

**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  
2007

Author	:	Alaa Mohammad Asim Abd El Fatah Shadi.
Title	:	The effect of two different doses of laser therapy in the treatment of knee osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Enas Fawzy Youssef.
	2.	Hassan Mohammad Neinaa.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The purpose of this study is to determine the effect of two different doses of low-level laser therapy (LLLT) on reducing pain severity, improving the functional ability, and increasing the active flexion range of motion in patients with knee osteoarthritis. Thirty patients were divided randomly into two equal groups. The first group treated with a laser dose of 3 J/cm<sup>2</sup>, and the second group treated with a laser dose of 6 J/cm<sup>2</sup>. Patients were assessed before and after treatment by visual analogue scale, Western Ontario and McMaster Universities osteoarthritis index (WOMAC), and long arm goniometer. Results: Both laser doses were effective in reducing pain and improving the functional ability and range of motion in knee osteoarthritis. There were no significant differences between both laser doses.</p>		
Key words	1.	Low-level laser therapy.
	2.	osteoarthritis.
	3.	VAS.
	4.	range of motion.
	5.	functional ability.
	6.	Lasers.
Arabic Title Page	:	تأثير استخدام جرعتان مختلفتان من الليزر العلاجي في علاج خشونة مفصل الركبة.
Library register number	:	1571-1572.

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Author	:	Alaa Eldin Abdel Sattar Khaireldin.
Title	:	Assessment of Dynamic Balance after Arthroscopic partial meniscectomy.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ahmed Hassan Hussien.
	2.	Hisham Mosbah.
	3.	Enas Fawzy Youssef.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The aim of this study is to evaluate the dynamic balance in patients with unilateral partial meniscectomy after receiving five weeks of traditional physical therapy program. Twenty patients (18 males &amp; 2 females) and ten healthy (10 males) subjects were included at this study. Results showed that there were no significant differences between dominant limb and non dominant limb in healthy subjects. Over all balance index and antero-posterior balance index were significantly higher in the involved limb than unininvolved limb and normal subjects, while no significance difference in medio-lateral balance index between involved limb, unininvolved limb and healthy subjects.</p>		
Key words	1.	meniscal injury.
	2.	partial meniscectomy.
	3.	balance.
	4.	Proprioception.
Arabic Title Page	:	تقييم الاتزان الديناميكي بعد الاستئصال الجزئي لغضروف الركبة بالمنظار.
<b>Library register number</b>	:	<b>1497-1498.</b>

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Author	:	Enas Anwar Abd El Aty Mohamed.
Title	:	The effect of Low- Dye taping on management of patients with unilateral plantar Fascitis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd El Azim Fayaz.
	2.	Enas Fawzy Youssef.
	3.	Ahmed Galal Al Said.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>This work aims to detect the effect of Low-Dye taping on the treatment of patients with unilateral plantar facilities. Thirty patients participated in the study and 15 normal subjects. The patients were randomly divided into two groups (15 patients) each, the first group treated by traditional physical therapy and the second one was treated by traditional physical therapy in addition to Low- Dye taping. The two patient groups were compared with the healthy volunteers matched in age and sex (15 subjects). Results showed better improvement of pain, function of the foot, foot pressure distribution with using low Dye taping group. It was recommended to add Low- Dye taping to treatment of plantar facilities patients.</p>		
Key words	1.	plantar facilities.
	2.	taping.
	3.	pain.
	4.	function.
	5.	foot pressure.
Arabic Title Page	:	تأثير شريط داي المنخفض في علاج مرضى التهاب صفاق الأخمص أحادي الجانب.
Library register number	:	1553-1554.

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Author	:	Ezzat El sayid Elawh Moubark.
Title	:	Phonophoresis Versus Ultrasound in Treatment of Lateral Epicondylitis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ibrahim Magdy Elnaggar.
	2.	Salwa Fadle Abdel Majeed.
	3.	Mohamed Safwat Shalaby.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>Lateral epicondylitis is a common cause of chronic elbow pain and wrist dysfunction especially in adults. The purpose of this study was to compare the effect of phonophoresis combined with exercises versus ultrasound combined with the same exercises on improving pain score, function score, strength score, and range of elbow motion score in treatment of lateral epicondylitis. Thirty patients suffering from unilateral lateral epicondylitis participated in this study; they were randomly assigned into two groups; one group received ultrasound and a program of therapeutic exercises and another group received phonophoresis and the same therapeutic exercises. Patients in both groups were evaluated pre- during (mid) and post-treatment for pain score, function score, strength score, range of motion score and total score. Patients in both groups received 12 sessions (three sessions every week for 4 weeks). Comparison of the results pre- and during (mid) treatment showed there was significant difference in ultrasound group in all measured variables and significant improvement in phonophoresis group in all measured variables. Post- treatment assessment of ultrasound group showed there was significant difference in all measured variables more than mid- treatment and in post- treatment assessment of group showed there was significant difference in all measured variables more than mid- treatment. On comparing both groups after treatment, the results showed significant improvement and there was no significant difference between groups.</p>		
Key words	1.	lateral epicondylitis.
	2.	Exercises.
	3.	elbow pain.
	4.	Function.
	5.	Strength.
	6.	range of motion.
	7.	ultrasound.
	8.	phonophoresis.
Arabic Title Page	:	الانتقال الصوتي للجزيئات مقابل الموجات فوق الصوتية في علاج التهاب فوق اللقمة العظمية الوحشية.
Library register number	:	1687-1688.

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Author	:	Ghada Mohamed Rashad Qoura.
Title	:	Assessment of Dynamic Balance in Adolescent Idiopathic Scoliosis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Salwa Fadle Abd El Mageed.
	2.	Youssry Mohamed Kamal El Hawary.
	3.	Mohamed Shawki Abd El Salam.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>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 simultaneous rotation of the vertebrae, which occurs during the growing years from 10 years to the puberty. Background and Purpose: Studies investigating balance problems specific to scoliotic patients showed that those patients reveal variable balance abnormalities. In this study we assessed the difference in balance responses between AIS patients and normal subjects. Subjects: Thirty female patients with AIS with a mean age of <math>(19.5 \pm 3.26)</math> years and thirty healthy female subjects with a mean age of <math>(19.36 \pm 2.41)</math> years. The Cobb's angle in the AIS ranged from <math>20^\circ</math> to <math>40^\circ</math> in the major curves. Both groups were assessed for the dynamic balance to measure the stability index by the Biodex Stability System. Results: There was no significant difference between both groups in dynamic balance test. Conclusion: As there was no significant difference between both groups in balance response, it is not recommended to add balance training as an extra physical therapy program for AIS female patients.</p>		
Key words	1.	Adolescent Idiopathic Scoliosis.
	2.	Balance.
Arabic Title Page	:	تقييم الاتزان الديناميكي لمرضى الانحناء الجانبي للعمود الفقري (الجنف) للمراهقين.
Library register number	:	1561-1562.



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Author	:	Hanaa Ali Hassan.
Title	:	Efficacy of low frequency and low intensity pulsed electro magnetic field in treatment of knee osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Salwa Fadle Abd El Majeed.
	2.	Enas F. Youssef.
	3.	Mohamed Goda Montaser.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p><b>Purpose:</b> The purpose of this study was to evaluate the effect of low frequency and low intensity pulsed electromagnetic filed on treatment of knee osteoarthritis. <b>Subjects:</b> Thirty patients diagnosed as second degree osteoarthritis participated in this study. <b>Methods:</b> patients were divided randomly into two groups: the first group consisted of 15 patients with a meanj age 41,333 (<math>\pm</math> 5.080) years treated with low frequency and low intensity pulsed electromagnetic filed with intensity 20 guass and frequency 20 hz for 20 min/session, 3 sessions/week each other day for 4 week, and exercise. The second group consisted of 15 patients with a mean age 42.867 (<math>\pm</math> 5.655) year treated with sham electromagnetic filed and exercise. The patient was assessed before and after treatment by womac index for pain and functional disability. <b>Result:</b> both treatment groups and exercise had a significant reduction of pain and functional disability. Comparison between groups showed a significant difference between both groups in favor of magnetic group. <b>Conclusion:</b> Low frequency and low intensity pulsed electromagnetic filed is more efficient in treatment of patients with osteoarthritis.</p>		
Key words	1.	osteoarthritis electromagnetic filed.
	2.	Exercise.
	3.	Pain.
	4.	Disability.
	5.	WOMAC.
Arabic Title Page	:	تأثير المجال المغناطيسي المتقطع منخفض التردد والشدة في علاج خشونة مفصل الركبة.
Library register number	:	1669-1670.

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Author	:	Heba Tullah Mohammed Said Zaghloul.
Title	:	The role of strengthening hip extensors muscle in treatment of chronic mechanical low back pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ibrahim Magdy El Nagaar.
	2.	Salwa Fadel.
	3.	Enas Fawzy Youssef.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The purpose of this study was to investigate the role of strengthening hip extensors muscle in treatment of chronic low back pain on reduction of back pain severity, improving hip extensors power, reduction of functional disability, increasing of spinal flexion range and increasing of spinal extension range of motion. The results revealed that both groups had significant less low back pain after treatment and less functional disability (<math>p &lt; 0.05</math>) but the hip extensors group program was more effective in reduction of back pain severity, reduction of functional disability, improving of hip extensors power and increasing of spinal extension range of motion than the flexion-extension group program (<math>p &lt; 0.05</math>). The combined flexion-extension exercise group program was more effective in increasing of spinal flexion range of motion than the hip extensors group program (<math>p &lt; 0.05</math>). The hip extensors program should be an integral component in additional to combined flexion-extension exercise program in treatment patients with chronic mechanical low back pain.</p>		
Key words	1.	low back pain.
	2.	flexion exercises.
	3.	extension exercises.
	4.	functional disability.
	5.	hip extensors.
Arabic Title Page	:	دور تقوية العضلات الباسطة لمفصل الفخذ في علاج ألم أسفل الظهر الميكانيكي المزمن.
Library register number	:	1477-1478.

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Author	:	Ibrahim Metwally Hegazy Douir.
Title	:	The efficacy of thrust mobilization technique in the treatment of the sacroiliac joint dysfunction.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ahmed Hassan Hussien.
	2.	Enas Fawzy Youssef.
	3.	Ahmed Galal El-saeed.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The aim of this study is to detect the effect of high velocity low amplitude thrust (HVLAT) mobilization (manipulation) in the treatment of sacroiliac joint dysfunction. Thirty patients participated in this study and selected randomly to be divided into group A (11males and 4 females) received HVLAT mobilization, corrective exercise, and infrared, and group B (4 males and 11 females) received corrective exercise and infrared. Visual analogue scale and Oswestry disability questionnaire, and modified Schober tests were applied to both groups before and after treatment in addition to measurement of lumbosacral (LSA) and pelvic tilting angles (PTA) from lateral radiographic view. Results showed that there was a significant difference in both groups after treatment. There was more significant improvement in pain, function, and mobility in group A than group B in post treatment, but no significant difference in both groups in LSA and PTA.</p>		
Key words	1.	sacroiliac joint dysfunction.
	2.	manipulation.
	3.	lumbosacral angle.
	4.	pelvic tilting angle.
Arabic Title Page	:	فعالية التحريك بطريقه القوه الدافعة في علاج المشكلات الوظيفية للمفصل العجزي الالبيء.
Library register number	:	1637-1638.



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Author	:	Islam Elsayed Ali Shohda.
Title	:	Effect of Biofeedback-Controlled Exercises In Treatment of Patellofemoral Pain Syndrome.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Salwa Fadl Abd El Mageed.
	2.	Ashraf Abd-Elkader Elnahall.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The purpose of this study is to clarify the importance of addition of biofeedback to vastus medialis obliquus strengthening exercises in the treatment of patellofemoral pain syndrome (PFPS). A comparison was held between two groups of PFPS patients. Group (A) received a biofeedback controlled Vastus medialis obliquus strengthening exercises, patellar taping and stretching exercises and group (B) received a Vastus medialis obliquus strengthening exercises, patellar taping and stretching exercises. Treatment outcome was determined by: 1) Visual analogue scale (VAS) to assess patellofemoral pain severity and Cincinnati rating system (CRS) to assess knee function. The results showed a statistically significant decrease in (VAS) and a statistically significant increase in (CRS) for both groups (<math>p &lt; 0.05</math>). There was no statistical difference between groups in (VAS) (<math>p &gt; 0.05</math>). There was no statistical difference between groups in (CRS) (<math>p &gt; 0.05</math>). Conclusion: Combining biofeedback training to Vastus medialis obliquus strengthening exercises for treating PFPS was equally effective like Vastus medialis obliquus strengthening exercises without biofeedback. This may be limited to the use of a Tr20C biofeedback device.</p>		
Key words	1.	Patellofemoral Pain Syndrome.
	2.	Biofeedback.
	3.	Visual analogue scale.
	4.	Cincinnati rating system.
Arabic Title Page	:	تأثير استخدام التمرينات مع التنبيه الرجعي الحسي في علاج آلام مفصل الركبة مع أسفل الفخذ.
Library register number	:	1459-1460.

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Author	:	Lydia Nabil Ibrahim Beshara.
Title	:	A Comparative Study Between Muscle Energy Technique and Spinal Flexion-Extension Exercises Program in Treatment of Chronic Mechanical Low Back Pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ibrahim Magdy Elnaggar.
	2.	Enas Fawzy Youssef.
	3.	Mohamed Abdallah Elsoufy.
Degree	:	Master.
Year	:	2007.
Abstract	:	<p>The purpose of this study was to compare the effect of muscle energy technique versus combined spinal flexion-extension exercises on reducing pain severity; reducing functional disability; and increasing the range of motion of trunk flexion, extension, right bending, and left bending. Subjects: Forty patients (male and female) diagnosed as chronic mechanical low back pain participated in this study. Methods: Patients were divided randomly into two groups: the first group consisted of 20 (11 male and 9 female) patients with a mean age of 33(<math>\pm</math>1.58) years treated with the combined spinal flexion-extension exercises program, the second group consisted of 20 (9 male and 11 female) patients with a mean age of 30.20(<math>\pm</math>1.57) years treated with the muscle energy technique. Both groups were treated for 12 sessions, 3 sessions per week "each other day". Patients were assessed before, midtreatment and after treatment by Visual Analogue Scale, Oswestry Disability Index, and tape measurement. Results: Both groups had significantly reduced low back pain severity and less functional disability after treatment. The muscle energy technique was more effective in reducing pain and functional disability than the combined spinal flexion-extension exercises. The combined spinal flexion-extension exercise was more effective in increasing lumbar flexion and extension range of motion than the muscle energy technique. There were no significant differences between groups regarding increasing the right and left trunk bending range of motion. Conclusion: The muscle energy technique is more effective than the combined spinal flexion-extension exercises in reducing low back pain severity and functional disability. Spinal flexion-extension exercises are recommended to be used when increasing range of forward flexion and back extension is an additional goal.</p>
Key words	1.	Chronic mechanical low back pain.
	2.	muscle energy technique.
	3.	flexion.
	4.	extension.
	5.	exercises.
Arabic Title Page	:	دراسة مقارنة بين تقنية الطاقة العضلية و تمرينات ثنى وفرد العمود الفقارى فى علاج ألم أسفل الظهر الميكانيكى المزمن.
Library register number	:	1469-1470.

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Author	:	Nermin Gamil Fakhry Beshara.
Title	:	Comparison of Spinal Curvatures and Flexibility in Osteoporotic and Normal Women.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd Elazim Fayaz.
	2.	Enas Fawzy Youssef.
	3.	Mohamed Abdel Latife Shahin.
Degree	:	Master.
Year	:	2007.
Abstract	:	
A total of 45 women are included in this study. They are divided according to their bone mineral density into three groups, Group I: 16 women with osteoporosis (OP); Group II: 15 women with low bone mineral density (osteopenia) (OST); Group III: 14 women with normal bone mineral density (control group). The thoracic kyphosis, lumbar lordosis, thoracic spine range of motion (ROM) and lumbar spine range of motion (ROM) are measured in the three groups. There are significant differences between the three groups regarding the thoracic kyphosis, lumbar lordosis, thoracic range of motion and lumbar range of motion. It is concluded that osteoporosis is associated with increase of the thoracic kyphosis and lumbar lordosis as well as the decrease of the thoracic and lumbar spine range of motion.		
Key words	1.	Spinal Curvatures.
	2.	Spinal Mobility.
	3.	Osteoporosis.
Arabic Title Page	:	مقارنة انحناءات وليونة العمود الفقاري في السيدات المصابات بهشاشة العظام والسيدات الطبيعية.
Library register number	:	1655-1656.

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Author	:	Samah Saad Al Moogy Zahran.
Title	:	Effects of bilateral Knee Osteoarthritis on Proprioception and Dynamic balance.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Bassem El Nahass.
	2.	Nadia Abd El Azeem Fayaz.
	3.	Ezzat Mohamed Kamel.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>The purpose of this study was to compare proprioception and dynamic balance in bilateral knee OA patients versus normal controls, and to assess the correlation between them. A comparison was held between two groups; group (A) 50 bilateral knee OA patients and group (B) 50 normal controls. Knee proprioception was measured in both groups by using the OB Goniometer and The Akron Rehabilitation System. Dynamic balance was measured in both groups using The Biodex Balance System. The results of this study showed significant decrease in both knee proprioception and dynamic balance in knee OA patients and showed that there is no correlation between them in knee OA patients.</p>		
Key words	1.	Dynamic balance.
	2.	Knee Osteoarthritis.
	3.	Proprioception.
Arabic Title Page	:	تأثيرات الالتهاب المفصلي للركبتين على الاحساس بالوضع و الاتزان الديناميكي.
Library register number	:	1603-1604.

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Author	:	Shahesta Ahmed Usama.
Title	:	Effect of Unilateral Back Bag Carrying on Dynamic Balance in Adolescent Idiopathic Scoliosis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Salwa Fadle Abd El Mageed.
	2.	Abd El Mohsen Arfah.
Degree	:	Master.
Year	:	2007.
Abstract	:	
<p>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 a spinal deformity in the curve of the vertebral column to the lateral side with a rotation of the vertebra in many major axes. Background and Purpose: To assess the effect of unilateral carrying backed pack loads at different proportions of body weight in both sides of the curve on dynamic balance in adolescent idiopathic scoliosis (AIS).Subjects: Thirty female patients with AIS with a mean age of(17.6 ±1.6)years and fifteen female with a mean age of subjects(17.6±1.6)years. The Cobb's angle ranges from (10 to 25°).Both groups were assessed the effect of unilateral carrying backed pack loads at different proportions of body weight in both sides of the curve on dynamic balance to measure the stability index by Biodex Stability System. Results: There was significant relation between dynamic balance and carrying loads at different proportions of body weight in both sides of the curve in matched normal subjects.</p>		
Key words	1.	Adolescent Idiopathic Scoliosis.
	2.	Balance.
	3.	load carrying .
	4.	back pack.
Arabic Title Page	:	تقييم تأثير حمل حقيبة الظهر على جانب واحد على الاتزان الديناميكي لمرضى الانحناء الفقري (الجنف) للمراهقين.
Library register number	:	1563-1564.