page	**:**	**تأثير البتر أحادي الجانب لأصبع القدم الأكبر على توزيع ضغوط أخمص القدم في مرضى السكر.**
Library register number	**:**	**2097-2098.**

Author	**:**	**Mohamed Tharwat Mohamed Aly.**
Title	**:**	**Early Versus Late Weight Bearing after Femoral Trochanteric Fractures Fixed By Dynamic Hip Screw.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Nadia Abd El-Azem Fayaaz.**
	2.	**Mohamed Ibrahim Ali.**
	3.	**Mohamed Mohamed Ibrahim.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

Background: Intertrochanteric and femoral neck fractures account for 90% of the proximal femoral fractures occurring in elderly patients. Rigid fixation with early mobilization of patients should be considered as the standard treatment. Objective: The purpose of this study was to compare between the effect of early and late weight bearing after trochanteric femoral fractures fixed by dynamic hip screw (DHS). Methods: Thirty patients had participated in this study; with age ranged for fifty to seventy years, they were assigned into two experimental groups. Group A which consisted of fifteen patients (9 males and 6 females) with mean age of 57.93 (± 5.70) years, received a conventional program of physical therapy plus a program of early weight bearing (within 48 hours post-operatively). Group B which consisted of another fifteen patients (7 males and 8 females) with mean age of 60.87 (± 4.19) years, received the same physical therapy program as in group (A) plus a program of late weight bearing (2 weeks post-operatively). All patients were assessed before and after the study for their pain severity and hip function by using Visual analogue scale and The Harris Hip Score. Results: the results revealed that there were significant differences between both groups in favor of group A regarding the reduction in pain severity and the improvement in function of the hip joint. Conclusion: starting weight bearing early after trochanteric femoral fractures fixed with DHS significantly improved the function and reduced the pain of the hip joint than late weight bearing.

Key words	**1.**	**Hip trochanteric fractures.**
	2.	**Femoral Trochanteric Fractures. Fixed By**
	3.	**Early Weight Bearing.**
	4.	**late weight bearing.**
	5.	**Dynamic Hip Screw.**
Arabic Title Page	**:**	**تحميل الوزن المتقدم مقابل المتأخر بعد الكسور المدورية الفخذية المثبتة بالمسمار الديناميكى للفخذ.**
Library register number	**:**	**2207-2208.**

Author	**:**	**Mona Mohamed Ibrahim Ahmed.**
Title	**:**	**Quantitative Structural Changes Induced By Treadmill Running Exercise In Osteopenic Adult Rats.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
Supervisors	**1.**	**Ahmed Hassan Hussein.**
	2.	**Bassem Galal Eldien El Nahass.**
	3.	**Hanaa Abdelkader Ibrahim.**
Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

The purpose of the current study was three folds; 1- To test whether the bone could react to treadmill running exercises by changing the structural arrangement of the internal trabecular system 2- To quantify the structural changes induced to the skeletal system, in terms of percent of change, secondary to treadmill running exercises in adult osteopenic rats and 3- to test the effect of treadmill running exercises on the mechanical strength of distal femoral cancellous bone in compression. Thirty two adult (12 weeks) albino rats (16males and 16 females) weighed 168.9± 18.46 gm were tail suspended for 2 weeks and then randomly divided into four groups; Group I (n=8) represented basal control for osteopenic bone loss induced by tail suspension, Group II (n=8) represented the second control for normal bone recovery after 6weeks of normal cage activities following osteopenia. Group III: (n=8) was the first exercise group in which the rats were exercised 6 weeks by level surface treadmill for a speed of 12m/min for a period of 30 minutes daily at frequency of 5days/week. Group IV: (n=8) was the second exercise group in which the rats were exercised by inclined treadmill at angle of 15°, which were hypothesized to develop more stress on bone by muscle tension, for the same speed, intensity and duration of group III. Significant improvements were shown in bone architecture in distal femur and proximal tibia of Group IV and in proximal tibia in Group III. No significant improvement in distal femur in Group III. Significant improvement was observed in the mechanical compressive strength, indicated by modulus of elasticity, of distal femur in Group IV but were not observed in Group III. The results suggested that treadmill running exercises were effective to induce changes in bone tissue either by changing trabecular dimensions and density or by altering its mechanical properties. The induced structural improvement was site specific and dose dependent.

Key words	**1.**	**Bone.**
	2.	**tail suspension.**
	3.	**treadmill running exercise.**
	4.	**histomorphometric analysis,**
	5.	**compressive testing.**
	6.	**Muscle.**
	7.	**Compression.**
	8.	**Architecture.**
	9.	**Strength.**
Arabic Title Page	**:**	التغيرات التركيبية الكمية الناتجة عن تمرين الجري على الطاحونة لدي الفئران البالغة المصابة بوهن العظام.
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Title	**:**	**Comparison between Solid and Kinesceptic foot orthoses on dynamic balance control in children with spastic diplegia.**
Dept.	**:**	**Physical Therapy Department for musculoskeletal disorder and its Surgery.**
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Degree	**:**	**Master.**
Year	**:**	**2010.**
Abstract	**:**	

The purpose of this study was to compare between Solid and Kinesceptic AFO on dynamic balance control in children with spastic diplegia. They were forty spastic diplegic cerebral palsy children who were participated in this study, their age ranged from 7 to 8 years, they had follow balance exercise program in addition to the prescribed physical therapy program for four months of treatment. They were divided randomly and equally into two groups: control (Group A) and study (Group B) groups. Balance parameters were assessed using the Biodex stability system for children of both groups before and after two and four months of the application of the suggested treatment program. The results of this study revealed statistically significant improvement in the measuring variables of both the control and study groups when comparing their pre and post treatment mean values. However, more significant improvement was noticed in the study group when comparing the post treatment mean values of the study group with the control group.

Key words	**1.**	**Cerebral Palsy.**
	2.	**Diplegia.**
	3.	**Solid AFO.**
	4.	**Kinesceptic AFO.**
	5.	**Balance.**
	6.	**foot orthoses.**
	7.	**dynamic balance control.**
	8.	**spastic diplegia.**
Arabic Title Page	**:**	**مقارنة بين تأثير جبيرة الكاحل المصمتة والغير مصمتة على التحكم فى التوازن الديناميكى عند الأطفال المصابين بالشلل المزدوج.**
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