

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY
PREPARED BY NERVEEN ABD EL SALAM ABD EL KADER AHMED**

**Physical Therapy Department for musculoskeletal disorder
and its Surgery
Master Degree 2011**

Author	:	Amr Moustafa Yehia Mohammed.
Title	:	Efficacy of Laterally Wedged Insole in Treatment of Medial Compartment Knee Osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussien.
	:	Nadia Abd El-Azim Fayaz.
	:	Mahmoud Alm El-Din Abd El-Hafez.
	:	Mona Hassan Gamal.
Degree	:	Master.
Year	:	2011.
Abstract	:	<p>The purpose of this study was to compare between the effect of laterally wedged insoles combined with conventional exercise program versus conventional exercise program on 1st peak knee adduction moment and WOMAC subscales (pain intensity, stiffness and physical function) in patients with medial compartment knee osteoarthritis. Twenty patients from both sexes randomly assigned into 2 equal groups participated in the study. Their mean \pm SD age, weight, and height were 49.3 (\pm 3.9 years), 80.5 (\pm 10.52 Kg) and 157.5 (\pm 9.525 cm) for group (A) and 49.5 (\pm 7.821 years), 80.5 (\pm 10.52 Kg) and 156.2 (\pm 8.025 cm) for group (B) respectively. Group (A) used 5° laterally wedged insoles in addition to the conventional exercise program that was also used in group (B). Kinetic gait parameters were collected using three dimensional motion analysis system in conjunction with a force plate unit. Findings revealed that there were significant reductions in knee adduction moments in both groups after the 4-week duration of receiving the treatment with no significant difference between groups. Moreover, there were significant reductions in total WOMAC scores in both groups after treatment, indicating improvement in pain, stiffness, and physical function subscales but more significant in group (A). With the knee adduction moment being similarly reduced in both groups after receiving the treatment, using the laterally wedged insoles together with the conventional exercise program still proves to be more beneficial than using the conventional exercise program alone owing to the significant improvement in the WOMAC subscales.</p>
Key words	:	Laterally wedged insoles.
	:	knee osteoarthritis.
	:	Adduction moment.
	:	WOMAC scores.
Arabic Title Page	:	تأثير النعل الداخلى ذي الأسفين الخارجى فى علاج الالتهاب العظمى المفصلي للحيز الداخلى للركبة.
Library register number	:	2685-2686.

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Author	:	Dalia Salah Ahmed Elshatoury.
Title	:	Effect of pulsed electromagnetic field on the promotion of healing of the grade II injury of ankle sprain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Salwa Abd El-Majeed Fadl.
	:	Ashraf Nehad Moharam.
	:	Manar Hussien Abd El-sattar.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Lateral ankle sprain is one of the most common injuries among athletes and other active adults . There are 17-20 % of ankle injuries in sports that involve jumping and cutting movements such as basketball, volleyball and soccer. The purpose of the current study was to investigate the effect of pulsed electromagnetic field on the promotion of healing of the grade II ankle sprain through detection of ligament thickness in millimeters. Thirty patients suffering from grade II ankle sprain evident by clinical and ultrasonography examinations participated in this study .Patients were randomly assigned in to two groups. The study group (GI) receiving pulsed electromagnetic field , and the control group (GII) receiving sham pulsed electromagnetic field, patients in both groups received nine sessions of pulsed electromagnetic field , (one session every other day for three weeks) . Group I showed highly significant difference concerning the ligament thickness of the affected side in comparing before, during and after treatment evaluations , compared to each other and to the sound side thickness. Group II showed less significant differences concerning the ligament thickness. Comparison between results achieved in both groups showed highly significant differences concerning the ligament thickness in favor of group I . Therefore, it was concluded that pulsed electromagnetic field promote healing of grade II ligament sprain of ankle joint and promote patients functional outcome.</p>		
Key words	:	Ankle Sprain.
	:	Pulsed Electromagnetic Field.
	:	Ligament Healing.
	:	healing of the grade II injury.
Arabic Title Page	:	تأثير المجال المغناطيسي الكهربائي المتقطع على تحفيز التئام تمزق الدرجة الثانية لمفصل الكاحل.
Library register number	:	2595-2596.

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Author	:	Ebtessam Fawzy Gomaa.
Title	:	Effect Of Patellar Taping On Balance In Patients With Knee Osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussien.
	:	Nadia Abd el-azim Fiyaz.
	:	Aly Mohamed E. El-Zawahry.
	:	Lilian Albert Zaky.
Degree	:	Master.
Year	:	2011.
Abstract	:	<p>Background: Impairment in balance and function are associated with falls and poor mobility in the elderly knee OA population. Therefore; simple, inexpensive, and easy treatments are required for knee OA patients to enhance their balance, which should include alleviating pain, attempting to correct mechanical mal-alignment, and addressing knee joint performance. Purpose: This study was done to investigate the effect of medial patellar taping technique on dynamic balance in patients with knee OA. Design and methods: The parallel group randomized controlled trial comprised a three weeks intervention period, where participants in both groups assessed before treatment (baseline) and after three weeks of treatment (final assessment). The subjects were randomly distributed into two groups: <i>Group A (control):</i> Consisted of 15 patients which were treated by exercise and electro-therapy program, <i>Group B (experimental):</i> Consisted of 15 patients which were treated by exercise and electro-therapy program in addition to medial patellar taping. Results: Both groups showed a significant improvement in dynamic balance with the taping group (<i>B</i>) showed observed changes in the overall stability index, antero-posterior stability index, and medio-lateral stability index ($p < 0.01$) which all indicates more improvement of dynamic balance in patients with knee OA wearing medial patellar tape. Conclusion: Adding medial patellar taping technique to the traditional physical therapy program had significant improvement on dynamic balance in patients with knee OA.</p>
Key words	:	Knee osteoarthritis.
	:	Taping.
	:	Balance.
	:	Patellar Taping.
Arabic Title Page	:	تأثير الرباط اللاصق لعظمة الرضفة على الاتزان فى مرضى الالتهاب العظمى المفصلى للركبة.
Library register number	:	2695-2696.

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Author	:	Hazem Ibrahim Atia Ibrahim.
Title	:	Interexaminer reliability and validity of lumbar segmental instability tests in patients with low back pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussein
	:	Alaa El Din A. Balbaa.
	:	Khalid El Sayed Ayad.
Degree	:	Master.
Year	:	2011.
Abstract	:	<p>Background and objectives: The purpose of this study was to investigate the interexaminer reliability of lumbar segmental instability motion tests and to evaluate the validity of these tests with lateral flexion –extension radiograph in patients with low back pain. Methods: Two groups of subjects participated in the present study, the first group was the normal subjects group, which included 10 subjects, the second group was the mechanical low back pain group, which included 20 subjects. Two physiotherapists performed passive accessory intervertebral motion test (PAIVMTs) and passive physiological intervertebral motion test (PPIVMTs) both in flexion and in extension. The mobility was recorded on a three point scale. Agreements between the two examiners were calculated using kappa and weighted kappa statistics at each level to express interexaminer reliability. Patients were referred for flexion-extension lateral radiographs. Sagittal rotation and translation of each lumbar spinal motion segment was measured from these radiographs, and compared to a criterion standard, to detect instability. Agreements between treating physiotherapist and radiographs were calculated using kappa and weighted kappa statistics at each level to express validity. Results: The reliability of assessment of PAIVMTs on vertebral level of segments L1-L2, L3-4 and L4-5 were moderate while it was fair in segments L2-3 and L5-S1. The reliability of assessment of PPIVMTs in flexion on vertebral level of segments L1-L2 and L5-S1 were moderate while it was fair in segments L2-3, L3-4 and L4-5. The reliability of assessment of PPIVMTs in extension on vertebral level of segment L2-3 and L5-S1 segments was poor, fair in L4-5 segment, moderate in L1-L2 segment and good in L3-4 segment. The validity of assessment of passive intervertebral motion test in lumbar segmental instability in the examined three tests on vertebral level of segments L1 to S1 were fair to good validity. Conclusion: It can be concluded that there was adequate interexaminer reliability and validity about lumbar intersegmental mobility tests, varied from test to other even from segment to other segment.</p>
Key words	:	Accessory motion.
	:	Lumbar mobility.

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	:	Low back pain.
	:	Interexaminer reliability.
	:	validity.
	:	Manual therapy.
Arabic Title Page	:	مدى الصلاحية والثقة البينية لاختبارات عدم الثبات القطعي القطني لمرضى ألم أسفل الظهر.
Library register number	:	2425-2426.

Author	:	Hend Salah Ali Shokry.
Title	:	Myofascial release versus mobilization in the treatment of frozen shoulder.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussien.
	:	Hamed Mohamed El Gohary.
	:	Lilian Albert Zaki.
Degree	:	Master.
Year	:	2011.
Abstract	:	<p>The purpose of this study was to determine the efficacy of myofascial release added to exercises as home program versus joint mobilization added to the same home program in treatment of frozen shoulder by measuring pain, function, and range of motion. Thirty subjects were randomly assigned into two groups of 15 subjects, received either myofascial release or joint mobilization three times a week for 6 weeks. Visual analog scale, American shoulder and elbow scale (ASES), active goniometric range of motion (ROM) measures by OB goniometer were recorded pre-and post treatment, significant improvement was found within groups comparing pre- to post test scores of pain, function and range of motion. No significant differences were found between the groups comparing pain, ASES, and active ROM of shoulder flexion, abduction but there was a significant difference in active external rotation in favor of joint mobilization. In conclusion, the results of this study suggest that either myofascial release or joint mobilizations are equally effective interventions for use in patients with shoulder adhesive capsulitis, except for the range of shoulder external rotation which was more significantly improved by the use of shoulder joint mobilization.</p>
Key words	:	Mobilization.
	:	efficacy of myofascial.
	:	frozen shoulder.

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	:	myofascial release
Arabic Title Page	:	إنفراج النسيج العضلي الضام مقابل التحريك اليدوي في علاج تجمد مفصل الكتف.
Library register number	:	2409-2410.

Author	:	Nashwa Mohamed Alaa El-Din Alam.
Title	:	Comparison between Two Different Exercise Programs on Energy Expenditure and Cobb's Angle in Adolescent Idiopathic scoliosis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Alaa EL Dein-Balbua.
	:	Zeinab Mohamed Helmy.
	:	Lelian Albert.
Degree	:	Master.
Year	:	2011.
Abstract	:	

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Adolescent idiopathic scoliosis(AIS)is the most common type of scoliosis that occurs during the growing years from 10 years to the puberty it is the spinal deformity in the curve of the vertebral column to the lateral side with a rotation of the vertebra in many major axes .until now the effect of exercise on(AIS) not clear ,there is article recommended that patient with (AIS) not participate in exercise, other suggest that using of exercise would worsen lateral curvature or remain unchanged and other support effect of exercise on improving cobb's angle . The purpose of this study was to investigate the effects of two exercise programs on Cobb's angle and energy expenditure in patient's adolescent idiopathic scoliosis. Methods and results: twenty subjects were divided equally to into two groups. Group (A) ten patients with AIS with the mean age of(19.3 ± 2.05 yrs) with the mean height of (163.1 ± 3.41 cm) with the mean weight of (50.6 ± 5.44 kg) and with mean BMI (19.06 ± 2.19 kg/m) and Group (B) ten patient of mild idiopathic scoliosis with the mean age of(19.6 ± 1.89 yrs) with the mean height (162.8 ± 4.02 cm) with the mean weight (51.1 ± 8.82 kg) and with mean BMI of (19.42 ± 3.63 kg/m) and all of them were female .Exercise testing, including the determination of maximal performance and maximal oxygen uptake (VO_{2max}), is considered the gold standard for assessing energy expenditure , Cobb's angle, a measurement used for evaluation of curves in scoliosis on an AP standing position. The result of this study revealed that; no significant difference in Cobb's angle in group (A) before and after receiving exercise program , no significant difference in Cobb's angle in group (B) before and after receiving exercise program , ; no significant difference in Cobb's angle in both group (A)&(B) after receiving exercise program, but there is significant difference in vo_2 max in group(A) after receiving exercise program , highly significant difference in group (B) after receiving exercise program and no significant difference between two group.

Key words	:	Maximum oxygen consumption.
	:	scoliosis
	:	SEAS
Arabic Title Page	:	المقارنة بين اثنين من برامج التدريب المختلفه علي نفقات الطاقة وزاوية كوب في الجنف مجهول السبب في المراهقين.
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Author	:	Rabab Mohamed Monged.
Title	:	A suggested physical therapy program for post Arthroscopic Repair of the shoulder.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussein.
	:	Alaa Eldin Mohyee Sulaiman.
	:	Mohamed Mohamed Ibrahim Ali Salem.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>Purpose: The purpose of this study was to investigate the effect of the suggested postoperative physical therapy rehabilitation program following Arthroscopic Bankart repair on regaining shoulder function. Subjects: Twenty males and females patients referred from an orthopedic surgeon after Arthroscopic Bankart Repair. Methods: Patients were randomly assigned into two equal experimental groups. The first experimental group; traditional group (A) consisted of 10 patients with a mean age of 27.2 (± 6.56) years old; received a traditional physical therapy program which consists of: cryotherapy, scapular exercises, range of motion exercises, isometric exercises, strengthening exercises, and elbow and wrist isotonic exercises. The second experimental group; suggested group (B) consisted of 10 patients with a mean age of 31.2 (± 7.02) years old; received a combined program of proprioceptive training and traditional physical therapy program identical to that applied to the first group. Treatment was given 3 times per week, every other day, for 12 consecutive weeks. Patients were evaluated pretreatment and posttreatment for shoulder pain severity, shoulder function, shoulder flexion, abduction, and external and internal rotation range of motions. Results: Patients of both groups showed significant improvement in all measured variables. In between groups difference the second group showed a significant improvement than the first group in all measured variables. Conclusion: the combination of proprioceptive training and traditional physical therapy was more effective than the traditional physical therapy program alone in treatment of patients following Arthroscopic Bankart repair.</p>		
Key words	:	Arthroscopic Bankart repair.
	:	Arthroscopic Repair of the shoulder.
	:	Shoulder Repair .
	:	proprioceptive training.
	:	traditional physical therapy program.
Arabic Title Page	:	برنامج علاج طبيعي مقترح بعد الإصلاح بالمنظار لمفصل الكتف .
Library register number	:	2381-2382.

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Author	:	Sara Ahmed Amin Abd Elrahman.
Title	:	Dynamic lumbar stabilization program versus conventional rehabilitation program after discectomy.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	:	Ahmed Hassan Hussien.
	:	Nadia Abd El-Azim Fayaz.
	:	Mohammed Omar Soliman
	:	Lilian Albert Zaky.
Degree	:	Master.
Year	:	2011.
Abstract	:	
<p>The purpose of this study was to compare between the effect of dynamic lumbar stabilization program and the effect of a conventional rehabilitation program on the sagittal segmental lumbar motion and the functional disability in patients with lumbar discectomy .Thirty male patients with L4-L5 open discectomy participated in this study in two groups; group (A) and group (B) with mean age of 32.40 (\pm 5.70) years, mean weight of 67.93 (\pm8.31) Kg, mean height of 170.93 (\pm 6.36) cm , the patients were referred from the Neurosurgery and the Orthopedic surgery departments, at Kasr El ainy hospital, faculty of Medicine, Cairo University, they were assessed twice at the 4th week from the surgery (before starting the rehabilitation programs) and the 8th week from the surgery (after finishing the rehabilitation programs), group (A) received dynamic lumbar stabilization program for 12 sessions while group (B) received a conventional rehabilitation program for 12 sessions. Spinal Mouse device was used in this study to measure the sagittal segmental motion of the lumbar spine at level L4-L5 segment and Modified Oswestry Low Back Pain Disability Scale (OSW) was also used in this study to measure the functional disability of these patients. The results of this study revealed that; at the 4th week from the surgery there was no significant difference in the sagittal segmental lumbar motion and the functional disability between group (A) and group (B), a significant difference in the sagittal segmental lumbar motion and the functional disability between before and after receiving dynamic lumbar stabilization program at group (A) , a significant difference in the sagittal segmental lumbar motion and the functional disability between before and after receiving the conventional rehabilitation program at group (B), at the 8th week from the surgery there was a significant difference in the sagittal segmental lumbar motion and the functional disability between group (A) and group (B). These results showed that the sagittal segmental lumbar motion at L4-L5 segment improved and the functional disability reduced after receiving dynamic lumbar stabilization program and after receiving the conventional rehabilitation program at the 8th week from the surgery, but the results after dynamic lumbar stabilization program were greater than after the conventional rehabilitation program.</p>		
Key words	:	Discectomy
	:	segmental lumbar motion.
	:	functional disability.
	:	Spinal Mouse.
	:	Modified Oswestry Scale.
Arabic Title Page	:	برنامج التثبيت القطني الحركي مقابل برنامج تأهيل تقليدي بعد استئصال الغضروف.

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