

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

**Physical Therapy Department for Musculoskeletal
Disorder and Its Surgery**

**Master Degree
2013**

Author	:	Ahmed Abd ElAziz Olama.
Title	:	The role of therapeutic exercises after knee arthroplasty : systematic review.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors		1. Ahmed Hassan Hussein. 2. Manal Mohamed Ismail. 3. Mona Hassan Gamal Eldein.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Objective: The aim of this systematic review was to study the role of therapeutic exercises after total knee arthroplasty (TKA) in patients with osteoarthritis (OA). Data source: Randomized controlled trials were reviewed if they included a physiotherapy exercise intervention compared with usual or standard physiotherapy care after TKA in the hospital, outpatient community or home setting. Search made in Pub Med, Cochrane and PEDro web sites. Selection Criteria: Randomized controlled trials in which therapeutic exercises were used for OA patients after TKA and in all age groups. All studies were from 2000 to 2012. Only outcome measures were related to knee ROM, muscle strength, function activities and quality of life. Data Extraction: Two independent reviewers extracted data from studies included in this systematic review using data extraction form. The methodological quality of the included studies was assessed with the modified version of the Cochrane Musculoskeletal Injuries Group (CMIG) scoring system. Data synthesis: Twelve studies were selected; all outcomes measurement including knee ROM, muscle strength, functional activities and quality of life were subjected to descriptive analysis. Conclusion: There was no effect for continuous passive movement on knee ROM, muscle strength, functional activity and quality of life but there were positive effects for exercises based on functional activities on knee range of motion and functional activities. Insufficient evidence for the effect of this type of exercises on muscle strength and quality of life, because there were not enough randomized trials measuring these outcomes. Keywords: Knee osteoarthritis, knee arthroplasty, knee replacement, therapeutic exercises, quadriceps strengthening, muscle strength, randomized controlled trials, continuous passive movement.</p>
Key words		1. Therapeutic exercises. 2. Knee arthroplasty. 3. Systematic review. 4. Knee osteoarthritis. 5. Knee replacement. 6. quadriceps strengthening 7. Muscle strength. 8. Randomized controlled trials. 9. Continuous passive movement.
Arabic Title Page	:	دور التمرينات العلاجية بعد تغير مفصل الركبة : مراجعة منهجية.
Library register number	:	3453-3454.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
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Author	:	Ahmed Ahmed Basheer.
Title	:	Relationship Between Hip Muscle Strength And Three Dimensional Kinematics In Subjects With And Without Patellofemoral Pain Syndrome.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Fayaz.
	2.	Ali Al-Zawahri.
	3.	Mona Hassan Gamal El-dein.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Patellofemoral pain syndrome (PFPS) is one of the most common, but least understood, knee disorders. Researchers have historically examined quadriceps strength and neuromuscular activity. Recently, researchers have shown that subjects with PFPS can exhibit hip weakness and demonstrate altered hip kinematics during functional activities. However, results from these works have not provided conclusive answers. Objectives: The purpose of this study was to: first, demonstrate the relationship between the hip muscles strength and hip kinematics in subjects with and without PFPS. Second, to compare the hip abductors strength and the hip kinematics during stair descent between the PFPS patients and the normal subjects. Methods: Ten males diagnosed with PFPS (with mean \pmSD age, 22 ± 1.4 years); and 10 normal males (with mean \pmSD age, 22.3 ± 0.9 years) participated. They underwent a strength assessment for the hip abductors using handheld dynamometer (HHD). Next, reflective markers were attached to bony landmarks to collect kinematic data during a stair descent task. For this purpose, subjects ascended and descended two 20-cm high steps. Results: No significant differences regarding hip abductors strength, hip adduction angle, and POA between the PFPS and the control groups as well as between the affected and the non affected in the PFPS group. Study also revealed no relationship between hip abductors strength and hip adduction angle and pelvic obliquity angle (POA). Conclusion: Subjects with PFPS and the normal subjects demonstrated similar hip abductors strength, similar hip kinematics during stair descent, and there was low relationship between hip abductors strength and hip kinematics.</p>
Key words	1.	Patellofemoral pain syndrome.
	2.	Hip abductors.
	3.	Hip adduction.
	4.	Pelvic obliquity angle.
Arabic Title Page	:	العلاقة بين قوة عضلات الفخذ والتحليل الوصفي ثلاثي الأبعاد في الأشخاص الذين يعانون والذين لا يعانون من متلازمة ألم مفصل الرضفة مع الفخذ.
Library register number	:	3219-3220.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Ahmed Moursi Ahmed Ibrahim.
Title	:	Mulligan's versus Maitland's mobilization in treatment of diabetic frozen shoulder.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El Sayed Ayad.
	2.	Aliaa Mohammed Rehan Youssef.
	3.	Ahmed Waheed Kandil.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Introduction: Mobilization techniques are used to relieve pain and restore mobility and function of frozen shoulder. Purpose: To compare between the effects of Mulligan's versus Maitland's end range mobilization on shoulder pain, function and mobility in patients with diabetic frozen shoulder. Methods: Thirty patients were randomly and equally distributed into: group (A) receiving Mulligan's mobilization and group (B) receiving Maitland's mobilization. Treatment was given 3 times per week, for 6 consecutive weeks. Patients were evaluated before and after treatment for shoulder pain severity; functional disability (using the Shoulder Pain and Disability Index) and shoulder mobility in flexion, abduction, external and internal rotation directions (using a digital level). Results: Patients in both groups showed significant improvement in all the measured variables ($p < 0.01$), however, Mulligan's technique was more effective ($p < 0.05$). However, in both groups, shoulder mobility was still significantly limited compared the sound side at the end of the treatment period ($p < 0.05$). Conclusion: Mulligan's and Maitland's end range mobilization are effective in decreasing shoulder pain severity and functional disability as well as in increasing shoulder mobility in all directions. However, the Mulligan's mobilization was more effective than Maitland's in treatment of diabetic frozen shoulder. Still, shoulder full range was not restored by 6-weeks of mobilization treatment.</p>		
Key words	1.	Mulligan's Mobilization.
	2.	Maitland's Mobilization.
	3.	Diabetic frozen shoulder.
	4.	frozen shoulder.
Arabic Title Page	:	التحريك بطريقة موليجان مقابل التحريك بطريقة ميتلاندي في علاج الكتف المتجمد السكري.
Library register number	:	3465-3466.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Ahmed Omar Abdel-Naeem.
Title	:	Effects of deep cervical flexors training on forward head posture.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa Eldin Abd Elhakem Balbaa.
	2.	Hamdy Radwan.
	3.	Aliaa Mohammed Rehan Youssef.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Neck pain is a popular complaint in the general population. Development of neck symptoms in certain occupations, such as video display terminal operators, is believed to occur as a consequence of adopting sustained non-neutral spinal postures in conjunction with increased activation of the neck-shoulder stabilizer muscles, which eventually results in higher levels of cervical spine loading. A common faulty head posture is the forward head posture (or chin poke). Purpose: to investigate the effects of deep cervical flexor muscles training on forward head posture in asymptomatic participants. Participants: Forty two asymptomatic adults were enrolled in this study. Methods: Participants were randomly assigned to one of the two groups; intervention and control. The intervention group received deep cervical flexor training for 6 weeks, while the control group received no intervention. Participants were assessed at the baseline and 6weeks later for the severity of forward head as indicated by the Cranio-Vertebral angle. This angle was measured using an electronic head posture instrument. Whereas, the strength and endurance of the deep flexor muscles were assessed using the Cranio-Cervical Flexion Test. Results: A significant improvement in forward head posture as measured by cranio-vertebral angle after deep cervical flexor training over the short term ($p<0.05$). Conclusion: the study revealed that 6 weeks of deep cervical training improves cranio-vertebral angle and deep cervical flexors strength and endurance. Thus, this exercise could be used as a preventive measure against the development of neck dysfunction in at risk population.</p>
Key words	1.	cranio-vertebral angle.
	2.	forward head posture.
	3.	cranio-cervical flexion test.
	4.	electronic head posture instrument.
Arabic Title Page	:	تأثير تدريب العضلات العنقية القابضة العميقة على الوضع الامامي للرأس.
Library register number	:	3411-3412.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Ahmed Ramadan Zaki Baghdadi.
Title	:	Balance and functional performance in patients undergoing cruciate retaining versus posterior stabilized total knee arthroplasty : Comparative study.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abdel Azeem Fayaz.
	2.	Hesham Abdel Baky Mohamed.
	3.	Mona Hassan Gamal Eldein.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Despite of the great success after total knee arthroplasty (TKA) there is percentage of people who are not fully satisfied. Until now controversy is still present between cruciate retaining total knee arthroplasty (CR TKA) and posterior stabilized total knee arthroplasty (PS TKA) especially in proprioception and functional performance. The rehabilitation program applied to all patients after TKA is the same despite of great difference between all techniques and the functional performance of patients following TKA still below age matched groups. Purpose: To test whether there is difference between CR TKAs and PS TKAs in proprioception and functional performance in patients following their rehabilitation program. Subjects: Thirty patients who were assigned for TKA, referred from an orthopedic surgeon and thirty normal subjects (males and females), their age ranged from 50-70 years, and were assigned into three groups. Group I: fifteen OA patients who were assigned for CR TKA. Group II: fifteen OA patients who were assigned for PS TKA. Group III: thirty subjects as age matched control group. Methods: Assessment procedures were done through Berge balance scale (BBS) to assess proprioception, Stair Climbing Test (SCT), and Timed Up-and-Go Test (TUGT) to assess function. The two study groups were assessed three times; preoperative, after home based physical therapy program (one month post-operative), and after outpatient rehabilitation program (two months post-operative). The age matched control group was assessed three times as the same time interval. Treatment procedures divided into three stages; Immediate post-operative program (hospitalization period: 1st week), home based physical therapy program (2nd – 4th week), outpatient rehabilitation program (5th – 8th week). Results: In our current study after two months post-operative there were significant decrease in TUGT and SCT time in CR TKA compared with PS TKA group, however there was no significant difference between the CR group and PS group in BBS scores. There is significant decline in proprioception and functional performance after one month post-operative, and significant improvement in proprioception and functional performance after two months post-operative in CR TKA and PS TKA groups. After two months postoperatively the BBS score in the two study groups were still below the age matched control group BBS scores, the SCT and TUGT times were still more in the two study groups in relation to the age matched control group. Lastly there were significant correlations between BMI, TUGT, and SCT in the two study groups.</p>		
Key words	1.	Balance.
	2.	functional performance.
	3.	cruciate retaining.
	4.	posterior stabilized.
	5.	total knee arthroplasty.
Arabic Title Page	:	الاتزان و الأداء الوظيفي في المرضى الخاضعين للاستبدال الكامل لمفصل الركبة مع بقاء أو إزالة الرباط الصليبي الخلفي.
Library register number	:	3459-3460.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
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Author	:	Ahmed Salah Abd ALLAH.
Title	:	Effect of craniocervical flexion training and dynamic neck strengthening exercises in patients with chronic mechanical neck pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa El Dein Abd EL Hakeem Balbaa.
	2.	Yasser Hassan El Meligy.
	3.	Magdolin Mishel Samy.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>The purpose of study was to determine the effect of low load craniocervical flexion training and dynamic neck muscles strengthening exercises versus neck muscles strengthening alone on pain, functional disability, deep muscles performance and isometric neck strength in patients with chronic mechanical neck pain. Subjects: Forty five subjects participated in the study and their age range from 18 to 30 years. They were divided into 15 normal subjects group (A) to detect the normal reference values of isometric neck muscles torque and 30 patients diagnosed with chronic mechanical neck pain patients were assigned randomly into two groups of equal number, each contained 15 patients. The group (B) received dynamic neck strengthening exercises by using DAVID Back Clinic (DAVID F 140), while the group (C) received as group B plus low load craniocervical flexion training. Neck pain, functional neck disability, deep cervical flexors performance and peak isometric muscles torque were measured before and after one successive month of treatment. Results: the results of this study revealed significant improvement in all variables for the two groups. More significant improvement was observed in favor of group (c) in pain, deep cervical performance and functional disability. Conclusion: Low load craniocervical flexion training is an effective additional tool in treating patients with chronic mechanical neck pain.</p>
Key words	1.	Craniocervical flexion training.
	2.	Dynamic neck strengthening training.
	3.	Deep cervical flexors performance.
	4.	Peak isometric muscles torque.
	5.	Chronic mechanical neck pain.
	6.	Mechanical neck pain.
Arabic Title Page	:	تأثير تدريب الانحناء الامامى الجمجمى العنقى وتمارين التقوية المتحركة فى مرض ألم الرقبة الميكانيكية المزمنة.
Library register number	:	3481-3482.

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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Ahmed Sayed Hassan Mohamed.
Title	:	Effect of low intensity pulsed ultrasound on bone healing in diaphyseal femoral fracture in human.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ahmed Hassan Hussein.
	2.	Khaled El Sayed Ayad.
	3.	Manar Abd El-Satar.
	4.	Waleed Reda Mohamed.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background fracture-healing is a complex biological process that involves the spatial and temporal orchestration of numerous cell types, hundreds if not thousands of genes, and the intricate organization of an extracellular matrix, all working toward restoring the bone's mechanical strength and rapid return to full function. Recent studies have shown an accelerating effect of low-intensity pulsed ultrasound (LIPUS) on fracture repair. Purpose to investigate the effect of LIPUS on the callus maturation in the diaphyseal femoral fracture treated by interlocking nailing. Methods thirty male and female cases with diaphyseal femoral fracture and treated by interlocking nailing their mean age (30.07 ± 5.57) years, mean weight (77.2 ± 8.99) kilograms (Kg), and mean height (172.07 ± 8.15) centimeters (cm), were assigned randomly into two groups: Group (A) (Experimental group) including fifteen patients and having daily treatment sessions include the rehabilitation exercise program and application of the low intensity pulsed ultrasound for 21 days after a week post operatively. While Group (B) (Control group) including fifteen patients and having daily treatment sessions of the rehabilitation exercise program only. Results the endosteal healing grading system between groups A and B showed that there was a significant difference in the post treatment values where p-value was (0.01). According to the Percentage of endosteal healing grading system, there was significant difference between the 2 groups in the grades of endosteal healing post treatment as p value was (0.003). Conclusions using of LIPUS therapy with the rehabilitation exercise program showed a statistically significant improvement in the callus maturation and decrease in the time to radiographic healing in favour to the experimental group(A) compared with that in the control group (B) , hence there would be also a significant decrease in the time to over-all clinical and radiographic healing.</p>		
Key words	1.	low intensity pulsed ultrasound.
	2.	bone healing.
	3.	diaphyseal femoral fracture.
	4.	endosteal healing,
Arabic Title Page	:	تأثير الموجات فوق صوتية المتقطعة المنخفضة الشدة على إلتئام العظم في كسر جسم عظمة الفخذ في الإنسان، أحمد سيد حسن محمد، المشرفون.
Library register number	:	3179-3180.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
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Author	:	Amr Mohamed Mohie Al-Dein.
Title	:	Effect Of Post Isometric Relaxation On Pain And Range Of Motion In Chronic Mechanical Neck Pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Ahmed Hassan Hussin.
	2.	Ali Mohamed Al Zawahri.
	3.	Mona Hassan Gamal Eldein El Laithy.
Degree	:	Master.
Year	:	2013.
Abstract	:	Chronic mechanical neck pain (CMNP) is a common disorder, Neck muscles show a strong tendency to develop hypertonus and spasm and alter proprioceptive input. Therefore; common effect of neck pain is muscle tightness. Clinically positive signs include tenderness in the posterior neck region, asymmetry, increased tension and restriction of movements. Objective: The purpose of this study was to demonstrate the effect of post isometric relaxation (PIR) on pain and range of motion (ROM) in (CMNP). Methods: Thirty patients had participated in this study; they were assigned randomly in two experimental groups. With age ranged from 20-40 years. Group A: consisted of 15 patients (14 females / 1 male) with mean age of 34.86 (± 8.39), received traditional physical therapy program. Group B: consisted of 15 patients (11 females / 4 males) with mean age of 32.46 (± 6.54) received traditional physical therapy program with muscle energy technique (MET) in form of (PIR). Results: revealed that (PIR) is more effective in reducing pain, increase (ROM), and there is a significant differences between both groups. Conclusion: (PIR) is more effective in reducing pain and increase (ROM) in patients with (CMNP).
Key words	1.	Chronic mechanical neck pain.
	2.	Muscle energy technique.
	3.	Post isometric relaxation.
Arabic Title Page	:	أثير الاسترخاء ما بعد الانقباض الالستاتيكي على الألم ومدى الحركة في ألم الرقبة ميكانيكي المزمن.
Library register number	:	3189-3190.

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**PREPARED BY ADEL ABD EL SALAM
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Author	:	Asmaa Omar Ibrahim.
Title	:	Kinesio Tape versus Manual Therapy in Treatment of Chronic Plantar Fasciitis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd El Azeim Fayaz.
	2.	Ahmed Mahmoud Khuleif.
	3.	Magdolin Mishel Samy.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>BACKGROUND: Plantar fasciitis is a common occupational or sport-related repetitive strain injury. Both manual therapy and kinesio tape are considered effective in treatment of chronic plantar fasciitis. Yet difference in efficacy between both techniques is not known. OBJECTIVES: The purpose of this study was to compare between the efficacy of manual therapy and kinesio tape on pain level, ankle rang of motion (ROM) and functional activities in patients with chronic plantar fasciitis. METHODS: Thirty subjects (4 males and 26 females) participated in this study; all were referred from a physician with clinical diagnosis of chronic plantar fasciitis. The subjects were randomly assigned into two equal groups. Group (A): consisted of 15 patients treated with cross friction massage, ankle joint mobilization in addition to stretching exercises for six sessions day after day for two weeks. Group (B): consisted of 15 pateints who were treated by kinesio tape in addition to stretching exercises for two weeks. The results revealed that there was no significant difference between manual therapy and kinesio tape on pain level, ankle ROM and foot functional activities. CONCLUSION: Both manual therapy and kinesio tape were shown to be effective in reducing pain level, improving ROM and functional activities in patients with chronic plantar fasciitis, but no statistical significant difference was proven between both of them.</p>		
Key words	1.	Kinesio Tape
	2.	Manual Therapy
	3.	Chronic Plantar Fasciitis
Arabic Title Page	:	شريط كينيسو مقابل العلاج اليدوى لعلاج التهاب لفاافة أخمص القدم المزمن.
Library register number	:	3571-3572.

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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Bassem Anter Hana.
Title	:	Pulsed electro magnetic field therapy versus ultrasonic in the treatment of carpal tunnel syndrome.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Manal Mohamed Ismail.
	2.	Mona Hasan Gamal El Din El Laithy.
	3.	Michel Eshak Loza.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>The purpose of the study was to investigate the combined effect of pulsed electromagnetic field therapy and splinting versus the combined effect of ultrasound treatment and splinting on the treatment of mild to moderate carpal tunnel syndrome. Subjects: Thirty patients with mild to moderate carpal tunnel syndrome, their ages ranged from 30-50 years, and they randomly assigned into two equal groups. Methods: group (A) received a program of splinting with volar (Cock-Up) wrist splint and pulsed electro magnetic field therapy while group (B) received a program of splinting with volar (Cock-Up) wrist splint and pulsed ultrasound. Assessment applied before and after period of treatment for both groups by two methods of evaluation, electrodiagnostic measurement (the median motor distal latency MMDL and the median sensory distal latency MSDL) and Boston carpal tunnel questionnaire BCTQ. Result: Patients of both groups showed significant improvement in all the measured variables (MMDL, MSDL and BCTQ). In between group's difference, the pulsed electro magnetic field therapy group showed a higher significant improvement in the electrodiagnostic measurement. Conclusion: both pulsed electro magnetic field therapy and pulsed ultrasound had a significant effect on improving patients with mild to moderate CTS, however, the pulsed electro magnetic field therapy was more effective than pulsed ultrasound on improving electrodiagnostic measurement (the median motor distal latency and the median sensory distal latency).</p>
Key words	1.	carpal tunnel syndrome.
	2.	pulsed electro magnetic field therapy.
	3.	pulsed ultrasound.
Arabic Title Page	:	المجال الكهرومغناطيسي المتقطع مقابل الموجات فوق الصوتية في علاج حالات ضيق النفق الرسغي.
Library register number	:	3151-3152.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Dina Mohamed Ali Al –Hamaky.
Title	:	Relationship Between Hip Abductors and Back Extensors Peak Torque in Mechanical Low Back Pain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa Eldin Abd Elhakem Balbaa.
	2.	Hassan Mostafa Al-Gamal.
	3.	Lilian Albert Zaki.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>BACKGROUND: mechanical low back pain (MLBP) is a common musculoskeletal pain condition. Decreased hip muscle strength has been implicated as a contributing factor, yet the relationships between pain, hip muscle strength and function are not known. OBJECTIVE: The purpose of this study is to investigate whether or not there is a correlation between hip abductors and back extensors muscle strength in patients with mechanical low back pain. and if it will be approved there is correlation attention will be paid to strengthen hip abductors in physiotherapy program. METHODS In this study, 40 persons(20 patients with mechanical low back pain and 20 normal persons) were assigned randomly into two groups. Group (A) (Normal Group):Twenty patients were included in this group. The data in table (1) and (Fig.14,15,16) represented their mean age (21.6±4.92) years, mean weight (64.35±13.23) kilograms (Kg), and mean height (164.15±9.78) centimeters (cm).Group (B) (MLBP Group):Twenty patients were included in this group. The data in table (1) and (Fig.) represented their mean age (22.4±1.6) years, mean weight (67.45±15.21) kilograms (Kg), and mean height (165.6±10.*-+entimeters (cm). concentric peak torques of back muscles and right and left hip abductors were measured by biodex isokinetic dynamometer.RESULT: the results revealed that there was no correlation between back extensors and hip abductors peak torques in mechanical low back pain. CONCLUSION: It can be concluded that there is no correlation between peak torques of back extensors and hip abductors in mechanical low back pain also there is no weakness of back extensors neither in hip abductors in mechanical low back pain in comparison to normal.</p>		
Key words	1.	Mechanical low back pain.
	2.	hip muscles.
	3.	back strength.
Arabic Title Page	:	العلاقة بين أقصى عزم للعضلات المبعدة لمفصل الفخذ والعضلات الباسطة للظهر في الم أسفل الظهر الميكانيكي.
Library register number	:	3473-3474.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
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**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Dina Sayed Abd Allah Abd el Aziem.
Title	:	Effect of Hip Abductors Strengthening versus Proprioceptive Training on Functional Ankle Instability.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El Sayed Ayad.
	2.	Ali Mohamed El Zawahry.
	3.	Magdolin Mishel Samy.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Ankle injuries are the most common lower limb injuries. Eighty-five % to ninety-five% of all ankle ligament injuries are lateral ankle sprains. The risk of re-injury is high, fifty-five % to seventy-five % of patients complaining of residual symptoms. Objective: The purpose of this study was to compare the effect of hip abductors strengthening exercises program versus proprioceptive training program on functional ankle instability. Methods: thirty male and female patients with age ranged from twenty to thirty years old, complained of functional ankle instability had participated in this study. Patients were divided into two groups, fifteen patients each. Group (A) received hip abductors strengthening exercises. Group (B) received proprioceptive training exercises. Patients in both groups were assessed before and after the treatment. Assessment was conducted for hip abductors muscle strength using (isometric strength of the gluteus medius via Hand-held dynamometer), dynamic postural control through (Y balance test) and functional abilities using (FADI). Results: both training programs led to improving gluteus medius isometric strength, dynamic postural control and functional abilities. However, there was significantly more improvement in group (A) than group (B) in gluteus medius strength. Conclusions: Six weeks of hip abductor strengthening exercise or proprioceptive training exercise program were both effective in improving functional ankle instability. However, hip abductors strengthening exercises seems to improve the hip abductors muscle strength more efficiently.</p>
Key words	1.	Functional ankle instability.
	2.	Proprioceptive training.
	3.	Hip abductors.
	4.	strengthening exercises.
Arabic Title Page	:	تأثير تقوية العضلات المبعدة لمفصل الفخذ مقابل تدريب المستقبلات الحسية العميقة على عدم الاستقرار الوظيفي لمفصل الكاحل.
Library register number	:	3484-3485.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Doaa Farag Ahmed Ibrahim.
Title	:	low level laser versus salicylate phonophoresis in treatment of shoulder impingement syndrome
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abd El Azim Fayaz.
	2.	Ashraf Nehad Moharram.
	3.	Khaled El Sayed Ayad.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Shoulder impingement syndrome is one of the most common causes of shoulder pain and usually occurs in the middle aged and elderly individuals accounting for 44–65% of all complaints of shoulder pain during a physician's office visit. Purpose: The study compared between the effect of low level laser accompanied with selected program of stretching and strengthening exercises versus salicylate phonophoresis accompanied with the same selected program of stretching and strengthening exercises in treatment of shoulder impingement syndrome. Materials and methods: Thirty male and female patients with shoulder impingement syndrome due to mechanical causes with stage II Neer classification participated in this study. They were distributed into three equal groups, matched by age and gender. The first experimental group (A) consisted of 10 patients with a median age of 34 (29.25, 39.25) years received low level laser therapy accompanied with selected program of stretching and strengthening exercises. The second experimental group (B) consisted of 10 patients with a median age of 35.5 (29.5, 40) years received ultrasonic phonophoresis accompanied with the same selected program of stretching and strengthening exercises. The third control group (C) consisted of 10 patients with a median age of 35.5 (29.75, 40) years received only the same selected program of stretching and strengthening exercises. Treatment was done 3 sessions a week for 6 weeks. Patients were evaluated pretreatment, post 4 weeks treatment and post 6 weeks treatment for shoulder pain severity, shoulder functional disability, shoulder flexion, abduction, internal and external rotation. Results: Patients in all groups showed significant improvement in all measured variables. But between groups difference, the first group showed more significant improvement than the second and the third groups in all measured variables. Conclusion: Both low level laser and phonophoresis accompanied with selected program of stretching and strengthening exercises had a significant effect on shoulder pain severity, shoulder functional disability, shoulder flexion, abduction, internal and external rotation. However, low level laser therapy accompanied with selected program of stretching and strengthening exercises was more effective than phonophoresis accompanied with the same selected program of stretching and strengthening exercises in treatment of shoulder impingement syndrome patients.</p>
Key words	1.	Impingement syndrome
	2.	low level laser
	3.	phonophoresis.
	4.	Lasers.
	5.	Shoulder impingement syndrome.
Arabic Title Page	:	تأثير الليزر ذو الصبغة النابضة في علاج مرض التورد.
Library register number	:	3575-3576.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Doha Hany Mohamed Labib.
Title	:	Influence of Proprioceptive Training in Patients with Arthroscopic Partial Meniscectomy.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Manal Mohamed Ismail.
	2.	Ashraf Nehad Moharram.
	3.	Mona Hassan Gamal Eldein.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Meniscal tears are one of the most common injuries of the knee in the sports field resulting from twisting motion on partially flexed weight bearing knee. Arthroscopic partial meniscectomy (APM) is a very common procedure used for symptomatic cases with meniscal tears. Physical therapy intervention including strengthening and proprioceptive training for lower extremity helps to improve muscle strength, endurance and knee joint balance. Objective: The purpose of this study is to investigate the effectiveness of proprioceptive training combined with a postoperative physical therapy program versus a postoperative physical therapy program after arthroscopic partial meniscectomy on muscle strength, knee function and balance. Methods: Thirty patients with the age ranged from 17 to 35 years had participated in this study. They were assigned randomly into two groups Group A consisted of 15 patients (11 males/ 4 females) with mean age of 24.46 (\pm5.4) years that received muscle strengthening program. Group B consisted of 15 patients (11 males/ 4 females) with mean age of 24.8 (\pm4.12) years who received muscle strengthening program and proprioceptive training. Patients were assessed before and after 4 weeks of rehabilitation period for their muscle strength peak torque per body weight, overall stability index and lysholm score. Results: Isokinetic measures, overall stability index and Lysholm score significantly increased after the rehabilitation in both groups. However, there was no group or group per time effects in any of the outcome variables. Conclusion: No differences found in the outcomes of patients when adding proprioceptive training to the rehabilitation program after arthroscopic partial meniscectomy.</p>		
Key words	1.	Meniscectomy.
	2.	muscle strengthening.
	3.	proprioceptive training.
Arabic Title Page	:	تأثير برنامج تمارين التحفيز بعد الاستئصال الجزئي من الغضروف الهلالي للركبة بالمنظار.
Library register number	:	3199-3200.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Essraa Mahmoud Abdel Aziz Farag.
Title	:	Combined Effect of Closed-Kinetic Chain and Open-Kinetic Chain Exercises on Atraumatic Shoulder Instability.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia AbdelAzeemFayaz.
	2.	Amr Mohamed Abdel Hady.
	3.	Mona Hassan GamalEldin.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>BACKGROUND :The a traumatic multidirectional instability of the shoulder is a complex problem in terms of diagnosis and treatment. Distinct from multi directional hyper laxity, multi directional instability hassymptoms related with increased translationsinmorethanone direction. OBJECTIVE: The purpose of this study was to investigate the combined effect of closed-kinetic chain and open-kinetic chain exercises in treatment of patients with traumatic shoulder instability. METHODS: Twenty patients had participated in this study; with age ranged for eighteen to forty years, they were randomly assigned into two experimental groups. Group A consisted of 10 patients with median age of 23.5 (20.0-40.0) years, received closed and open kinetic chain exercises program. Group B consisted of another 10 patients with median age of 24 (20.0-29.0) years, received a program of open kinetic chain exercises only. Treatment was given 3 times/ week, every other day, for 4 consecutive weeks. Patients were evaluated pre and post treatment for their shoulder functional ability, shoulder joint's stability, and shoulder pain. RESULTS: the results revealed that there were no statistical significant differences between both groups after treatment regarding the improvement in shoulder functional ability, pain, and shoulder joint's stability. CONCLUSION: The combined effect of Closed and open kinetic chain exercises yield similar effects of pain level, function, and stability of the glenohumeral joint in subjects with atraumaticmultidirectional shoulder instability after four weeks of treatment.</p>
Key words	1.	Atraumatic shoulder instability.
	2.	kinetic chain exercises physical therapy.
Arabic Title Page	:	التأثير المشترك لتمارين السلسلة الحركية المغلقة والمفتوحة في حالات أرضحية الكتف الغير مستقر.
Library register number	:	3147-3148.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Hanaa Ali Hafez Mohamed.
Title	:	The effect of kinesio tape and Williams' exercises on patients with lumbar spondylosis
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Allaa EIDin Balbaa
	2.	Atef Mohamed Morsi
	3.	Magdolin Mishel Samy
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: Spondylosis is a term that refers to degenerative osteoarthritis of the joints between the centers of the spinal vertebrae and/or neural foramina. Kinesio taping is theorized to have several functions including restoring correct muscle function by supporting weakened muscles, reducing congestion by improving the flow of blood and lymphatic fluid, decreasing pain by stimulating neurological system and correcting misaligned joints by relieving muscle spasm. The purpose: To investigate the effect of kinesio taping on pain, ROM and functional disability in patients with lumbar spondylosis. Subjects: Forty five male and female patients were diagnosed as lumbar spondylosis. Their age ranged from 35 to 55 (\pmSD) years. There were randomly distributed into three groups, group (A) KT, group (B) KT and Williams' exercises and group (C) Williams exercises. They were selected from "Beni -suef University Hospital. Group (A): Consisted of 15 patients. They received the application of KT on lumbar region one time per week for four weeks. Group (B): Consisted of 15 patients. They received the application of KT one time per week and Williams' spinal flexion program three times per week for four weeks. Group (C): Consisted of 15 patients. They received Williams' spinal flexion program three times per week for four weeks. All patients were evaluated by VAS, Modified modified Schobars test and Oswestry questionnaire before and after the treatment. Results: Statistical analysis of data showed significant differences within groups in VAS, Modified modified Schober test and Oswestry questionnaire. Between groups comparisons were in favor of group (B) then group (A) then group (C). Conclusion: treatment with KT and Williams' spinal flexion program is more effective in treatment of lumbar spondylosis patients.</p>
Key words	1.	kinesio taping
	2.	Williams' exercises
	3.	low back pain
	4.	lumbar spondylosis
Arabic Title Page	:	تأثير الشريط اللاصق وتمارين ويليمز على مرضى خشونة الفقرات القطنية.
Library register number	:	3551-3552

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Hanan Emam Abd Elrahman.
Title	:	Effect of shock wave therapy in treatment of trigger finger.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Amal Fawzy Ahmed.
	2.	Ahmed Kholif Mohamed.
	3.	Soheir Shehata Rizk Allah.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Background: Trigger finger (TF) or stenosing tenosynovitis is a condition affecting the movement of the tendons as they bend or flex the fingers or thumb due to inflammation of the tendon that causes pain and weakness of the hand. Purpose: To investigate the effect of Extracorporeal Shock Wave Therapy on pain level and hand grip strength in patients with trigger finger. Subjects: Thirty male and female patients participated in this study, they were assigned into two equal groups; Group I (study group), Group II (control group), their age ranged from 35 to 65 years. Methods: The study group consisted of 15 patients with a mean age of (47.93 ± 5.81) years received extracorporeal shock wave therapy (3000 shocks, 1000 shock/ session, 3 session one per week, energy flux density 0.32 mJ/mm², energy level 5-7 mJ, pulse rate 160/min.) in addition to traditional physical therapy program which included infrared, deep friction massage on the tendon of of flexor digitorum superficialis muscle of the corresponding finger, and racquetball compressions active exercise. The control group consisted of 15 patients with a mean age of (46.86 ± 5.3)years received traditional physical therapy program only. The pain level were measured for both groups before and after treatment by the Numerical Analogue Scale(NAS), the hand grip strength were measured for both groups before and after the treatment by Hand Held Dynamometer. Results: The mean value ± SD of NAS before treatment for group I was (8.4 ± 1.45) and that for group II was (8.06 ± 1.33). There was no significant difference between group I and group II in NAS before treatment (p = 0.51). The mean value ± SD of NAS after treatment for group I was (2.33 ± 0.81) and that for group II was (5.06± 1.16). There was a significant decrease in NAS of group I post treatment compared to group II (p = 0.0001). The mean value ± SD of hand grip strength before treatment for group I was 19.26 (± 9.92) kg and that for group II was 19.06 (± 7.99) kg. There was no significant difference between group I and group II in hand grip strength before treatment (p = 0.95). The mean value ± SD of hand grip strength after treatment for group I was (35 ± 9.81) kg and that for group II was 27.33 ± 9.6 kg. There was a significant increase in hand grip strength of group I post treatment compared to group II (P = 0.03).The results showed a highly significant improvement of all measured parameters in the study group as compared to control group. Conclusion: Extracorporeal Shockwave therapy could be a valuable addition to the treatment program for management of patients with trigger finger.</p>		
Key words	1.	Trigger finger,.
	2.	Extracorporeal Shockwave.
	3.	Hand grip strength.
Arabic Title Page	:	تأثير العلاج بالموجات التصادمية في حالات الإصبع النطاظ.
Library register number	:	3257-3258.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Haitham Yousri Rizk Sallam.
Title	:	Effect of Scapular Kinesio Taping in Treatment of Shoulder Impingement Syndrome.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Nadia Abdelazim Fayaz.
	2.	Lelian Albert Zaky.
	3.	Aly Osman El Mofty.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>BACKGROUND: Shoulder impingement syndrome (SIS) is the most common disorder of the shoulder. SIS is a commonly reported cause of shoulder pain resulting in functional loss and disability. Previous research has led to the recommendation of exercises for training of the scapular muscles to improve scapulothoracic upward rotation. Tape is commonly used as an adjunct for treatment and prevention of musculoskeletal injuries. OBJECTIVE: The study compared the combined effect of scapular Kinesio taping and Cool's suggested exercises to correct scapular muscles imbalance versus the same therapeutic exercises in treatment of shoulder impingement syndrome. METHODS: Thirty patients had participated in this study; they were assigned randomly into two experimental groups. The first experimental group (A) consisted of 15 patients with a mean age (36.33±5.67) years; they received combined program of scapular kinesio taping and Cool's suggested exercises. The second experimental group (B) which consisted of 15 patients with a mean age (37.73±5.27) years; they received a program of therapeutic exercises identical to those applied to the first group. Treatment was given 3 times per week, each other day, for 4 consecutive weeks. Patients were evaluated pre-treatment and post-treatment for shoulder pain severity, shoulder functional disability, absolute scapular muscle activity upper fibers of trapezius (UT), middle fibers of trapezius (MT), lower fibers of trapezius (LT) and serratus anterior (SA) muscles and relative balance ratios upper fibers of trapezius/middle fibers of trapezius (UT/MT), upper fibers of trapezius/lower fibers of trapezius (UT/LT) and upper fibers of trapezius/serratus anterior (UT/SA) using dynamic surface electromyography. RESULTS: Using repeated measures multivariate analysis of variance (MANOVA) test, patients showed significant improvement in the combined dependant variables in both groups but between groups difference the first group showed a more significant improvement than the second group in the combined dependant variables. CONCLUSION: Both of the scapular Kinesio taping combined with therapeutic exercises had a significant effect on shoulder pain severity, shoulder functional disability, absolute EMG activity in the upper fibers of trapezius (UT) and relative balance ratios in upper fibers of trapezius/middle fibers of trapezius (UT/MT), upper fibers of trapezius/lower fibers of trapezius (UT/LT) and upper fibers of trapezius/serratus anterior (UT/SA) based on the application of tape. No significant differences in absolute electromyography (EMG) activity between taping and no taping groups were found for the middle fibers of trapezius (MT), lower fibers of trapezius (LT) and serratus anterior (SA) Therefore, the combination of selected Cool's suggested exercises and scapular kinesio taping were more effective than the therapeutic exercises in the treatment of shoulder impingement syndrome.</p>		
Key words	1.	Impingement syndrome.
	2.	Kinesio taping.
	3.	therapeutic exercises.
	4.	electromyography.
Arabic Title Page	:	تأثير الرباط اللاصق للوح الكتف في علاج متلازمة إحصار الكتف.

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

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Library register number	:	3491-3492.
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Author	:	Nabil Abdo Abdellah Mohamed.
Title	:	Correlation study between clinical and radiological findings in knee osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa Eldin Abd Elhakem Balbaa.
	2.	Khaled Elsayed Ayad.
	3.	Ahmed Mostafa Mohamed.
Degree	:	Master.
Year	:	2013.
Abstract	:	

Background: Osteoarthritis (OA) of the knee is the most common form of arthritis and leads to more activity limitations (e.g., disability in walking and stair climbing) than any other disease, especially in the elderly. Recently, impaired proprioceptive accuracy of the knee has been proposed as a local factor in the onset and progression of radiographic knee OA (ROA). **Purpose:** to compare between the clinical and radiological findings in healthy with that of knee OA. Also, to determine if there is a correlation between the clinical and radiological findings in patients with knee OA. **Subjects:** fifty one patients diagnosed as unilateral or bilateral knee OA with age ranged between 35-70 years, from both gender without any previous history of knee trauma or surgery, and twenty one normal subjects with age ranged from 35 - 68 years. **Methods:** peak torque/body weight (PT/BW) was recorded from knee extensors at isokinetic isometric mode at angle of 45 degree. Also the Absolute Angular Error was recorded at 45⁰ and 30⁰ to measure joint position sense (JPS). They made anteroposterior (AP) plain X rays from standing semiflexed knee position and their average score of Timed Up and Go test (TUG) and WOMAC were recorded as a measure of knee pain, stiffness and function. Comparison between the mean values of different variables in the two groups was performed using unpaired student t test. P value less or equal to 0.05 was considered significant. **Results:** there were significant differences between the studied variables between the experimental and control groups except the values of AAE at 30⁰. Also there were no significant correlation between the clinical findings (pain, function, muscle strength and proprioception) and the severity of arthritic changes in X rays **Conclusion:** From the finding of the current study we can conclude that there were a significant difference between the both groups in all studied parameters (the WOMAC, functional level, quadriceps muscle strength and the joint proprioception). Also this study did not support the dependency on radiological findings in management of knee OA as the radiological features did not necessarily indicate the level of structural damage of patients with knee OA and we should consider the clinical features in our treatment plan.

Key words	1.	radiological knee osteoarthritis.
	2.	joint position sense.
	3.	peak torque.
	4.	Proprioception.
	5.	WOMAC, isokinetic assessment.
	6.	isokinetic assessment.

Arabic Title Page	:	دراسة الارتباط بين النتائج الاكلينيكية والاشعاعية لخشونة مفصل الركبة.
Library register number	:	3201-3202.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Radwa Talaat Mohammed El-Shorbagy.
Title	:	The Contribution of Hip Strategy in Dynamic Balance in Recurrent Ankle Sprain.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa EL-Din Balbaa.
	2.	Khaled Ayad.
	3.	Waleed Red.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>Introduction: Ankle sprain is a common lower limb injury that is complicated by high recurrence rate. The cause of recurrence is not clear; however, changes in motor control have been postulated. Objective: to determine the contribution of proximal hip strategy to dynamic balance control in patients with recurrent ankle sprain. Methods: Fifteen subjects with recurrent ankle sprain (group A) and fifteen healthy control subjects (group B) participated in this study. Abductor-adductors as well as flexor-extensor hip musculatures control was abolished by fatigue using the Biodex Isokinetic system. Dynamic balance was measured before and after fatigue by the Biodex Balance system Results: Repeated measures MANOVA was used to compare between and within group differences, In group A fatiguing of hip muscles (flexors-extensors and abductors-adductors) increased overall stability index (OASI), anteroposterior stability index (APSI) and mediolateral stability index (MLSI) significantly ($p=0.00$) whereas; in group B fatiguing of hip flexors-extensors increased significantly OASI and APSI only ($p= 0.017, 0.010$; respectively) while fatiguing of hip abductors-adductors has no significant effect on these variables. Moreover, patients with ankle sprain had significantly lower dynamic balance after hip muscles fatigue compared to the control group. Specifically, after hip flexor-extensor fatigue, the OASI, APSI and MLSI were increased significantly than those of the control values ($p= 0.002, 0.011, \text{ and } 0.003$, respectively) whereas fatiguing of hip abductors-adductors increased significantly in OASI and APSI only ($p=0.012, 0.026$, respectively). Conclusion: To maintain dynamic balance, patients with recurrent ankle sprain seem to rely more on the hip strategy.</p>		
Key words	1.	ankle sprain.
	2.	hip muscles fatigue.
	3.	dynamic balance.
Arabic Title Page	:	مشاركة إستراتيجية الفخذ في الاتزان الحركي في الالتواء المتكرر للكاحل.
Library register number	:	3319-3320.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Sara Mohamed Samir.
Title	:	Post isometric relaxation versus positional release in treatment of chronic low back dysfunction.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Alaa Aldeen Abd Al Hakeem Balbaa.
	2.	Lilian Albert Zaki.
	3.	Marzouk Abd Alfatah Alythy.
Degree	:	Master.
Year	:	2013.
Abstract	:	
<p>BACKGROUND: Chronic low back dysfunction many factors is one of the most common complain of the working age population, there are many factors that contributing to CLBD and large group of them are without clear a etiology. Both Post Isometric Relaxation and Positional Release Technique considered effective manipulative osteopathic techniques in treatment of CLBD. Yet difference in efficacy between both techniques is not known. OBJECTIVES: The purpose of this study was to compare between the efficacy of PIR and PRT on pain level. Rang Of Motion and functional activities in patients with CLBD. METHODS: Thirty patients from out patient clinic of faculty of physical therapy Cairo University, had participated in this study; they were randomly assigned in two groups (group A, B). With age ranged from 30 to 50 years. Group A consisted of 15 patient (8 males and 7 females) with mean age 40.0 (± 4.81) years, received PIR technique and conventional physical therapy program. Group B consisted of 15 patients (5 males, 10 females) with mean age 42.93 (± 6.68) years, received PRT and conventional physical therapy program. RESULTS: The results revealed that there was no significant difference between PIR and PRT on pain level, ROM and functional activities. CONCLUSION: Both PIR and PRT were shown to be effective in reducing pain level, improving ROM and function in patients with CLBD, but no statistical significant difference was proven between both of them.</p>		
Key words	1.	Low back dysfunction.
	2.	Post isometric relaxation technique.
	3.	Positional release technique.
	4.	Oswestry disability index.
Arabic Title Page	:	إسترخاء ما بعد الإنقباض مقابل تقنية الإنفراج الموضعي في علاج خلل الظهر المزمن
Library register number	:	3243-3244.

**ELECTRONIC GUIDE TO THESES APPROVED BY PHYSICAL
THERAPY DEPARTMENT FOR MUSCULOSKELETAL DISORDER
AND ITS SURGERY**

**PREPARED BY ADEL ABD EL SALAM
NERVEEN ABD EL SALAM ABD EL KADER AHMED**

Author	:	Shimaa Mohammed Naguib Abdel Aziz.
Title	:	Effect of Shock Wave Therapy on Knee Osteoarthritis.
Dept.	:	Physical Therapy Department for musculoskeletal disorder and its Surgery.
Supervisors	1.	Khaled El Sayed Ayad.
	2.	Magdolin Mishel Samy.
	3.	Waleed Reda Mohammed Awad Allah.
Degree	:	Master.
Year	:	2013.
Abstract	:	<p>Background: OA is a chronic and often progressive joint disease characterized by focal loss of articular cartilage and marginal bone formation, resulting in joint space narrowing and osteophytosis. The clinical syndrome of OA is diagnosed when symptoms and signs of the disease are present in the setting of this classic radiological finding. The purpose: was to examine the effect of shock wave therapy on knee osteoarthritis. Subjects: Thirty patients diagnosed as knee osteoarthritis stage 3 and 4 according to Kellgren and Lawrence scale. Methods: Patients were randomly distributed into two equal groups. The control group (A) consisted of 15 patients with a mean age of 50.4 (\pm 4.85) received therapeutic exercises (strengthening exercise, stretching exercise) 3 times per week, every other day, for 4 consecutive weeks, instructions and home program. The experimental group (B) consisted of 15 patients with a mean age of 51.86 (\pm 5.13) received shockwave therapy (10000 shock, 2000/session, 5 sessions, 1 week a part, 0.18mJ/mm²), and therapeutic exercises (strengthening exercise, stretching exercise) 3 times per week, every other day, for 4 consecutive weeks, instructions and home program. Patients were evaluated pretreatment and post treatment for knee pain severity, functional ability, and flexion range of motion and extension lag of knee joint. Results: Patients of both groups showed significant improvement in all the measured variables. In between groups difference the shock wave group showed a significant improvement in decreasing pain severity, functional ability and flexion range of motion, and extension lag). Conclusion: Both shock wave and the therapeutic exercises had a significant improvement on decreasing knee pain severity, functional disability, knee flexion ROM, and extension lag. Shock wave therapy could help in improving all variables more significantly than therapeutic exercise.</p>
Key words	1.	Knee Osteoarthritis.
	2.	Shockwave.
	3.	Therapeutic Exercises.
Arabic Title Page	:	تأثير العلاج بالموجات التصادمية علي خشونه مفصل الركبه.
Library register number	:	3523-3524.